OLD FORT SCOTT

ARCHEOLOGY

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ARCHEOLOGICAL INVESTIGATIONS AT OLD FORT SCOTT, 14BO302, FORT SCOTT, KANSAS 1968 to 1972

by

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with

CERAMICS

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ABSTRACT

Fort Scott was a short-lived (1842 to 1853) U.S. military outpost that was established along the western military frontier in what is now Bourbon county in southeastern Kansas. Dragoon and infantry troops were stationed at Fort Scott to stabilize relations between white settlers and Indians (both native and eastern emigrant tribes) and to guard the military road that connected Fort Leavenworth, Kansas with Fort Gibson, Oklahoma. Beginning in 1846 the fort also functioned as a departure point for troops sent southwest to the war against Mexico. Fort Scott saw limited use by the military during the Free State conflicts of the 1850s, during the Civil War, and during the railroad strike which lasted from 1869 to 1873. From the time of its first abandonment by the army in 1853, the fort area served as the nucleus for the city of Fort Scott and is presently located within the boundaries of that city.

During the period from 1968 to 1972, the Kansas State Historical Society conducted archeological investigations of 20 fort-related structures within the area of the original Fort Scott. Extensive archeological excavations were conducted in 15 separate areas and this work resulted in exposing 13 foundations or structural elements which date from the early constructional history of Fort Scott. These investigations also resulted in the collection of more than 36,000 items of material culture which include such varied artifacts as objects of metal, leather, glass, ceramics, paper, bone, rubber, plastic, wood, cloth, shell, brick, mortar, coal, plaster, and numerous examples of butchered animal bone. Both military and civilian items are represented in the sample and many items can be related to specific functions such as transportation, weaponry, construction, clothing, recreation, etc. Datable items cover a temporal range from the very early history of the fort (1840s) to the mid-twentieth century.

The archeological investigations conducted within the environs of Fort Scott (14BO302) were conducted under a research contract between the Kansas State Historical Society and the National Park Service, with the Society providing the necessary archeological expertise. These investigations aided the historic interpretation, cultural reconstruction, and restoration of this significant historic site and provided valuable insights into the history of Kansas and the development of the West. As a result of local, federal, and state support for the archeological and historical research, Fort Scott has now been preserved for the benefit of the public.

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A number of individuals and institutions deserve special recognition for their part in the 1968 to 1972 investigations of archeological site 14BO302, Old Fort Scott. The investigations were funded through a cooperative research contract entered into between the Kansas State Historical Society and the National Park Service. The actual archeological investigations were conducted by Thomas P. Barr, previously Historic Sites archeologist with the Society, and crew. Thomas A. Witty, Jr., state archeologist, was the overall project supervisor. National Park Service personnel, both at Fort Scott and in various regional offices, contributed valuable information and advice throughout the investigations and during the lengthy analysis period. Representatives of government from local, state, and federal agencies provided additional support as did the numerous private contractors who shared in the restoration responsibilities at Old Fort Scott.

A special thanks must be given to my colleagues at the Kansas State Historical Society. Diane L. Good, archeology laboratory supervisor at the Society, analyzed the ceramics from Old Fort Scott and wrote that section of the present report. She also assisted in various other portions of the artifact analysis by compiling metric data and providing perceptive observations. The identification of the majority of the harness, farrier, and wagon parts was capably performed by Don D. Rowlison, public archeologist at the Society. All of the artifact photographs included in the report were taken by Earl Kintner, Society photographer. Barbara Tibbitts, of the Archeology Department's secretarial staff, enthusiastically typed the draft of this report. Belinda Neal, administrative assistant in the Society's Archeology Department, cheerfully typed and edited the final version of the report. Other staff members, too numerous to mention by name, provided specific identifications for several artifacts and led me to sources that I had not previously been aware of.

The identification of faunal remains from Fort Scott was capably performed by Ed Sudderth of the Midwest Archeological Center, National Park Service. Ed also prepared the descriptive tables on the distribution of faunal remains by structure and on the minimum number of individuals by taxa (Tables 22 through 36).

The drawing for the cover of this report was done by Mike Snell of the Society's staff and was based, in part, on an earlier drawing by Don Rowlison. It is a freehand drawing of an early S-type Dragoon button (1833-1850) excavated at Fort Scott (see Plate 16, B).

I would also like to thank my wife Ginger and my sons Jesse, Logan, and Andrew for their patience and encouragement during the preparation of this report.

FOREWORD

The Kansas State Historical Society conducted archeological investigations at the site of Fort Scott, in southeastern Kansas, during five separate seasons between 1968 and 1972. The objectives of these investigations were first to acquire information about the fort architecture and second, to acquire a representative collection of artifacts for interpretation and display. All of the archeological excavations were under the direct supervision of Thomas P. Barr, who was at that time historic sites archeologist at the Kansas State Historical Society. The overall project supervisor was Thomas A. Witty, Jr., state archeologist. During the time intervening between the completion of the archeology at Fort Scott and the preparation of this present report, Barr was assigned restoration and preservation programs for the Society's branch properties. This involvement led to his being designated as historic properties supervisor for the Society in 1979. He was therefore no longer a member of the Archeology Department and he was not available for historic archeological research. The responsibility for the completion of the analysis and report preparation for the archeology of Fort Scott was reassigned to John D. Reynolds, assistant state archeologist. Reynolds utilized the available archeological documentation assembled by Barr during the Fort Scott excavations as well as the recovered material culture items in preparing this report. The resources of the Society, in terms of archives, documents, etc., as well as research personnel, proved to be of great aid in the report's completion. While the majority of the report was prepared by Reynolds, the entire analysis and write-up of the ceramics section of this report was performed by Diane L. Good, archeological laboratory supervisor at the Society. Ms. Good also assisted in analyzing and sorting many of the nonceramic materials. The faunal analysis included in the report was conducted by Ed Sudderth of the Midwest Archeological Center, National Park Service, United States Department of the Interior, and the faunal tables included in the present report were prepared by him.

The principal author of this report has at least some familiarity with the Fort Scott project. During the fall of 1970, Reynolds assisted Barr for two weeks in completing archeological excavations within the interior of the Hospital (Historic Structure 8) at Fort Scott. This brief excavation demonstrated to the author some of the difficulties that can be encountered in performing archeological excavations in areas that have been highly disturbed by modern urbanization.

Even the analysis of material culture items recovered from a site as complex as Fort Scott is fraught with difficulties. The analysis and identification of items recovered at historic sites obviously presents the archeologist with certain problems which are not commonly encountered by the prehistorian. First of all, because of their more

recent date, and because of the magnitude of the culture with which he deals, the historic archeologist often has enormously large collections to deal with. Thus, the sheer mass of material can present the archeologist with almost insurmountable difficulties. Added to this are additional complications. Archeologists often strive to classify and categorize the items that they have recovered into categories that, in some manner, are close to the categories that were recognized (or thought to be recognized) by the original users. In general anthropology, this has been termed the "emic" approach. In historic archeology, the users were often our own ancestors and it would seem obvious that we should focus considerable energy on determining how they perceived and classified the objects that were in their surroundings. Unfortunately, this can be a very difficult task. The categories are there, they are available in the hundreds of diaries, documents, and accounts from the past which form the basic material of the history of our country. Unfortunately, it takes an individual with very rapid reading skill and with a computer-like mind for detail to amass the necessary information and to assimilate it. The author of this report makes no such claims.

A further difficulty (in one sense) that the historic archeologist encounters is created by the fascination of the American public for its own history, and particularly for antiques which date from the past. There are volumes of information available about nearly every type of artifact that is encountered at a historic site. There are collectors who amass huge collections of bottles, buttons, clay pipes, marbles, etc., and many of them have written about their collections. The archeologist has to turn himself into a jack-of-all-trades to identify historic artifacts. He must learn complexities of manufacturing techniques on buttons, bottles, metal items, plastics, etc. He must learn the subtle changes in material technology that have occurred at such a rapid pace for western culture. And all this time there is a haunting spectre--someone, somewhere, is the real authority on S-type military buttons, on handmade shell buttons, etc., and "If I could only find that person, my problems would be solved". In the meantime, the archeologist must struggle along, trying as best he can to make accurate identifications and interpretations in a field where knowledge is increasing at a geometric rate. The author believes that every report in historic archeology contains at least some misidentifications (or less than thorough identifications) of material culture items. This is unavoidable and certainly the present report has its share of these mistakes (though hopefully no more than its share). Many times these misidentifications are merely humorous (such as the identification of a metal item as a "harpoon" head in the "Archeology at Kipp's Post" when the illustrated item is almost certainly a portion of a downspout hook from a gutter) (Woolworth and Wood 1960:303 and Plate 58). In other instances, the misidentifications can seriously impair our understanding of at least a portion of the historic past.

INTRODUCTION

The remains of Fort Scott, a frontier United States military post established in 1842, are located within the boundaries of the modern city of Fort Scott in southeastern Kansas (Figure 1 and Plate 1). The city of Fort Scott is located in eastern Bourbon county, about 60 miles north of the Oklahoma border and four miles west of the Missouri line. The military Fort Scott was originally constructed for the use of dragoon and infantry personnel within a reservation area which had been established for emigrant American Indian tribes from New York. It was one of a series of western military posts that were placed along a north-south line that stretched from Texas and Louisiana to the Dakota's. Fort Scott was situated on the Marmaton river between the settlers of Missouri and the Indian tribes to the west, along the north-south military road which connected Fort Leavenworth (located to the north) with Fort Gibson (to the south) and it was intended, at least in part, as a fort to protect the military road. The frontier moved rapidly west and, in 1853, the military abandoned Fort Scott and the garrison moved further west to Fort Riley, Kansas and to other western posts. Thus, in just a little more than a decade, Fort Scott had become obsolete. During its brief early life, Fort Scott was a base for military personnel who served on expeditions along the Santa Fe Trail and in other areas of the western plains. During the war with Mexico, in 1846, Fort Scott was an important point of departure for U.S. troops engaged in that dispute. Though the military abandoned Fort Scott in 1853, the existing fort buildings formed the nucleus of the civilian town of Fort Scott.

Fort Scott was subsequently utilized by the military, in a limited way, during the Free State conflicts of the 1850s and several of the original fort buildings saw extensive military use during the Civil War. It again was put to very limited use by the U.S. military during the railroad strike of 1869 to 1872. While the town of Fort Scott has grown around and over the original military outpost, the fort never completely lost its individuality. This may, in part, be attributed to the sturdily built military buildings which were constructed during the period from 1842 to 1853. Seven of these structures survive, at least partially, to the present day. The fact that the original fort was laid out with its four sides directionally oriented to the northeast, southeast, southwest, and northwest, may also have helped to preserve its character, as the town of Fort Scott is laid out by the main compass points.

In April 1964, Fort Scott was recommended for status as a National Registered Historic Landmark and an agreement to preserve Fort Scott as a National Landmark was reached on October 25, 1964 (U.S. Department of the Interior, National Park Service 1967:1). Eventually, the city of Fort Scott and the National Park Service cooperated in a major restoration and interpretive development of the original Fort

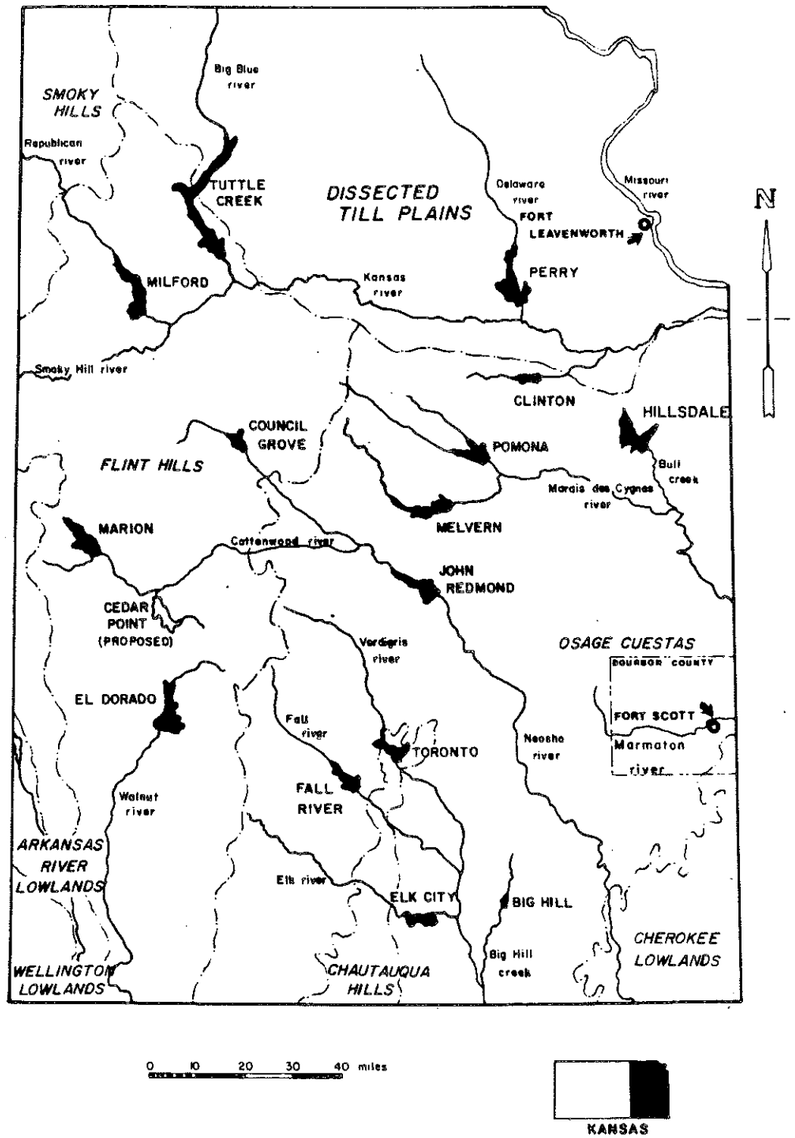

Figure 1: Fort Scott and related areas in eastern Kansas.

Scott complex. The concerned agencies early recognized that archeological investigations of the Fort Scott complex were a necessary part of this restoration and interpretation (U.S. Department of the Interior, National Park Service 1967:63). Accordingly, a cooperative research contract (No. 14-10-2:920-46) was entered into in 1968 between the Kansas State Historical Society and the National Park Service for the conduct of the needed archeological investigations. The primary archeological objective was to extend knowledge about fort architecture and a secondary purpose was to recover artifacts for interpretation and display.

The archeological investigations conducted by the Kansas State Historical Society at the site of Fort Scott were performed during the period from 1968 to 1972. All of the archeological excavations were under the direct supervision of Thomas P. Barr, archeologist, with Thomas A. Witty, Jr., state archeologist, as overall project supervisor.

The contract entered into between the Society and the National Park Service stated that the Society was to:

> Supply the necessary personnel and facilities to conduct archeological tests and excavations, to locate and delineate in such a way as to facilitate stabilization, restoration, or reconstruction of Building HS-1, HS-2, HS-3, HS-4, HS-6, HS-8, HS-9, HS-11, HS-12, HS-15, HS-16, HS-17, HS-31, and HS-32. The following to be done subject to the acquisition of these properties by the City of Fort Scott: HS-5, HS-7, HS-10, HS-13, HS-14, and HS-30.

The scheduling of the actual Society investigations at Fort Scott was affected by a number of factors, most of these outside of the control of the Society. For example, modern buildings were located on top of a number of the areas to be investigated and no archeological studies could be performed in those areas until these structures had been removed. Delays in land acquisition and further delays in the demolition of standing structures forced the Society to maintain a very flexible schedule for investigations. The original contract underwent several modifications to provide for the needed investigations.

The archeological investigations at Fort Scott are now complete, at least in terms of the specified research contract (with modifications), and the present report is a final report of these findings. Included are a brief history of Fort Scott, an explanation of the methodology utilized during the archeological research, a detailed examination of recovered structural evidence, and a lengthy discussion of the most significant of the more than 36,000 items of material culture recovered during the course of the investigations.

ENVIRONMENTAL SETTING

Bourbon county, in southeastern Kansas, is situated in the Osage Cuestas of the Osage Plains section of the Central Lowlands physiographic province (Schoewe 1949:280). The Osage Cuestas are bordered on the north by the Kansas river, on the east by the Ozark Plateaus, and on the west by the Flint Hills Upland (Schoewe 1949:273-280). Through geological times, the escarpments or cuestas have developed by erosion of Pennsylvanian-aged strata which consist of layers of shale, sandstone, and beds of limestone. Due to the inconsistent hardness of these various members, which are gently inclined to the west-northwest, differential erosion has formed vales between the prominent escarpments that slope in the direction of the underlying dipping strata (Schoewe 1949:282).

A large number of distinct soil types, which differ both in chemical and physical composition, have been formed from weathered sandstone, shale, and limestone deposits of this area (Layton and Dornberger 1931:10). Controlling factors in the formation and diversity of these soils include differences in the character of the underlying materials, differences in surface relief, and differences in native vegetation. The soil of the area occupied by Old Fort Scott is classified as Clareson stony silty clay loam (Bell and Fortner 1981:10). Bell and Fortner note that Clareson soil is a gently sloping, well-drained soil that is located on the upper sides of ridges in the uplands (1981:10). Limestone rocks, averaging 1 to 2 ft in diameter, cover 0.1 to 3 percent of the surface on typical Clareson soils (Bell and Fortner 1981:10). The typical surface layer of this soil is a very dark brown stony silty clay loam which averages approximately 10 inches thick. The subsoil, which ranges up to 22 inches thick, has an upper part that is very dark brown, very firm flaggy silty clay loam, and a lower part that is dark reddish brown, very firm flaggy silty clay. Bedrock is typically encountered at a depth of circa 32 inches. Clareson soils have moderately slow permeability, low available water capacity, and a moderate shrink-swell potential (Bell and Fortner 1981:10). The Clareson series of soils have formed in material that has weathered from limestone (Bell and Fortner 1981:41). A and B horizons range from medium acid to neutral (Bell and Fortner 1981:42). Because of the depth of parent rock, the presence of large stones, and the moderately slow permeability, Clareson soils are generally unsuitable for building site development and in terms of sanitary facility placement (Bell and Fortner 1981:66). While the Clareson soils in general are unsuitable for building site development and sanitary facility placement, the soils do get high marks in at least one regard. According to Bell and Fortner (1981:87), the Clareson soils never flood.

According to Kuchler's map of the potential natural vegetation for Kansas, this area of Kansas is in a transitional or mixed

vegetation region between the tall grass prairie and the oak-hickory forest (1974). This is an area of extensive interspersion of forest and prairie with an upland consisting entirely of grasses in the natural state, of which little bluestem and big bluestem were most abundant. The lower lying alluvial lands, such as along the Marmaton river valley, were apparently originally covered with trees and with water-adapted grasses. The trees were chiefly hackberry, ash, elm, pin oak, black oak, water oak, black walnut, hickory, cottonwood, almond leaf willow, sycamore, post oak, hawthorne, maple, and papaw (Layton and Dornberger 1931:1-2). In terms of the specific area of Old Fort Scott, Bell and Fortner indicate that the characteristic native vegetation on Clareson soils includes little bluestem (30 percent), big bluestem (20 percent), sideoats grama (15 percent), Indiangrass (10 percent), and switchgrass (5 percent) (Bell and Fortner 1981:66).

The forest valleys and nearby prairies provided shelter and food for abundant fauna aboriginally which included elk, white-tailed and mule deer, black bear, cougar, wild cat, timberwolf, gray and red fox, raccoon, opposum, the gray, fox, and flying squirrel, beaver, otter, muskrat, and cottontail rabbit (Wedel 1959:14). The prairie uplands probably supported bison, coyote, antelope, jack rabbit, badger as well as smaller animals. Numerous birds were present including wild turkey, prairie chicken, ruffed grouse, quail, passenger pigeon, and Carolina parakeet as well as many other species. The Marmaton river undoubtedly yielded an abundance of edible fish and shellfish.

The arrival of Euro-Americans in this area and the subsequent clearing of much of the forest and grass cover has resulted in a much changed environment, with the larger native mammals mostly absent from the area and with agricultural fields replacing most of the natural flora and with a resulting rise in the silt content in the river and its tributaries.

The climate of Bourbon county is characterized by hot summers and moderately cold winters. This area is within the most generously watered portion of the state with an annual precipitation of approximately 40 inches, most of this resulting from spring and summer rains. Exceptionally heavy rains in spring cause occasional flooding of the Marmaton river and exceptionally dry years cause occasional local droughts (Layton and Dornberger 1931:3-4). January is the coldest month with an average daily temperature of 33.2° Fahrenheit and July is the hottest month with an average daily temperature of 81.2° Fahrenheit (Bell and Fortner 1981:62). Extremes of temperature can range from lower than minus 7° Fahrenheit in January to higher than 106° Fahrenheit in July and August. The last freezing temperature in spring occurs on or before April 15 in five years in ten, and the first freezing temperature in fall occurs on or later than October 20 in five years in ten (Bell and Fortner 1981:62). This results in a probable growing season, nine years in ten, of 163 frost-free days

(Bell and Fortner 1981:62). Bourbon county experiences 39.88 inches of precipitation per year on the average, with most of this occurring as rainfall. The heaviest rainfall occurs from April to September (Bell and Fortner 1981:62).

Pennsylvanian cherts, limestones, sandstones, and shales as well as alluvial clays provided a ready and locally available resource for both prehistoric and historic populations. Alluvial bottomland soils have been utilized by both aboriginal and Euro-American groups for cultivated crops while upland areas have been utilized historically as rangeland.

HISTORICAL BACKGROUND

OUTLINE OF HISTORICAL PERIODS OF FORT SCOTT (14BO302)

Fort Scott Military Post (1842-1853)

Fort Scott was established in 1842 as a western frontier post and it was situated on the Marmaton river between the settlers of Missouri and the Osage Indians, and on a line that connected Fort Leavenworth with forts to the south. On April 9, 1842, a spot for the fort was chosen near the ford on the Marmaton river where the military road crossed the river. The lands were within the reservation that had been established for a number of New York tribes. Temporary log huts were used by the military, but construction of a permanent post was begun almost immediately and proceeded, sporadically, until the late 1840s when it was essentially complete. Permanent structures located at the fort included four sets of officer's quarters (each designed for two families), three barracks, a post headquarters and ordnance building, a quartermaster and commissary building, a dragoon stable, a quartermaster shops and corral, a hospital, a guardhouse, a bake shop, a magazine, and several outbuildings. By 1843, Fort Scott had reached its maximum strength of 200 enlisted men and eight officers and Fort Scott military personnel served on expeditions along the Santa Fe Trail and in other areas of the western plains. During the war with Mexico in 1846, the garrison was much reduced in strength as troops were sent from Fort Scott to engage in that conflict. By 1853, Fort Scott was abandoned by the military, as the frontier had moved west and had made the fort obsolete.

Fort Scott and Bleeding Kansas (1853-1861)

Though Fort Scott was officially abandoned as a military post in 1853, the area which encompasses the fort was never abandoned from the time of its inception in 1842. After the 1853 abandonment, a number of the original fort structures were purchased from the government by civilians and were utilized for diverse purposes, including both private residences and hotels as well as trade shops, professional offices, and schools. The U.S. military dispatched units to this area from Fort Leavenworth on several occasions to try to quell the border strife engendered by the proslavery and antislavery adherents, and it is possible that at least some of the surviving structures were utilized by the military on a temporary basis. Basically, however, these structures formed a nucleus around which the growing civilian town of Fort Scott was being formed.

United States Department of the Interior

NATIONAL PARK SERVICE
INTERMOUNTAIN FIELD AREA
Rocky Mountain System Support Office
12795 W. Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

In Reply Refer To: H2415 (IMFA-RM-S)

March 26, 1997

Mr. John Reynolds
State Archaeologist
6425 SW Sixth St.
Topeka, Kansas 66615-1099

Dear Mr. Reynolds:

I would like to request a file search for archeological sites in the vicinity of the Fort Scott National Historic Site, Fort Scott (Bourbon County), Kansas. I have been requested by the park to conduct a geophysical investigation, resistance and magnetic surveys, of a portion of the park behind the officer's quarters and the area of the quartermasters quadrangle. I would like information on archeological sites and surveys in Section 30 of T25S, R25E. For any costs incurred in the file search, please submit the invoice to the National Park Service in care of my attention.

If you have any questions, please contact me at (303) 969-2882.

Sincerely,

Steven L. De Vore, Archeologist
Stewardship and Partnership Team

Fort Scott and the Civil War (1861-1865)

Fort Scott was in strategic location during the Civil War and was occupied by Union troops for much of that time. It was located just to the west of proslavery Missouri and close to the Indian Territory in Oklahoma and, although it was never actually attacked by Confederate forces, it was threatened twice by troop movements under the command of Confederate General Sterling Price. During the Civil War, Fort Scott served many functions including a Union strong point, quartermaster supply depot, general hospital, prison camp, recruiting point, and refuge for freed slaves and homeless war victims. Several of the original fort structures, which were built between 1842 and 1850, were rented and/or commandeered by Union forces during this period and numerous other buildings in the surrounding town were also utilized. Several new military buildings, most apparently outside of the old fort area, were constructed during this period. The utilization of the fort by the military during this period was quite different from that use for which the fort had originally been designed. That is, all of the original structures of Fort Scott had been clearly designed as elements of a well-integrated frontier fort. By the time of the Civil War, the original fort structures had been in civilian hands for several years and had been subjected to considerable modification. Even during the Civil War years, some of the fort structures from the early period stayed in civilian control. Thus, the Fort Scott of Civil War days consisted of portions of both the Old Fort Scott and the later town of Fort Scott, and even extended well beyond the boundaries of the city.

Fort Scott in the Aftermath of the Civil War (1865-1869)

Though Fort Scott was not incorporated as a town until 1860, the town formation had obviously commenced several years earlier (Blackmar 1912:673) and the town continued its growth during the Civil War and afterward. For instance, John A. Bugg and Hiero T. Wilson located as civilian sutlers at Fort Scott shortly after it was established as a military post (Blackmar 1912:672). The original Officer's Quarters #1, which had been offered for sale by the federal government in 1855, functioned as the Fort Scott Hotel from 1856 until at least 1870. In 1857, a government land office was established in Fort Scott and the town grew rapidly thereafter (Blackmar 1912:673). A private school was opened in Fort Scott (in the old fort hospital) in 1857 and a newspaper, the Southern Kansan, was established (Blackmar 1912:674). A brewery was established in 1863, a planing mill in 1876, a foundry and machine shop in 1869, woolen mills in 1873, and flour mills in 1871 (Blackmar 1912:675). While little information is presently available concerning the specific period from 1865 to 1869, it seems likely that the town of Fort Scott continued its slow but steady growth. Its position as the county seat of Bourbon county undoubtedly aided this growth.

Post of Southeast Kansas (1869-1873)

In 1869, James Frederick Joy acquired control of a struggling railroad company, the Kansas and Neosho Valley Railroad Company, and reorganized the company under the name of the Missouri River, Fort Scott and Gulf Railroad. By December of 1869, construction crews had linked Fort Scott with Kansas City and the east by rail. Settlers in the Indian Territory to the south of Fort Scott found their homestead claims being encroached upon by the railroad and they reacted with hostility and, in some cases, with violence. By August of 1869, U.S. troops were ordered into the area to control the situation. Eventually, in January of 1870, the Department of the Missouri created the Independent Post of South Eastern Kansas, with headquarters at Fort Scott and with troops stationed at intervals along the construction line for the new railroad. While the town of Fort Scott was officially headquarters for the army from 1869 to 1873, there is little or no evidence to suggest that any of the original fort structures were occupied by the military during this period. During most of this period, the only permanent military staff in Fort Scott were the commanding officer and one other officer, a handful of enlisted men, and one or two civilian clerks (Thompson 1967:159).

Late Nineteenth and Twentieth Centuries Fort Scott (1873-1968)

Following the last military occupation of the Fort Scott locale in 1873, the fort structures and grounds of Old Fort Scott continued to serve a variety of civilian functions as they slowly deteriorated or were replaced. By the time that Fort Scott started to receive serious attention by persons interested in its preservation and historical importance, most of the original fort structures had been obliterated and a succession of modern structures had been built on top of the original structure locations. By 1968, seven structures survived which had any semblance of original fabric. These included Historic Structure 1 (Officers Quarters), Historic Structure 2 (Officers Quarters), Historic Structure 4 (one-half of Officers Quarters), Historic Structure 8 (Hospital), Historic Structure 12 (Quartermaster and Subsistence Storeroom), Historic Structure 14 (Bake House), and Historic Structure 30 (a stone Quartermaster's building).

FORT SCOTT

The history of the military complex that is called Fort Scott has been dealt with in some detail in two publications by Erwin N. Thompson (1967, 1968). In those two documents, Thompson summarized the history of Fort Scott as it is known from available documentary,

archival, and photo-archival resources. Unquestionably, there is much yet to be learned through the documentary evidence about the early fort. Nevertheless, Thompson has provided usable and fairly detailed histories for the fort and its structures and these will be relied upon heavily in the following brief discussion of the history of Fort Scott and the history of the particular structures that were the focal point of the archeological research in the fort complex.

Two major factors were responsible for the formation and placement of Fort Scott, as well as numerous other frontier defensive outposts, in the period from 1825 up to the beginning of the Civil War. First, Fort Scott was established as a defensive post to protect emigrant Indian tribes from tribes that were native to the Plains (Thompson 1967:10). Following the Indian Removal Act of 1825, numerous American Indian tribes from the eastern United States were relocated into portions of Kansas and Oklahoma and, in some cases, this created situations of intense conflict and hostility between the resident tribes and the newly arrived emigrants. The Federal government recognized an obligation to protect the emigrant tribes and Fort Scott was one of the defensive posts established with this goal in mind. The second major reason for the establishment of Fort Scott was to protect newly arrived white settlers and travelers from both emigrant Indian groups and from Indian groups native to the region.

The actual site for Fort Scott was apparently chosen on April 9, 1842, although the location had been tentatively selected even earlier (Thompson 1967:11). Construction of temporary quarters began almost immediately (Thompson 1967:11). These first structures were apparently built of logs cut from local timber and none of them have survived.

The site chosen for the new post was on a relatively flat limestone bluff on the south side of the Marmaton river, just south of the juncture of Mill creek with the Marmaton river. The area was covered with thick groves of walnut, ash, and oak trees along the river bottoms and even onto some of the hills (Thompson 1967:13). Captain Benjamin D. Moore chose the actual site for Fort Scott and he established the location of the parade ground around which the primary fort buildings were to be located (Thompson 1967:17). The parade ground was situated on relatively level ground about 300 yds back from the point of the bluff and it occupied an area approximately 350 ft on a side. The responsibility for construction of the permanent post initially fell to Lieutenant Richard S. Ewell of the First Dragoons, who became the acting post quartermaster in July 1842 (Thompson 1967:17). In the same month, Captain Thomas Swords arrived at Fort Scott and replaced Ewell as post quartermaster. Much of the subsequent fort construction was the responsibility of Swords (Thompson 1968:1). The actual construction of the fort was accomplished by utilizing both skilled and unskilled laborers drawn from the enlisted ranks of the military as well as skilled civilians in such specialized trades as carpentry, bricklaying, stone masonry, joinery, and glazing

(Thompson 1968:2). Much of the fort was built using native materials (e.g., planks and boards sawed in the sawmill located on Mill creek and locally collected limestone for the foundations of the structures).

The bluff upon which Fort Scott was to be located is oriented in a northeast to southwest direction and this affected the alignment of the fort. Thus, the axis of the parade ground was oriented in a northeast to southwest direction and the layout of the whole fort was predetermined by this orientation. As noted, the parade ground was square, approximately 350 ft on a side, and the primary buildings of Fort Scott were located around the edges of this square and formed a larger square, approximately 474 ft on a side (Thompson 1967:17). Swords planned to build five blocks or sets of officer's quarters along the northeast side of the parade ground (Thompson 1967:20). Four of these were to be duplexes and the fifth was to be the commanding officer's quarters. The commanding officer's quarters were never completed. Opposite them, on the other side of the parade ground, were to be located an infantry barracks, a hospital, and a guardhouse. A dragoon barracks and a stable were to be located on each of the two remaining sides of the parade ground. The post ordnance office and storeroom was to be located off the north corner of the parade ground and the quartermaster's and subsistence storerooms were to be in a building off the east corner. All the structures were to be framed and weather-boarded and the basements of the officer's quarters, the barracks, and the hospital were all to be located above ground (Thompson 1967:21). Construction of the fort buildings took place sporadically from 1842 until 1850. It was eventually completed and basically followed the plan outlined by Swords. A scaled plan of Fort Scott was made in 1848 (Figure 2) which shows the specific locations of most of the fort structures which were eventually completed at the fort before the military abandoned the post in 1853 (Quartermaster Consolidated File, National Archives, Record Group 92). Also included on this plan are important details concerning the construction chronology and floor plans for the fort buildings.

HISTORIC STRUCTURES

The following section of this report provides summary data about the known history of each of the historic structures at Fort Scott which were a part of the long-term archeological investigations conducted by the Archeology Department of the Kansas State Historical Society. The specific structures to be investigated were specified in a contract (with amendments) between the Society and the National Park Service (Contract No. 14-10-2:920-46 and Amendments 1 to 4). The contract and its various amendments specified that a total of 20 structures, or probable structure locations, be investigated and/or excavated by the Society (Figure 3). The structures included in the study were Historic Structures 1 through 17 and Historic Structures 30, 31, and 32 (as numbered by Thompson in Fort Scott Historic

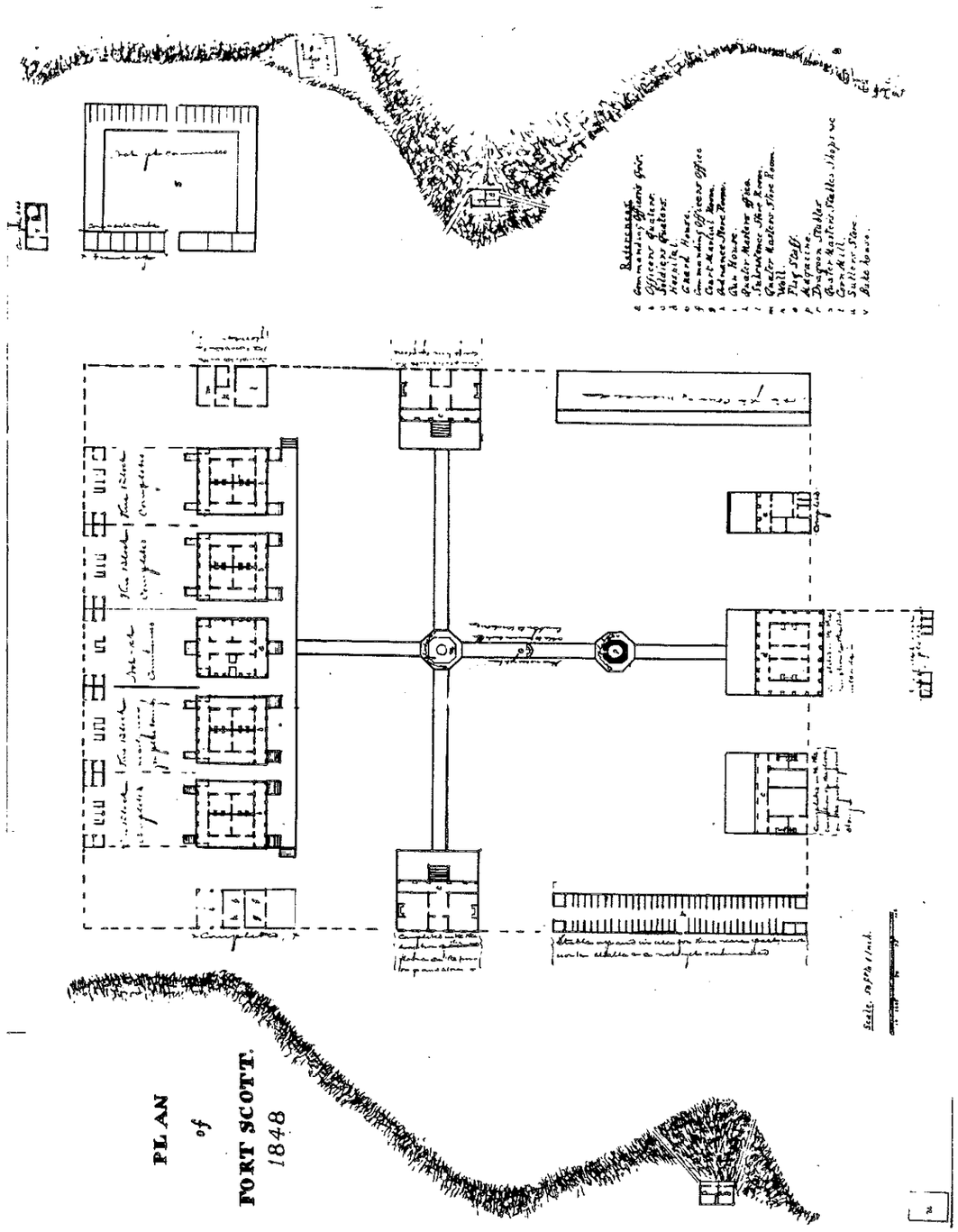

Figure 2: Plan of Fort Scott, 1848

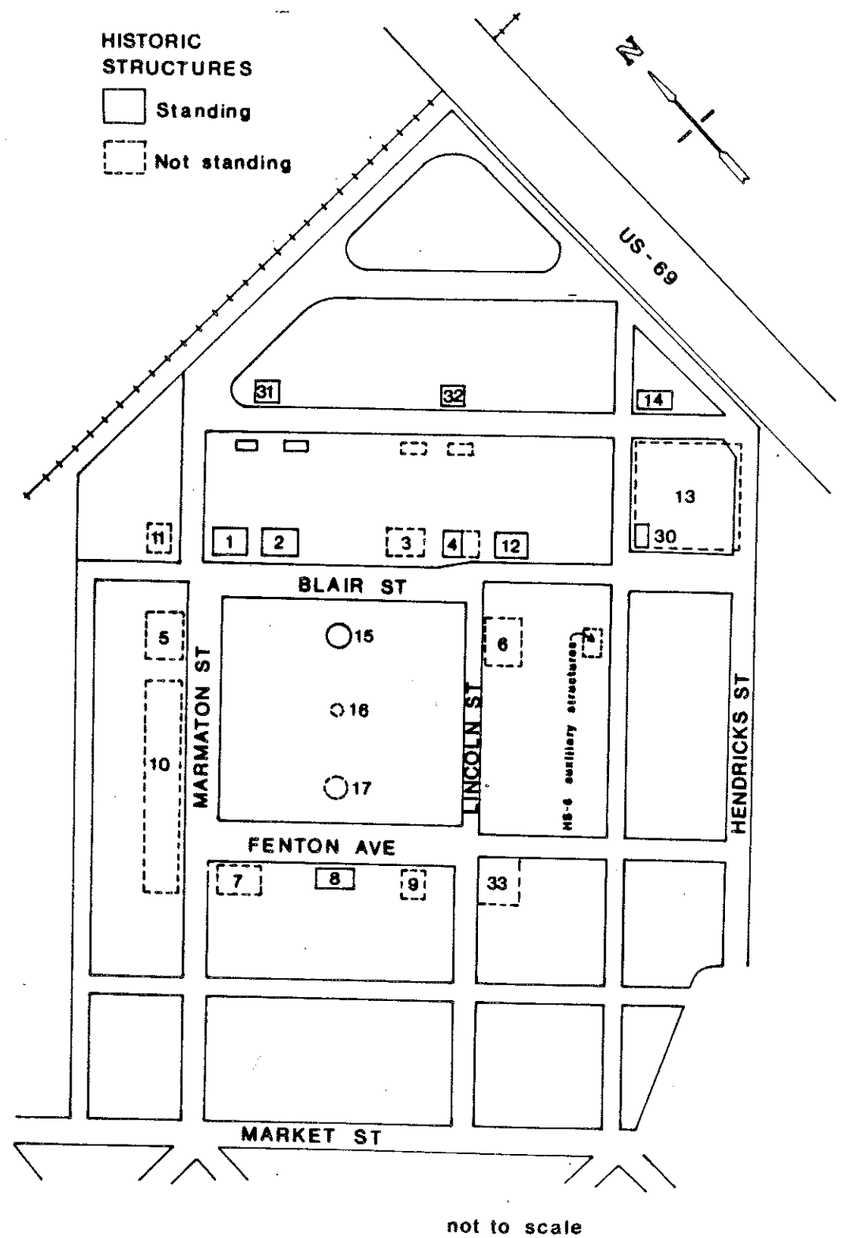

Figure 3: Fort Scott, approximate site of historic structures and present street system.

Structures Report, Part II, Historical Data Section) (Thompson 1968). As Thompson notes (1967:169-171), these structures represent just a portion of the historically documented structures that once stood on or adjacent to the military post. Excluding modern structures, Thompson lists 71 fort or related structures that may once have been present (1967:169-171). The focus of the work conducted at Fort Scott by the Society's Archeology Department was on those structures which were suspected to have been a part of the initial fort construction (1842 to 1853). Accordingly, the structures studied were those for which documentation existed indicating an early construction or for those structures which were of questionable origin. One additional structure location, Historic Structure 33, is included in the present discussion because it may relate to the early Fort Scott constructional period. Since the following summaries have been abstracted from two sources (Fort Scott, Kansas, Site Identification and Evaluation, and Fort Scott, Kansas, Historic Structures Report, Part II, Historical Data Section), the author of the present report has eliminated specific, line by line, citations. The interested reader is referred to the two sources noted above, both written by Erwin N. Thompson (1967 and 1968), for more detailed and more thoroughly documented accounts of the general and specific history of Fort Scott.

Parade Ground

The parade ground occupied a square approximately 350 ft on a side and it was oriented in a northeast to southwest direction. It was selected by Captain Moore in 1842, and during the period from 1842 to 1853, it contained three fort-related structures; the well, the flagpole, and the powder magazine (Thompson 1967:172). Two walks intersected at the well and formed a cross on the parade ground and trees were apparently planted on the parade ground during this early period. The parade ground, renamed Carroll Plaza by settlers during the 1850s, has survived until the present day and has been utilized for a variety of purposes including use as a wood yard, wagon stand, a clothes yard, and as a public park (Thompson 1967:173).

Historic Structure 1, Officer's Quarters #1

Condition: Standing, interior had been altered after 1853 abandonment.

Constructional History: Begun in late summer or fall of 1842, nearly completed by October of 1843, may not have been finally completed until after October of 1844.

Location: Northeast side of the parade ground.

Description: White, wooden duplex of two and one-half stories. Lacked true basement but ground floor was considered to be a basement. Foundation of native limestone, structure framed and weatherboarded. Two separate living quarters. Heavy porches or verandahs on both back and front were supported by walnut pillars. Structure measured 58.5 ft long and 37 ft wide.

Occupancy: First occupied by military by at least September of 1844 and utilized by military personnel until abandonment of fort in April of 1853. Advertised for sale by the army on March 9, 1855, and reportedly purchased by A. Hornbeck. Functioned as the Fort Scott Hotel from 1855 until 1863. Closed and reopened several times as a hotel during the period from 1863 until 1870. At an unknown date, it was purchased by Judge William Margrave and was his residence until his death in 1904. Subsequently, it was owned by Ralph Richards until it was purchased by the city of Fort Scott. Remained in city ownership until it was acquired by the National Park Service.

Related Structures: An 1848 plan of the structure shows two small sheds of two rooms each and a double latrine at the rear of the yard which contains Historic Structure 1.

Historic Structure 2, Officer's Quarters #2

Condition: Standing, both exterior and interior altered after 1853 abandonment.

Constructional History: The building was started in 1845 and in October of that year the frame was up and it was ready for covering. This set of quarters was the last of four sets of officer's quarters to be constructed. The completion date of the structure is not known, but it was not finished by September of 1848.

Location: Northeast side of the parade ground, immediately southeast of Historic Structure 1.

Description: White, wooden duplex of two and one-half stories. Lacked true basement but ground floor was considered to be a basement. Foundation of native limestone, structure framed and weatherboarded. Two separate living quarters. Heavy porches or verandahs on both back and front were supported by walnut pillars. Structure measured 58.5 ft long and 37 ft wide. This structure was essentially the same in material and architecture as Historic Structure 1.

Occupancy: The beginning date for occupancy of Historic Structure 2 is unknown although it was presumably after September 9, 1848, and prior to the abandonment of the post in 1853. Advertised for

sale by the army on March 9, 1855, and purchased by Hiero T. Wilson, the former post sutler. Wilson and family occupied one-half of the structure in the 1850s and at least during the early 1860s, while Samuel Williams lived in the other half. During the Civil War, Mrs. Wilson continued occupancy of the Wilson half of Historic Structure 2 and Union officers occupied William's half. Structure was offered for sale by Hiero Wilson in 1873, but Wilson may have continued to live in the structure until his death in 1892. At that time, the property was purchased by Charles Goodlander. In 1901, one-half of the structure was deeded by Goodlander as the Goodlander Home for Children. The Home purchased the other half of the structure and maintained the institution in that structure until 1955. Extensive internal modification took place during this period.

Related Structures: The 1848 army plan of Fort Scott shows two small sheds of two rooms each and a double latrine at the rear of the yard. The west shed of Historic Structure 2 may have been joined to the east shed of Historic Structure 1.

Historic Structure 3,
Officer's Quarters #3

Condition: Structure removed.

Construction History: The constructional history of Officer's Quarters #3 and Officer's Quarters #4 cannot be separated at the present time because the evidence does not indicate which of the two was constructed first. However, the two structures were evidently identical. The foundation walls for both Historic Structure 3 and Historic Structure 4 were reportedly finished by October of 1843. One of the structures had apparently been covered-in and was nearly ready for plastering one year later. By October of 1845, one of the two structures had been completed except for the floors on the porches and the other was ready for plastering. Both Historic Structure 3 and Historic Structure 4 may have been ready for occupancy by the spring of 1846. The 1848 army plan of Fort Scott shows them both completed.

Location: Northeast side of the parade ground, east of Historic Structure 2.

Description: White, wooden duplex of two and one-half stories. Lacked true basement but ground floor was considered to be a basement. Foundation of native limestone, structure framed and weather-boarded. Two separate living quarters. Heavy porches or verandahs on both back and front were supported by walnut pillars. Structure measured 58.5 ft long and 37 ft wide.

Occupancy: Historic Structure 3 may have been ready for occupancy by

the spring of 1846 and was almost certainly occupied by 1848 and presumably functioned as an officer's quarters until the abandonment of Fort Scott in 1853. Advertised for sale by the army on March 9, 1855, and purchased by Mr. E. Greenwood. In 1858, the structure was occupied as residences by Alex McDonald and by Epaphroditus Ransom. Historic Structure 3 was purchased by Governor Samuel Medary in 1860. The structure was then occupied by Charles Blair, son-in-law of the governor and a citizen of Fort Scott. Blair entered the Volunteers early in the Civil War and obtained the rank of colonel. From April 1863 to November 1864, he was the commanding officer of the military establishment at Fort Scott and he probably continued to occupy Historic Structure 3 during that period. Blair left Fort Scott sometime between 1864 and 1869. By December of 1869, a boarding house had been opened in the west half of the residence by G.W. Webb. Officer's Quarters #3 was torn down sometime around 1900 and a frame house was built on the site.

Historic Structure 4,
Officer's Quarters #4

Condition: The west half of the structure is still standing.

Constructional History: As indicated in the discussion of Historic Structure 3, the constructional history of Historic Structures 3 and 4 must be considered together. The foundation walls for Historic Structure 4 had been completed by October of 1843 and the structure was presumably ready for occupancy by the spring of 1846.

Location: Northeast side of the parade ground, east of Historic Structure 3.

Description: White, wooden duplex of two and one-half stories. Lacked a true basement but the ground floor was considered to be a basement. Foundation of native limestone, structure framed and weather-boarded. Two separate living quarters. Heavy porches or verandahs on both back and front were supported by walnut pillars. Structure measured 58.5 ft long and 37 ft wide. This structure is virtually identical to Historic Structures 1, 2, and 3.

Occupancy: This structure may have been first occupied by military personnel as early as the spring of 1846 and it was almost certainly occupied by 1848. It presumably remained in use up until the abandonment of Fort Scott in 1853. Advertised for sale by the army on March 9, 1855 and purchased by J. Mitchell. The structure was occupied by George Clarke and Willis Ransom in 1858. Historic Structure 4 may have functioned as a boarding house, operated by Dr. and Mrs. Short, in the 1870s. The

building was remodeled and divided into apartments circa 1900. The eastern half of the structure was destroyed by fire in 1945.

Related Structures: As was true for Historic Structures 1, 2, and 3, the 1848 plan of Fort Scott depicts several auxiliary structures in back of Historic Structure 4.

Historic Structure 5,
Dragoon Barracks

Condition: Structure removed.

Constructional History: Construction on Historic Structure 5 apparently began shortly after Captain Thomas Swords arrived at Fort Scott in 1842. The barracks had apparently been roofed by the fall of 1843 but was not occupied until May of 1844.

Location: Northwest side of parade ground, north of Historic Structure 10, the Dragoon Stables.

Description: Historic Structure 5, the Dragoon Barracks, was designed to be somewhat similar in appearance to the officer's quarters and was framed and weather-boarded and had an above-ground basement. A 10 ft wide verandah was located across the front of the main floor and was supported by six pillars. This verandah had a single flight of stairs which was located in the center of the structure, as opposed to the two end flights of stairs of each of the officer's quarters. The dimensions of the Dragoon Barracks were 65 ft long by 32.5 ft wide.

Occupancy: Company A of the First Dragoons moved into the Dragoon Barracks in May of 1844. The barracks apparently lacked permanent flooring as of October of 1845 but this had been provided by 1848. As is the case with the officer's quarters, Historic Structure 5 was evidently advertised for sale by the army in March of 1855. During the period from the fort's abandonment in 1853 until the outbreak of the Civil War, Historic Structure 5 was utilized as a public building. The U.S. Land Office was located on the main floor and the post office shared the same floor for a short time. The first issues of the Fort Scott Democrat, the first newspaper in Fort Scott, may have been published in the same building. The basement or ground floor housed several businesses from 1858 until the outbreak of the Civil War. Included were a wine and liquor store which was established by D.W. Johnson in 1858, a tailor shop operated by R. Blackett, an office of Attorney John C. Sims and, in 1859, a portion of this floor had been converted into the Ashland Saloon under the management of Mr. Rashe. Rashe changed the name of this establishment to the U.S. Land Office Saloon in 1860 and sold out his holdings in Fort Scott in February of 1861. A physician, Dr. John S. Redfield, may have had an office in Historic Structure 5 in 1859. The U.S. Land Office was moved sometime before the Civil War and the rooms that had housed the land office were converted into a barber shop. During the Civil War, Historic Structure 5 was rented by the army, although its subsequent utilization is unknown. The barracks was still standing in 1871 but by 1900 it had been torn down and had been replaced by a lumberyard. A lumberyard was still present at the site when the Society began its investigations at Fort Scott in 1968.

Historic Structure 6,
Infantry Barracks

Condition: Structure removed.

Constructional History: Historic Structure 6 was initially designed as a dragoon barracks and apparently was virtually identical to Historic Structure 5. Construction of Historic Structure 6 was underway by the fall of 1843, at which time its frame was ready for raising and the foundation walls had been built. The building was nearly finished in July of 1844 and it may have been occupied for the first time during that same month.

Location: Historic Structure 6 was located on the southeast side of the parade ground and directly opposite Historic Structure 5.

Description: Historic Structure 6 was apparently virtually identical to Historic Structure 5. Thus it would have been somewhat similar in external appearance to the officer's quarters and would have been framed and weather-boarded and had an above-ground basement and a stone foundation. Like Historic Structure 5, a 10 ft verandah would have been present across the front of the main floor and this would have been supported by six pillars. A single flight of stairs would have been located in the center. The dimensions of Historic Structure 6 were presumably the same as that for Historic Structure 5, 65 ft long by 32.5 ft wide.

Occupancy: While Historic Structure 6 was initially intended to be a dragoon barracks, it is unlikely that dragoons were initially housed in this building. The first tenants of the structure were apparently the men of Company D of the Fourth Infantry who moved in during July of 1844. The structure was presumably inhabited by various infantry companies up until the time of the fort's abandonment in 1853. Little is known about the subsequent utilization and eventual demise of the structure. It apparently was rented by the army during the Civil War and it was still standing in 1871. In the 1960s, the approximate site of the barracks was occupied by a two and one-half story brick house of more recent construction.

Related Structures: Traces of stone foundations and walls of auxiliary structures were present behind the structure to the east, and a stone cistern was also visible.

Historic Structure 7,
Infantry Barracks

Condition: Structure removed.

Constructional History: The construction of Historic Structure 7 was apparently well underway by July of 1844 and it was largely completed by September of the same year. Like the other barracks, permanent flooring, both within the structure and on the verandah, were lacking for several years. This structure was initially designed as an infantry barracks and presumably it housed various companies of infantry from its September, 1844 occupancy until the abandonment of Fort Scott in 1853.

Location: Southwest side of the parade ground.

Description: The exterior of Historic Structure 7 was apparently quite similar to that of Historic Structure 5 and Historic Structure 6 and included a limestone foundation, framing and weather-boarding and an above-ground basement. Also present was a 10 ft verandah which went across the front of the main floor, was supported by six pillars, and had a central flight of stairs for access to the verandah from the outside. The dimensions of this structure were presumably the same as that for Historic Structure 5 and Historic Structure 6, 65 ft long by 32.5 ft wide.

Occupancy: Company C of the Fourth Infantry moved into Historic Structure 7 on September 3, 1844, and this company and other infantry companies presumably inhabited the structure throughout the early period of Fort Scott's history. The structure was placed on sale by the army in 1855 and it was purchased by a civilian and became the Western Hotel or Western House. This hotel evidently operated up until at least the time of the Civil War. Historic Structure 7 was rented by the army during the Civil War and was converted into a ward for the general hospital which was established at Fort Scott. After the Civil War, the structure continued its function as a hotel. Sometime during the early 1870s it became a boarding house and was owned by a number of individuals at different times. It functioned as a hotel until at least 1873. The date of its demise is not known. By the mid-1960s, the site was occupied by a modern brick building.

Historic Structure 8,
Hospital

Condition: The frame of this structure was still standing when the site was first visited in 1968 by Society archeologists.

Constructional History: The Hospital was one of the earliest buildings upon which construction was started. By October of 1843, it was nearly ready for occupation although it was lacking flooring. By the summer of 1844 it was nearly complete. The permanent flooring for the structure was laid before 1848 and it seems evident that the Hospital was in use well before that date.

Location: Historic Structure 8 is located on the southwest side of the parade ground, approximately in the center of this side.

Description: Historic Structure 8, the Hospital, was designed as a two-story structure and it was compatible with the other buildings erected at Fort Scott. As is the case with the previously described buildings, the structure lacked a true basement and the ground floor was considered to be the basement, while the upper floor was considered to be the main floor. The dimensions of the structure, according to Thompson (1967:181 and 1968:43) are variously given as either 52 ft by 48 ft or 32 ft by 48 ft. A 10 ft wide porch or verandah ran completely around the main floor of the building and was supported by stone pillars. Historic Structure 8 was apparently utilized as a hospital from 1844 up until the 1853 abandonment of Fort Scott by the military. The Hospital building was sold by the army in 1855 and the town of Fort Scott purchased it. Prior to this time, the structure had been used for public purposes, as it served as a polling place for the election of members to the Territorial Council and to the House of Representatives. It also served as a meeting hall for religious organizations. From 1855 until the Civil War, the Hospital structure served several private uses. Mr. J.S. Simms established a law office in one of the doctor's offices and local groups rehearsed a play on the upper floor of the structure. One of the former wards was used as a guardhouse by Fort Scott's local militia in January of 1859. During the Civil War, the army rented the structure and used it as a hospital. Just prior to the Civil War, the Hospital had housed Fort Scott's first public school. After the war, the Hospital was again used as a school, first for white students and later as a school for Negro children. The structure was converted into a bus barn sometime around 1900. When this site was first visited by archeologists from the Society in 1968, the framework of the building had been covered with sheet tin and the interior was being utilized as a storehouse for a furniture store. The verandahs had been completely removed and much of the interior of the structure had been disturbed.

Historic Structure 9,
Guardhouse

Condition: Structure removed.

Constructional History: Work on the guardhouse began on October 1, 1844. The date of completion of this structure is not known although it was completed by the time that the 1848 plan of the fort had been compiled.

Location: The Guardhouse was located on the southwest side of the parade ground and to the east of Historic Structure 8.

Description: The Guardhouse was a one-story building made of limestone. It had a 10 ft porch along the front which lined up with the porches of the hospital and the infantry barracks. The porch was supported by four pillars. The interior of the building was divided into four rooms and one of these was subdivided into three cells. The building was 32 ft square.

Occupancy: While the completion date for the structure is not known, it presumably was completed sometime prior to 1848 and presumably was used as a guardhouse by the military from that time until the abandonment of Fort Scott in 1853. The building was advertised for sale by the army in 1855, but it is not known who purchased the building or for what use. It may have been purchased or acquired by the town of Fort Scott for use as a jail. It is also possible that the city did not acquire the Guardhouse until 1870. The building was rented by the army during the Civil War and was converted into a part of the general hospital complex. The guardhouse was used as a city jail in the postwar years. The structure was eventually removed and was replaced with a modern building that served as police headquarters and city jail for the town of Fort Scott.

Historic Structure 10,
Dragoon Stables

Condition: Structure removed.

Constructional History: Two sets of Dragoon Stables were originally planned for Fort Scott. One was to be adjacent to each of the two dragoon barracks on opposite sides of the parade ground. The two companies of dragoons was reduced to one in 1843 and it was decided not to build the second set on the east side of the parade ground. The construction on Historic Structure 10 apparently began sometime before October of 1843, as the structure was covered and nearly weather-boarded by that date. The stable was not finished by November of 1843, but dragoon horses were stabled within it as of that date. The permanent flooring may have been laid by October of 1845, but the fort plan of 1848 indicates that some of the interior work on the structure had not yet begun.

Location: Historic Structure 10 was located on the northwest side of the parade ground and immediately to the south of Historic Structure 5, the Dragoon Barracks.

Description: Historic Structure 10 was a framed and weather-boarded building which had doors at either end and in the middle along its west side. A row of stalls, numbering 68 on the 1848 plan, extended along both sides of the structure. Small rooms, presumably used for tack and other items, were located at the north and south ends of the structure. The stable was a single-story structure which had a small loft. The Dragoon Stable evidently measured approximately 210 ft long by approximately 32 ft wide.

Occupancy: As indicated previously, Historic Structure 10, the Dragoon Stable was in use as a stable from at least November 1843 until the abandonment of Fort Scott in 1853. A variety of enterprises were located in the Dragoon Stable area after the structure was sold by the army in 1855. In 1858, Mr. C.W. Drake, a tinsmith and retailer, opened a store which dealt with cooking and heating stoves, tin ware, kettles, and stove pipe. Union troops at Fort Scott utilized the former stable as a barracks in 1861 when the town of Fort Scott was threatened by Confederate troops. Drake resumed his business briefly in the building in April of 1862, but the army again took over the building and used two-thirds of it as a warehouse for commissary stores. In 1870 or 1871, two men named Check and Benner had acquired the building and opened a feed and livery stable. The structure was removed at some unknown time and when the site was first visited by the Society in 1968 the structure area was occupied by a lumberyard and a sheet metal works.

Historic Structure 11,
Post Headquarters and Ordnance Stores

Condition: Structure removed.

Constructional History: The frame for the Post Headquarters and Ordnance Stores building had been erected by October of 1845 and the building was considered completed in 1848.

Location: The Post Headquarters and Ordnance Stores building was located off the north corner of the parade ground.

Description: Historic Structure 11 was a framed and weather-boarded, one-story building which functioned both as the post headquarters and as the ordnance storerooms. The structure evidently contained three rooms although these may have been partitioned, as the 1855 advertisement for sale of the building described it as having five rooms. This structure did not have a verandah. The structure measured at least 56 ft long by 32 ft wide.

Occupancy: The Post Headquarters and Ordnance Stores building was put up for sale in 1855 and was purchased by ex-Sergeant Zeal. Zeal was living in Missouri at the time and apparently he did not inhabit the structure, but either rented or resold it. In December of 1858, a man named Blake Little was living in Historic Structure 11 and had a store there. In fact, Little was killed during a raiding party led by Jayhawker James Montgomery on December 16, 1858 in this very building. This was one of the violent proslavery/antislavery confrontations that occurred in Fort Scott in the years immediately preceding the Civil War. During the Civil War, the army rented Historic Structure 11 but for what use is not known. The structure was apparently acquired by Justice of the Peace Margrave at about this time. The structure was still standing in 1870 and the eventual date of its demise is not known. A small frame house stood on the site in the 1960s.

Historic Structure 12,
Quartermaster and Subsistence Storerooms

Condition: Structure still present but modified.

Constructional History: Historic Structure 12 was one of the first structures to be completed at Fort Scott and is reported to have been occupied as early as June, 1843.

Location: The Quartermaster and Subsistence Storerooms was located off the east corner of the parade ground and was located to the east of Historic Structure 4.

Description: Historic Structure 12 was apparently quite similar in appearance and size to the Post Headquarters and Ordnance Stores, Historic Structure 11. Historic Structure 12 evidently contained four rooms and it was the only building dating from this early period at the fort which had a basement. It was said to be 60 ft long by 32 ft wide.

Occupancy: Historic Structure 12 was evidently utilized by the military from June of 1843 until the army abandoned Fort Scott in 1853. Little is known about the specific history of this structure after it was offered for sale by the army in 1855. It apparently was not rented by the army during the Civil War. The building was standing in 1871 and was thought to be destroyed or removed at some later time. A large frame residence located in the vicinity of the structure during the 1960s was initially thought to be a modern structure, but was recognized by Tom Barr to be the original Historic Structure 12 and was saved.

Historic Structure 13,
Quartermaster's Stables

Condition: Historic Structure 13 is not a single structural element. Instead, it apparently consisted of a large enclosed compound with adjacent buildings. It is quite possible that Historic Structure 30, an extant stone building, was associated with Historic Structure 13. In any case, any evidence of the enclosure that surrounded the Quartermaster's Stables area is gone.

Constructional History: Construction of the Quartermaster's Stables area was apparently one of the last priorities in the construction schedule for Fort Scott. Construction in this area may not have been undertaken until as late as 1848. The 1848 post plan of that year indicates that work had started on a large enclosed compound east of the quartermaster's building that was labeled "QUARTERMASTER'S STABLES, SHOPS, ETC.".

Location: Historic Structure 13, or the complex so designated, was located to the east of the east corner of the parade ground.

Description: Historic Structure 13, the complex described herein as the Quartermaster's Stables, was apparently a large rectangular area which had an interior court. Thus, the area designated as Historic Structure 13 may have included more than one structure or building. The interior court was apparently designed as a corral and work area, while a stable was located on the east side which may have had 21 stalls. Six additional small rooms may have been located north of the gate of the enclosure on the west side and these may have served as corn and oat cribs. Three larger rooms were apparently planned for the west side of the enclosure, south of the gate. An 1848 report by Captain Burbank (Thompson 1968:66) indicates that in the fall of that year the foundation had been laid for a stable which was intended for the animals of the Quartermaster's Department. A February 1849 report by Quartermaster Morrow (Thompson 1968:66) suggests that the Quartermaster's Stables had been finished by that year. Morrow also requested authority to build a hay barn with an attached shed, which may have been intended for location within the same general area. As indicated earlier, Historic Structure 30, a stone building, is located within the general area of the Quartermaster's Stables and compound and may be associated with this early phase of the constructional history of Fort Scott. In fact, it may be one of the structures referred to in the army documents.

Occupancy: As indicated, construction of the Quartermaster's Stables did not get underway until circa 1848, although some elements of the Quartermaster's Stables were evidently being utilized by as early as 1849 and presumably continued in use up until the 1853 abandonment of the post by the military. The buildings or structures within the area were apparently offered for sale by the army in 1855. The specific locations of the buildings were

not specified. A number of these buildings were grouped together and this grouping included such quartermaster-related activities as a blacksmith shop, a carpenter shop, granaries, root houses, and an ice house. It is possible that all of these structures once existed within the general limits of Historic Structure 13, but there appears to be a lack of documentary evidence to support this assumption. The army evidently rented at least some of the structures within the general area of Historic Structure 13 during the Civil War. An 1871 sketch of Fort Scott (described by Thompson 1968:67) shows a compound that follows the general plan of 1848. This sketch indicates that a long building was located along the east side of the compound and two buildings, separated by a gateway, were located on the west side of the compound. Smaller structures were apparently located on the north and south sides of the compound. The compound apparently occupied an area of approximately 140 ft by 115 ft. The history of the Historic Structure 13 area after 1871 is not known. In the 1960s the area was covered with a scattering of modern homes that also included Historic Structure 30, the stone building that has been alluded to herein and which is described in more detail later.

Historic Structure 14,
Bake Shop

Condition: Structure still standing.

Constructional History: The only reference that is known concerning the construction of the Bake Shop is the 1848 plan of the post which indicates that the Bake Shop was completed by that date.

Location: The Bake Shop was apparently located about 25 ft to the northeast of the Quartermaster's Stables, Historic Structure 13. In terms of the overall layout of the fort, this would make it the most northeasterly of any of the structures at the fort which date from the 1842 to 1853 period.

Description: The 1848 plan of Fort Scott indicates that the Bake Shop was a small building which had two rooms, and that the larger of these rooms contained an oven in its northeast corner. In the 1855 advertisement for sale, the army indicated that the building was a stone building that measured 37 ft by 18 ft and which contained two rooms. The stone building that is still present upon the site is of approximately that size and sits upon what appears to be the same site. As is indicated in the previous references, the interior of this standing structure is divided into two rooms.

Occupancy: The Bake Shop was apparently completed and in use by 1848 and presumably continued in use until the abandonment of Fort Scott in 1853 by the military. The subsequent history of this

structure is little known. It apparently was offered for sale by the army in 1855, but it is not known whether it was subsequently utilized by civilian personnel or by Civil War military personnel. The present building that stands on the site was utilized in recent years and had a porch added onto the front and a frame addition on the rear.

Auxiliary Structures: Thompson (1968:72) noted traces of stone work in the immediate vicinity of Historic Structure 14 and suggested that these might have been related to this structure.

Historic Structure 15,
Well

Condition: The location of the Well, when visited in 1968 by Society archeologists, was covered with a concrete slab and no trace of the original canopy was present.

Constructional History: The 65 ft deep Well had apparently been dug (most of it blasted out) by October 1843. The date of construction of the Well canopy is not known although it may have been finished by 1848.

Location: The Well is one of three structures that were originally located within the limits of the parade ground (Historic Structure 15, Historic Structure 16 and Historic Structure 17) and it was located close to Officer's Row, or at the northeast end of the parade ground and centered from northwest to southeast.

Description: The actual Well was apparently a 65 ft deep well which had been blasted through the various layers of limestone, slate and coal which are present on the bluff where Fort Scott is located. The canopy which eventually covered the Well was apparently octagonal and had eight white columns that supported a low-domed roof.

Occupancy: The Well presumably was utilized from the time that it was completed in October of 1843 until the army abandoned the post in 1853. In 1870, the Well was cleaned out and a pump was inserted in it so that it could once again be put into use. At the time that the site was visited by the Society, the Well was no longer in service and was covered with a concrete slab.

Historic Structure 16,
Flagpole

Condition: Structure not present when visited by the Society in 1968.

Constructional History: Historic documentation does not indicate

whether a flagpole was ever actually erected at Fort Scott during the period from 1842 to 1853. The flagpole had evidently not been erected by 1848 because of a lack of suitable timber from which to make it. Thompson (1968:53) indicates that an 1861 newspaper article contained an editorial suggesting that a flagpole be erected on the plaza.

Auxiliary Structures: Thompson (1968:53) notes that the 1848 plan shows an unidentified object that had been erected on the south side of the Flagpole site and he suggested that this may have been a sundial.

The Flagpole, if it was actually present during the period from 1842 to 1853, was evidently located in the exact center of the parade ground.

Historic Structure 17,
Powder Magazine

Condition: Structure removed.

Constructional History: By October of 1843 the stone foundation for the Powder Magazine had been constructed and a year later the Powder Magazine had been finished except for the tinning of the roof. By 1845 this structure had been completed.

Location: The Powder Magazine was located at the southwest side of the parade ground in a line with the Well (Historic Structure 15) and the Flagpole location (Historic Structure 16).

Description: The Powder Magazine at Fort Scott was apparently quite similar to a powder magazine that had been established earlier at Fort Leavenworth. Historic Structure 17 was an octagonal building which had walls that were made of brick and it had a tin roof. It also had a floor, but the composition of the floor is unknown. The 1848 plan suggests that the Powder Magazine had a diameter of approximately 20 ft.

Occupancy: Since the construction of the Powder Magazine was finished in 1845, it was presumably utilized for storage of powder from that date until the army abandoned Fort Scott in 1853. The building was offered for sale by the army in 1855, but no description was given. It is not known if anyone purchased the structure at that time. During the Civil War, the army rented the building, presumably for its original purpose. By 1868 the structure had been completely torn down and the constructional materials had been utilized in the building of other structures in the town of Fort Scott.

Historic Structure 30,
Stone Building

Condition: Structure still standing.

Constructional History: Archival and documentary evidence have provided little information as to the constructional history of Historic Structure 30. As indicated previously, the structure is within the general limits of Historic Structure 13, the Quartermaster's Stables, and it may be a structure that was associated with that complex. This is suggested by both the constructional material used in its building (local limestone and timber) as well as by the lack of technical skill shown in its stone construction. Thompson (1968:68) suggests that the crudity of the stonework exhibited on the building may have been a result of the utilization of inexperienced workmen (possibly enlisted men). Thompson (1968:69) suggests several theories as to the origin of the structure. One theory was that this was a remnant of the old army quartermaster complex (Historic Structure 13). In fact, Thompson suggests that this may have been the location of the blacksmith shop which was mentioned in the army's 1855 advertisement for sale of the structures at Fort Scott. The other theories advanced by Thompson would suggest that the structure was built in the period after 1853.

Location: Historic Structure 30 is located within the general limits of Historic Structure 13, the Quartermaster's Stables. In fact, the structure occupies the west corner of the rectangle defined as Historic Structure 13.

Description: Historic Structure 30 is a one and one-half story stone building which also incorporates native walnut in its interior. The south end of the structure is a solid stone wall without any openings, while the north end has a large door-like opening in the middle. The west side has two double windows, a door on the ground level and a single opening above the door. A door is also located at the east side, toward the north end, and a single opening is located directly under the eave and about the middle of the wall.

Occupancy: No historic documents or archival information is presently available to suggest when Historic Structure 30 was occupied or for what purposes.

Historic Structure 31 and
Historic Structure 32,
Stables and Carriage Houses

Condition: Both structures were still standing in 1968.

Constructional History: These two structures were apparently both built after the military abandonment of Fort Scott in 1853. Neither of the structures appear on the 1848 plan of Fort Scott nor do they appear on the army's 1863 map of Fort Scott.

Location: Historic Structure 31 is located immediately behind Officer's Quarters #2 (Historic Structure 2) and Historic Structure 32 is located immediately behind Officer's Quarters #4 (Historic Structure 4).

Description: Historic Structure 31 and Historic Structure 32 are essentially identical buildings that are stone structures that have been identified as stables and carriage houses. The two structures are very carefully built (in terms of masonry) and both have large lofts. Thompson (1968:74) concludes that these two structures were built sometime after 1871 and he suggests that they were erected by civilian residents of the officer's quarters who had purchased those buildings after the army abandoned them in 1853.

Historic Structure 33,
Wagon Scale House

Condition: Structure either removed or never built.

Constructional History: A small frame house, reputed to be a wagon scale house associated with the Fort Scott military period, was still standing just east of Historic Structure 9 when Erwin Thompson conducted his historic studies at Fort Scott (1967, 1968). An unidentified source had informed Thompson (1968:74) that this was the oldest civilian house still standing at Fort Scott and that it was originally constructed as a hay scale house. Charles W. Goodlander (1900:7) noted the presence of a structure in this vicinity in 1858 when he first arrived in Fort Scott:

> I walked off with him, going down the sidewalk along the present row of buildings facing the plaza, and then across the plaza to the house east of the present calaboose, where a saloon was kept by a man named Head. This building had been the wagon scale house for fort purposes.

Thompson (1968:75) could find no support for Goodlander's statement that the army had a scale house during the period from 1842 to 1853. The general area where this frame house stood was in an area that had originally been planned as a dragoon stables. Thompson concluded that this house was constructed in the period after the abandonment of Fort Scott by the military in 1853.

Location: Historic Structure 33 was allegedly located across Lincoln Avenue just to the east of Historic Structure 9, the Guardhouse.

Description: As indicated above, an extant structure consisting of a small frame residence was located on the alleged site of Historic Structure 33 when the site was first visited by Erwin Thompson in the 1960s. He noted that it appeared to be of very recent origin although he did not carefully inspect the interior of the structure. A photograph of this structure is included in Goodlander's memoirs about Fort Scott (1900:11) and the structure shown seems to be inconsistent with the other structures located at Fort Scott that do date from the period of 1842 to 1853.

Occupancy: As has been indicated, some sort of structure apparently existed in the location of Historic Structure 33 at least as early as 1858 (Goodlander 1900:7). Whether or not the frame residence that was on this site when the site was visited by Thompson is the same structure that is depicted in the Goodlander manuscript is not known.

THE ARCHEOLOGY OF FORT SCOTT: HISTORY OF INVESTIGATIONS, RESEARCH ORIENTATION, AND METHODOLOGY

The archeological investigations conducted by the Kansas State Historical Society at the site of Fort Scott (14BO302) were performed during the period from 1968 to 1972. All of the archeological excavations were under the direct supervision of Thomas P. Barr, the Society archeologist who was in direct charge of the Fort Scott project. The overall project supervisor was Thomas A. Witty, Jr., state archeologist. The archeological investigations conducted by the Society were just a part of the Society's overall contribution to the Fort Scott project. From the early 1970s up until 1978, Barr was intensely involved in the restoration and reconstruction of Fort Scott. During this period, he functioned as expert witness during nearly all phases of the restoration and site development.

The research contract (No. 14-10-2:920-46), entered into between the Society and the National Park Service in 1968, specified the excavations and investigations to be conducted by the Society and it also established a research orientation for the work which was to be performed. This contract stated that the Society was to test and/or excavate Historic Structures 1 through 17, 30, 31, and 32. This work was to serve as an aid in locating and delineating structural features for eventual stabilization, restoration, or reconstruction of selected structures. The scheduling of the actual Society investigations at Fort Scott was affected by a number of factors, most of these outside of the control of the Society. For example, modern buildings were located on top of a number of the areas to be investigated (e.g., HS3, HS5, HS6, HS7, HS9, HS10, HS11, and HS13). Obviously, no investigations could take place in these locations until the modern structures had been removed. Delays in land acquisition and further delays in the demolition of these standing structures forced the Society to maintain a very flexible schedule for investigations. Furthermore, the restoration plan for Fort Scott was well underway and planners sometimes needed immediate data from the archeologists so that their restoration attempts would have the highest probability of being historically accurate. This was particularly the case in terms of Historic Structure 8, the Hospital, where the Society conducted two major excavations (one in October of 1968 and the other in September of 1970) to provide specific information about external and internal features of that standing structure for use in the restoration attempt. The first of these investigations documented the presence and location of limestone porch support footings and the second investigation provided information about the location and nature of two internal chimney placements.

The complex which has been recognized by archeologists and historians as Fort Scott was deliberately oriented by its builders to

utilize existing ground contours. Thus, the fort parade ground and the structures surrounding the parade ground that date from the 1842 to 1853 period were oriented 45 degrees to the east of north. To simplify discussion of the fort and its structures, the northeast side of each structure and the northeast side of the parade ground will herein be referred to as if they were north and all buildings will be described as if they actually had a north, east, south, and west side.

HISTORY OF INVESTIGATIONS

Archeological site 14BO302, Fort Scott, was first formally visited by a Society archeologist on February 12, 1968, and it was on this date that the site received its official designation as 14BO302, following the trinomial method of site designation proposed by the Smithsonian Institution, River Basin Survey. This is the scientific method for designating all archeological sites in Kansas and its usage is employed by the Kansas Antiquities Commission, as well as by archeologists at the Kansas State Historical Society, the University of Kansas, Kansas State University, and Wichita State University.

1968 Investigations

The first archeological excavations undertaken at site 14BO302 by the Society were performed over a two-week period during May of 1968, and this work was centered around the suspected location of Historic Structure 17, the Powder Magazine. This excavation revealed portions of the footing trench of an octagonal structure which measured approximately 8 ft on a side and which had a maximum diameter of circa 20 ft.

1968/1969 Investigations

The Society resumed the investigations at Fort Scott during September of 1968 and worked in the area (as weather permitted) until mid-January of 1969. The first structure investigated during this second season of excavation was the east one-half of Historic Structure 4, Officer's Quarters #4. Each of the officer's quarters was reputed to be of uniform size (58.5 ft by 37 ft) and each was designed as a duplex. The west one-half of Historic Structure 4 (the west half of the duplex) was still standing when the Society visited the site, but the east one-half had been destroyed by fire in 1945. The Society investigations of this structure were thus conducted in the eastern one-half. Excavations revealed three of the seven limestone column supports for the south verandah, a large percentage of the structure footings, two fireplace foundations, and a flagstone porch area on the north side of the structure. A cement-lined cistern, of recent origin, was uncovered to the northeast of the structure.

A second officer's quarters, Historic Structure 3, was also investigated during the 1968/1969 field season. This structure had

been demolished sometime around 1900 and a two-story house was subsequently constructed on the site which obscured the west one-half of the original foundation. This modern house was removed in November of 1968 so that archeological investigations could be performed. The modern house had been constructed with a full basement and the presence of this feature obscured all traces of the original foundation in this area of Historic Structure 3. Elements of the perimeter foundation walls were discovered on the east, north, and south sides and portions of a flagstone verandah were uncovered on the north and west sides of the structure. Six of the original seven column supports for the south verandah were also discovered.

The location of Historic Structure 11, the Post Headquarters and Ordnance Stores, was also investigated during the 1968/1969 field season. A recent house had been built over the original HS11 area and this house had a basement associated with it. The basement foundation had eradicated any evidence of HS11 within the area affected by modern construction (basically, much of the east footing of HS11 had been removed). The north, south, and west footings were present and were uncovered, and these footings revealed a foundation that measured at least 56 ft long and 32 ft wide.

While the area where Historic Structure 6 was thought to be located was still obscured by modern buildings during the 1968/1969 field season, the Society's archeology crew was able to perform extensive testing to the east of the Historic Structure 6 area, in a location where stone rubble had been noted previously. In this location, secondary structures were located which may have been associated with HS6, an infantry barracks. A stone footing for a two-room structure was uncovered which had overall dimensions of 26 ft long by 16 ft wide. A stone-lined latrine and drainage system was situated immediately northeast of the two-room structure. The recovered evidence of the structure and latrines are in the same approximate location of a two-room structure which is identified on the 1848 plan of Fort Scott, and the scale of the structure shown on that plan suggests that it was of approximately the same size as the presently described archeologically revealed structure.

The first of two major excavation efforts was performed in the vicinity of a still-standing structure, Historic Structure 8 (Hospital), during the 1968/1969 field season. The superstructure of the first and second stories of the Hospital were present at that time, but the pitched roof, two chimneys, and the verandah had all been removed. The 1968/1969 excavations in the Hospital area were confined to the outside of the existing structure. This work uncovered a large portion of the flagstone verandah that originally encircled the ground floor of the Hospital and which extended out for a distance of 10 ft from the structure. Two areas were noted (each was approximately 10 ft square) which were lacking in flagstone. One was situated on the east side at the south end of the building and the other was located

on the west side at the south end. These were evidently storage rooms which were attached to the Hospital, but which were not directly accessible from the ground floor interior of the structure. Brick rubble from chimneys was noted in two locations within the eastern of these two auxiliary structures. A small amount of flagstone from a probable sidewalk was noted to the rear of the Hospital verandah flagstone, but investigations within this area were curtailed because of the ongoing demolition of other structures in the vicinity of the Hospital.

One additional area, Historic Structure 33, was tested during the 1968/1969 field season. Historic Structure 33 was the alleged location for a wagon scale house which had supposedly been located just to the east of Historic Structure 9, the Guardhouse. While the test excavations conducted in this area did uncover isolated artifacts, no evidence of a foundation or other structural elements was revealed.

1970 Investigations

A short field season was held at Fort Scott during September of 1970 by the Society's Archeology Department. This was actually a joint effort between the historical architects of the National Park Service and the Society archeologists, and it was designed to provide the architects with needed information about four of the fort structures. The outcome of the work was successful as it allowed for the completion of finalized architectural drawings to be used in the fort's restoration.

The most extensive investigation conducted during September of 1970 took place within the limits of Historic Structure 8, the Hospital, where information was sought concerning the placement and nature of the two chimney foundations. Stone and brick foundation remnants were identified at the east and west sides of the Hospital structure which are interpreted to be the residue of the original chimney foundations. A preliminary investigation was also conducted in the area of Historic Structure 15, the Well, and flagging was set in the vicinity of Historic Structure 17, the Powder Magazine, to indicate the limits of the octagonal-shaped footing trench which had been uncovered in May of 1968. The presence of an oven foundation was also investigated in conjunction with a reconnaissance of Historic Structure 14, the Bake House. The oven foundation was still partially extant, but it lay underneath flooring which had been laid within the Bake House at sometime subsequent to the army's abandonment of Fort Scott in 1853.

1971 Investigations

The 1971 archeological field season at Fort Scott was conducted from June through August. Extensive excavations were conducted on three structures; Historic Structure 6 (Infantry Barracks), Historic

Structure 7 (Infantry Barracks), and Historic Structure 9 (Guardhouse). The locations of all three of the investigated structures had recent foundations superimposed over the period (1842 to 1853) foundations and this complicated the archeological interpretations. Nevertheless, each of the investigated structures still had at least portions of the original foundations still present.

The foundation of the Guardhouse, Historic Structure 9, was the best preserved of the three foundations investigated during the 1971 field season. In addition, the foundation of this structure had been sealed off from later deposits to some extent, and the result was that a higher percentage of in situ period artifacts was recovered from the Historic Structure 9 investigations than from any other comparable structure. Many of these items were obviously military-related items (i.e., nine of the 34 military buttons recovered during the excavations of Fort Scott were found in the area of Historic Structure 9). While portions of the east foundation were apparently removed by more recent construction, the other external walls, corners, and internal footings were still present, and these elements indicated that the structure was of the dimensions (32 ft square) suggested by historic documents. Also uncovered were four stone column supports on the north side of the structure. Additional flagstone was noted at the southeast corner of the structure.

The foundation for Historic Structure 6, an infantry barracks, had been much altered subsequent to the demise of the building in the period after 1871. The foundation of a modern brick building (with a basement) almost totally obscured the interpretation of the northwest corner and north wall of the structure. The actual stone from the footings was uncovered only along the south wall line, although the footing trenches from several other foundation elements were present. Only two of the column supports for the west verandah were still present, although historic sources suggest that six columns were originally placed on the west side to support the heavy 10 ft wide porch or verandah that projected from this side of the building. One of the chimney foundations (on the south wall) was still partially extant.

Like Historic Structure 6, the second infantry barracks, Historic Structure 7, had been severely damaged by modern construction in the period following its demise. Nevertheless, the east wall and an associated chimney footing were present and elements of the north and south walls were also preserved. One external column support and one internal wall support were present as well as elements of two internal footings. An area of flagstone was uncovered at the southwest corner of the structure.

1972 Investigations

The final series of archeological investigations at Fort Scott were conducted during the period from April through July of 1972. The structure locations that received study at that time included Historic Structure 5 (Dragoon Barracks), Historic Structure 10 (Dragoon Stables), Historic Structure 13 (Quartermaster's Stables), Historic Structure 15 (Well), and Historic Structure 16 (Flagpole).

The stone footings for the Dragoon Barracks (Historic Structure 5) were found to be nearly complete, and the information provided by the archeological investigations thus played a very critical role in the preparation of conjectural architectural drawings to be used in the eventual restoration attempt. The entire perimeter stone foundation was present and three additional stone footings (spaced equidistantly) were noted along the west wall and extending out from the west foundation wall. These three footing extensions may have been added on at a late date. Other external features noted were five of the original six stone footings for the heavy columns which supported the porch which extended off the east side of the structure. Two stone chimney foundations (of different sizes) were uncovered on the inside of the north and south structure footings, and all three of the east-west internal room support footings were discovered in situ. Four square internal footings were also recovered in their entirety.

The Dragoon Stables area (Historic Structure 10) had been more severely impacted by postfort construction than had the Dragoon Barracks and it therefore contained less of the original foundation information. In fact, the only corner of the footing that could be verified by the archeological investigations was the northeast corner. Sections of both the east and west foundations were uncovered which still had stone in place, but the south wall line (and both the southeast and southwest corners) were missing. The presence of elements of both the east and west foundations allowed the archeologist to verify that this structure was 32 ft wide, as had been indicated on the 1848 plan of Fort Scott. Since only 195 ft of the structure's length was extant, the original length of the structure (reported to be 210 ft) could not be verified.

Archeological investigations in the area of Historic Structure 13 (Quartermaster's Stables) were limited to cross section tests and included the uncovering of two corners of the complex (northwest and southeast corners) so that projections could be made for ground outlining of the original complex.

Archeological excavation performed in the area of Historic Structure 15 (Well) revealed major portions of the foundations for the Well canopy. This octagonal-shaped structure had external side lengths of approximately 8.5 ft and a diameter of circa 20 ft. Six of the eight stone footings for column supports were uncovered as well as portions of an octagonal-shaped area of carefully laid flagstone which evidently originally formed a ground level footing just to the outside

of the canopy supports, and which was probably originally integral with a flagstone sidewalk complex that quartered the parade ground.

The area where Historic Structure 16 (Flagpole) was identified from historic sources was in the center of the parade ground, to the north of the Powder Magazine (Historic Structure 17) and to the south of the Well (Historic Structure 15). Unfortunately, as was the situation in other areas of Fort Scott, this area had suffered considerably from modern intrusion subsequent to the abandonment of Fort Scott by the army in 1853. When first visited by Society archeologists, this area contained a modern flower bed with a retaining wall. In the summer of 1972, this flower bed was removed with construction equipment and the area was carefully scrutinized by archeologists in search of any evidence that would verify that a flagpole ever existed in this location. No such evidence was found and, while this does not demonstrate conclusively that a flagpole was never erected in the center of the parade ground, it certainly suggests this conclusion.

THEORETICAL ORIENTATION

The archeological investigations that were performed at site 14BO302 were designed and implemented as a necessary step in the planned restoration of the original (1842 to 1853) fort complex. Fort Scott was originally constructed for the use of dragoon and infantry personnel during the period from 1842 to 1853. It later saw limited military use during the Free State conflicts of the 1850s, the Civil War, and the railroad strike of 1869 to 1872. The development of the town of Fort Scott around and over the original fort area in the period after 1853 had resulted in the modification of all nine surviving structures and had caused the destruction of above-ground evidence for all of the remaining structures that dated from the early fort period. Controlled archeological excavations were utilized to accurately locate the sites of structures that had been obliterated and to establish original dimensions and grades to buildings which were extant.

Historic documents and photographs were first utilized to provide information as to the approximate locations of missing structures and structural elements. Twenty areas (HS1 to HS17 and HS30 to HS32) were initially selected for archeological investigation. One additional area, HS33, was eventually added to this list. Two of the surviving structures, Historic Structure 4 (Officer's Quarters #4) and Historic Structure 8 (Hospital) were missing significant elements of the original buildings and fairly extensive archeological excavations were conducted in these areas to uncover and document surviving subsurface evidence of these missing elements. The remaining structures that had survived were all carefully investigated by the project archeologist, Tom Barr, as well as by architects and historians from the National Park Service. Excavation of these structures was not required because

of the large amount of original fabric (as indicated on historic photographs and in historic documents) which had survived. Extensive archeological excavations were performed in twelve areas where there was little or no surviving above-ground information about the nature of the missing structures. Test pits, trenches, and larger scale excavations were performed in other areas of the fort complex where the project archeologist had reason to suspect that other fort-related structures might once had stood.

The primary goal of the archeological excavations performed at Fort Scott was to provide information about the nature and size of the original fort structures. Explorations outside of the suspected structure locations were limited in scope. Similarly, while it was anticipated that some fort-related artifacts would be discovered during the excavations, the collection of such specimens was considered as a secondary objective.

METHODOLOGY

Archeological site 14BO302 occupies an area of slightly less than six acres within the city limits of the town of Fort Scott. Specific areas of archeological interest within the fort complex were designated either as Historic Structures, Areas, or Features. The Historic Structures were numbered in the same sequence as set forth in the master plan for Fort Scott (National Park Service 1967) and in two publications by Erwin Thompson which detail the history of the fort area (1967, 1968). Specific areas of archeological interest within the fort complex which, because of their locations, could not be conveniently subsumed under one of the Historic Structure numbers were designated either as Areas or as Features. An Area was a location within the site where a complex of presumably related cultural materials was identified. Area designations are convenient units for horizontally separating materials within a broad site area. Areas are numbered by utilizing the last two numerals of the current year (e.g., 72) and then adding individual designators (e.g., 721, 722, 723, etc.) in the order in which the areas are assigned. This method for subdividing a site was seldom employed in the Fort Scott investigations because of the fact that the majority of the investigations were restricted to locations which already had Historic Structure numbers. Nevertheless, it proved useful in cases where subsequent excavations (in separate years) were held within the same Historic Structure location. Since the Area number is included (along with site number, catalogue number, HS number, etc.) on the individual recovered artifacts, it was immediately obvious to the site analyzer that a specific artifact was recovered in one year rather than in another.

Feature designations were utilized as identifiers for any notable observation or find in the site area. Thus, artifacts as well as structural features and soil disturbances could be awarded feature status. Such status prompted their individual recording upon prepared

record forms. Features were not numbered consecutively. Instead, each designated feature was given the number of the record page upon which it was recorded.

Vertical and horizontal control of materials found within the site was obtained using standard measuring devices such as 100 ft steel tapes, line levels, engineer's eye level, stadia rod, alidade, and plane table. The English system for measurement was utilized during the excavations and in this report, except that artifacts are described using the metric system. The photographic record from the Fort Scott excavations includes both color slides and black and white prints for most items or complexes which were so recorded.

FORT SCOTT STRUCTURAL EVIDENCE

The following descriptions of the archeologically revealed structural remains uncovered at Fort Scott are presented in summary form. The information included herein, including maps of the investigations, was made available to the National Park Service during the restoration phase of the Fort Scott project. The archeological investigations of a number of the studied structures were not undertaken until other restorations were already underway. Close correlation of the rapidly accumulating archeological information between the Society and the National Park Service ensured that the restorations could proceed with minimal delays.

As has been noted in the section of this report which deals with the history of Fort Scott, the majority of the structures which date from the early fort period (1842 to 1853) share many similarities. They were typically built on the existing ground elevation and footings were constructed of native limestone slabs. The structures were framed and weather-boarded and incorporated much native material (e.g., oak, walnut, locally manufactured mortar and plaster, etc.). Much of the timber utilized in the construction of the buildings was sawn in a sawmill established by the army at Fort Scott for that very purpose. The basic plan of the fort, and the plans of the individual structures, were prepared by military personnel (such as Captain Benjamin D. Moore and Captain Thomas Swords) who had received at least some training in architecture and engineering. The construction was accomplished using both civilian and army personnel and, while some of the workers were skilled craftsmen, the majority were unskilled. Shortages of workers, construction and building hardware, tools and money hindered the fort's completion throughout this early period. Remarkably, most of the structures which were initially planned for Fort Scott were eventually completed before the army abandoned the fort complex. Even more remarkably, seven of the original fort structures have survived (wholly or in part) until the present day.

Historic sources, and surviving structures, indicate that a number of the fort-related structures were built to a common plan or plans. The four officer's quarters were all nearly identical duplexes and the three enlisted men's barracks were evidently quite similar to each other, though built on a different plan than the officer's quarters. The Post Headquarters and Ordnance Stores and the Quartermaster and Subsistence Storerooms may also have shared a similar plan, though they differed in at least some significant details of their construction and utilization. The Well canopy and the Powder Magazine, while they differed considerably in their construction styles, were both octagonal structures of roughly similar dimensions. While the general plans of a number of related structures were quite similar, the archeological investigations of Fort Scott have illuminated several differences between reputedly identical structures. For

instance, while the heavy porch supports of most of the structures were solidly based upon square limestone footings, at least one structure, Historic Structure 3, had porch support footings which were comprised of brick.

As has been noted, the Fort Scott complex was not established with its buildings and parade ground oriented to the cardinal directions (Figures 2 and 3). In fact, the parade ground and the structures are oriented almost exactly 45 degrees east of north. To simplify the following discussion about the fort and its structures, the northeast side of each structure and the northeast side of the parade ground will be referred to as if they were north and all buildings will be discussed as if they actually had a north, east, south, and west side.

OFFICER'S QUARTERS, HISTORIC STRUCTURES 1 THROUGH 4

The officer's quarters were four nearly identical duplexes which occupied an area immediately to the north of the parade ground (Figures 2 and 3). Officer's Quarters #1, a standing structure, is situated at the northwest corner of the parade ground and the remaining officer's quarters (of which #2 and one-half of #4 are still standing) are arranged in a row to the east of #1 and are numbered sequentially. A large vacant area was originally present between Officer's Quarters #2 and #3. This area had been set aside as a location for a Commanding Officer's Quarters, but this structure was never built. Interestingly, the Commanding Officer's Quarters did reach the advanced planning stage. On June 29, 1848, the quartermaster at Fort Scott, Lieutenant George W. Wallace, sent a plan and a cost estimate for the construction of a Commanding Officer's Quarters to Major General T.S. Jesup, Quartermaster General of the United States Army (Wallace 1848).

Each of the four officer's quarters that was actually constructed was designed to house two officer's families. Thus, by the time that construction of these quarters was completed, Fort Scott had accommodations for eight families of officers. As has been previously noted, two and one-half of the quarters are extant and these standing structures have become important elements in the Fort Scott restoration. Though each of these surviving buildings had been modified in the period after 1853, they nevertheless provided important information to guide the archeological investigations of the missing structures. Each of the officer's quarters was a two and one-half story wooden duplex which lacked a true basement and which had a foundation of native limestone. The structures were each divided into two equally spacious living areas by means of a north-south bearing wall which completely separated the two halves of each duplex. Each duplex had two fireplaces on each of the floors and these fireplaces were situated along the internal bearing wall. Since the fireplaces of each

duplex were set opposite the fireplaces of the other half of the duplex, only two chimneys were needed to vent the twelve fireplaces which were located within the entire structure. These chimneys were centrally located from east to west and were located on each of the sloping sides of the long roof. Thompson (1968:8) reports that each half of the ground or basement floor of each of the officer's quarters was divided into two rooms and also contained a long hall. One of these rooms was evidently utilized as a kitchen and the other as quarters for servants or slaves. The hall was large and may have served many functions (e.g., storerooms, workroom, sleeping quarters, etc.).

Each of the four officer's quarters was reputed to be 58.5 ft long and 37 ft wide. The foundation (including at least a footing trench for the internal load bearing wall which separated the duplexes) was constructed of native limestone. The structures were framed and weather-boarded, presumably with lumber produced in the army's sawmill at Fort Scott. The interior walls of each structure were lathed and plastered and may have been whitewashed or painted white (Thompson 1968:8). The floors of each structure were wood and the flooring (particularly of ground floor and porch areas) was evidently the last detail of construction for each of the structures, as well as for most of the fort structures. Each of the officer's quarters had two broad porches, one located on the south side of the building and the other on the north. These 10 ft wide porches ran the full east-west length of the buildings, 58.5 ft, and they were each supported by seven equally spaced columns which were firmly set on column supports. Each of the porches had two broad external stairways and these were located at the east and west ends of each porch. Flagstone was apparently laid under the porches and may have extended around the entire exterior perimeter of each structure.

The archeological excavations performed by the Society in the area of the officer's quarters were confined primarily to the locations where Historic Structure 3 (Officer's Quarters #3) and the east one-half of Historic Structure 4 (Officer's Quarters #4) were believed to have been located. The extant structures (HS1, HS2, and west one-half of HS4) were carefully studied by Tom Barr, the project archeologist, to gain knowledge about construction methods and techniques utilized by the builders.

Historic Structure 3, Officer's Quarters #3

The area where HS3 was thought to be located was partially overlain by a modern structure just prior to excavation. The two-story frame house that was present was razed in November of 1968 so that the required excavations could be performed. This structure had been constructed with a full basement and the presence of this feature obscured all traces of a portion of the foundation of HS3. The

excavation performed in the area of HS3 was extensive and included a total of nearly 4,500 sq ft of excavated fill. Structural information recovered during the excavation demonstrated the presence of a portion of early limestone-lined footing trenches, three chimney or fireplace footings that were associated with these early footing trenches, six column support footings, and sections of flagstone which evidently surrounded the perimeter of an early structure (Figure 4). Recent footings from the razed building were also recovered as well as elements of other recent footings that occurred outside of the inferred limits of either structure. The surviving elements of the exterior footing trench from the early structure indicated that a rectangular building had been situated here that had its long axis oriented east to west. The footing trench had an average width of 2 ft and limestone slabs (measuring circa 1 by 1.5 ft in horizontal dimensions) were present and had obviously been carefully placed within the trenches. The surviving elements of the north and south trenches indicated that the original structure had a width of 38 ft. The east wall or trench line was present in its entirety but, unfortunately, the west trench was missing completely. However, portions of an internal footing trench (also filled with limestone slabs that had not been severely disturbed) was uncovered and this feature paralleled the east wall or trench line. Along this internal footing trench, elements of three fireplace or chimney foundations were uncovered. Two of these were situated toward the south end of the internal footing and the third was located toward the north end and on the east side of the footing trench. This latter feature is the largest of the chimney or fireplace footings and it has a north-south dimension of 11 ft and an east-west dimension of 6.5 ft. The eastern of the other two fireplace footings measures 8.5 ft north-south and 4.5 ft east-west. The remaining fireplace footing was so incomplete that only the east-west dimension (5.7 ft) could be obtained. The two eastern chimney footings, the internal footing trench, and the surviving north, east, and south perimeter footings obviously outline a large room that was once a part of a larger structure. The room so defined had a north-south dimension of 38 ft and an east-west dimension (from the eastern edge of the footing trench to the center of the internal footing trench) of 26.2 ft.

Six rectangular column supports (measuring 2 ft east-west and 1.7 ft north-south) were identified on the south side of the interpreted structure and well outside of the footing trenches. The spacing of the six column supports suggests that a seventh support was originally present, although no evidence of this seventh support survived. The column supports were oriented in an east-west line that paralleled the east-west footing trench of the interpreted structure and they were located (from the south edge of the footing trench to the south edge of the column supports) 8.5 ft out from this footing trench. Each of the column supports was composed of a number of red-colored bricks. The intervening area between the line of column supports and the south footing trench of the structure was not excavated.

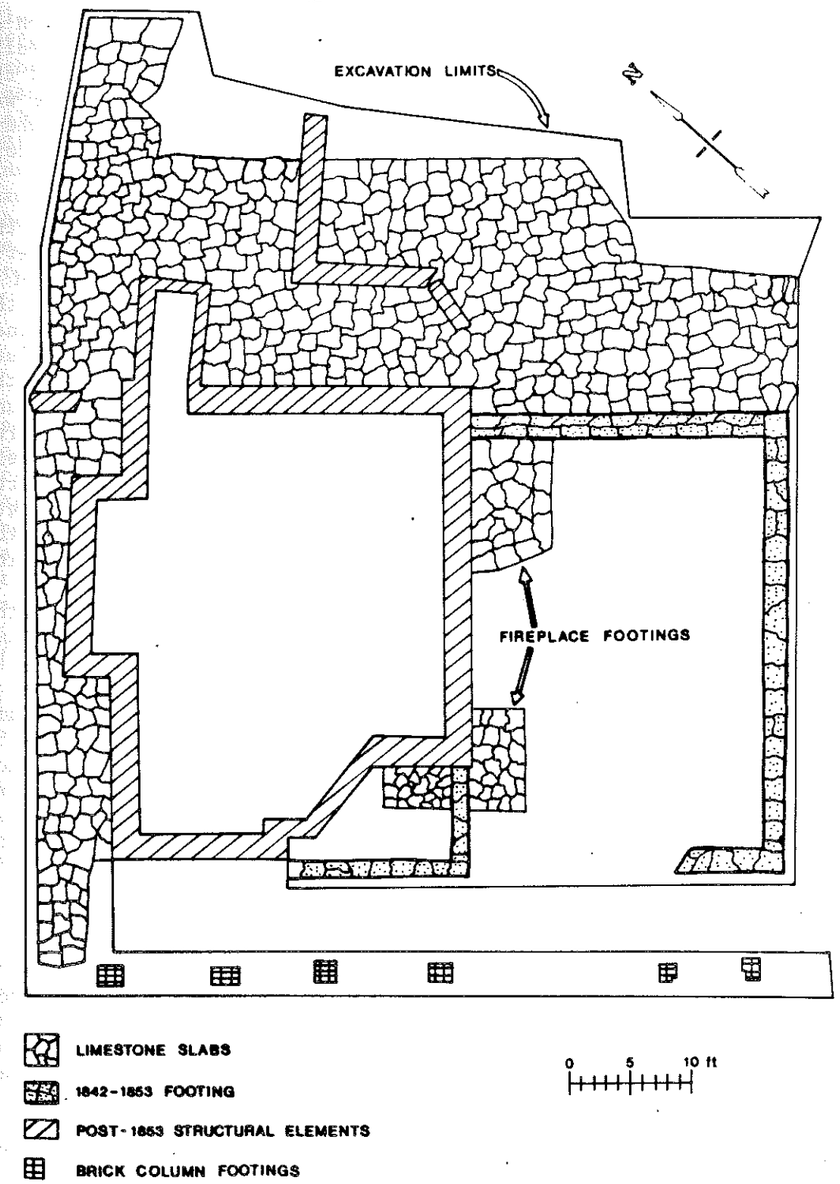

Figure 4: 14BO302, Historic Structure 3, Officer's Quarters #3.

While no definite column supports were identified to the north of the north footing trench of HS3, limestone flagstone (carefully placed) was present in this area and extended out from the edge of the north footing trench a distance of 21 ft. Additional flagstone was noted at the extreme western end of the excavation in an area where the modern basement had almost totally obliterated original fort features.

The structure revealed by the excavations conducted in the vicinity of Historic Structure 3 has been interpreted to be Officer's Quarters #3. The archeological evidence reveals the presence of a number of structural features that have their counterpart in the surviving officer's quarters. These include the presence of internal fireplace or chimney foundations, a structure with a north-south dimension that is close to the 37 ft measurement recorded for the standing structures (actually, 38 ft in the case of HS3), and column supports that are spaced in the same locations as the column supports on the standing structures that hold up the heavy south porches. Several discrepancies must also be noted. Only six column supports were present in association with HS3, while the standing complete structures (HS1 and HS2) each have seven column supports on both the north and south porches. However, as has been indicated, the spacing of the surviving column supports for HS3 certainly suggests that a seventh was originally present. The column supports on all of the surviving officer's quarters are of limestone while the HS3 column supports are of brick. The extant officer's quarters (as well as historic documentation) clearly indicates that the ground floor of each of the quarters had four centrally located fireplaces. Only three such fireplace foundations survive in the HS3 area but it may be presumed that a fourth fireplace was present and that its foundation was obliterated when the modern basement was constructed. A much more serious discrepancy is noted in terms of the inferred size of this building. The one surviving room (at the east end) is presumably the entire basement or ground floor area of the east duplex of Officer's Quarters #3.

If this is truly the east half of Officer's Quarters #3, and if Officer's Quarters #3 had the same east-west dimension as Officer's Quarters #1, 2 and 4, then this room would have an east-west dimension of 29.25 ft (half of the reported 58.5 ft measurement). However, the room, as scaled from the map prepared upon the completion of the excavation, measures only 26.2 ft east-west. Several hypotheses can be suggested to account for this discrepancy. First, an error could have been made during the preparation of the field map. While this is possible, the magnitude of such an error (3.1 ft) would seem excessive. A second possibility is that the recovered structural elements are not related to Officer's Quarters #3, but instead are elements of another structure. The general similarity of this structure to the other officer's quarters would suggest that this second hypothesis is untenable and that the recovered structural elements are indeed

elements of Officer's Quarters #3. A third possibility is that Officer's Quarters #3 was smaller in its east-west dimension than the other three officer's quarters. The remaining possibility is that the eastern half of Officer's Quarters #3 was smaller than the western half. Examination of the two end column supports (west and east) for HS1 through HS4 suggests that these column supports were located just inside the line of the east and west footing trenches (though this cannot be known for the western line of HS3). If this is the case, then the original structure would measure approximately 58 ft, a measurement that is close to the east-west dimension for the two standing officer's quarters.

Historic Structure 4,
Officer's Quarters #4

The west one-half of HS4 was still standing when Fort Scott received archeological study. The east one-half of this structure had been destroyed by fire in 1945. The Society investigations of this structure were thus confined to the east one-half. A large rectangular excavation was opened immediately to the east of the still standing north-south bearing wall which once separated the east and west halves of the duplex and which now serves as an outer wall for the structure. The removal of 1,700 sq ft of fill in this area revealed a large portion of the original foundation footings, two chimney or fireplace footings, column supports on both the north and south sides of the structure, and a flagstone porch area on the north side (Figure 5, Plate 2). In addition to the foundation elements which date from the early construction period of HS4, a more recent cistern was located just to the east of the northeast corner of HS4 and a small concrete foundation and a concrete slab were uncovered which intruded into the HS4 area.

The north and south foundation trenches were well defined and consisted of 2 ft wide trenches which contained carefully laid limestone slabs with some mortar still present between the stones. A portion of the north wall was missing and presumably this stone was removed sometime after the structure had burned. The north one-half of the east wall was also recovered and several internal footing sections were uncovered. The north-south dimension of the outside wall footings is 37 ft and the east-west dimension (from the standing east wall of the structure to the east wall of the missing half of the duplex) is 28 ft. Two 10 ft long sections of a north-south oriented internal wall were located which extended from 8 ft to 10 ft west of the east foundation footing. Two chimney or fireplace footings were discovered extending out from the east wall of the standing half of the structure. These were quite similar in size and position to the fireplace footings discovered in conjunction with the excavation of HS3. The more northerly of these measured 7.5 ft north-south and 3 ft east-west and the southern one measured 10 ft north-south and 4.5 ft east-west. The fireplace footings were comprised of limestone and

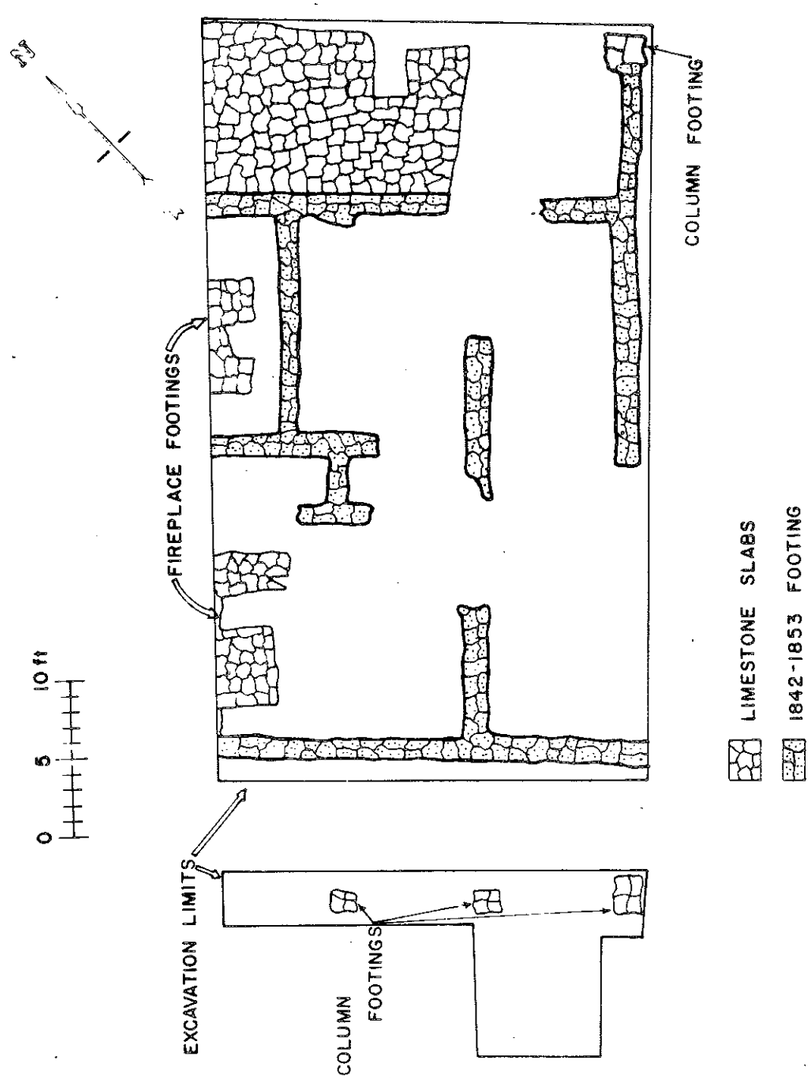

Figure 5: 14BO302, Historic Structure 4, Officer's Quarters #4

some brick. A portion of a footing (12 ft long and 2 ft wide) separated the two fireplace areas and east-west footings further served to isolate the two fireplaces from the main part of the floor. In the case of the north fireplace, this footing was a 14 ft long limestone-slab-filled trench which extended from the north wall of the structure to the internal east-west footing which separated the two fireplaces. This 14 ft long footing was located 4.5 ft east of the east wall of the standing half of the duplex. This would appear to be an unlikely placement for an internal wall as it would almost eliminate the heating efficiency of the northern fireplace.

Three of the column supports (all made of square-cut limestone slabs) were discovered on the south side of the house and two of the column supports for the north porch were identified. The south porch supports were located 9.5 ft (to center of support) from the outside edge of the south structure footing and the supports were spaced 9 ft apart (from center to center). A large area (11 ft by 17 ft) of flagstone was uncovered which lay immediately to the north of the north structure footing. This flagstone would have been located under the north porch and it may once have covered the entire porch area. It presently encompasses over one-half of the exposed north porch area. A modern cement foundation and a concrete slab partially obscured the interpretation of the HS4 foundation along the east wall. A circular cistern (with a diameter of 8.5 ft) was identified just outside of the east wall of HS4 at the north end. Barr (1982) interpreted this to be a recent or modern cistern that was not associated with the HS4 foundation.

ENLISTED MEN'S BARRACKS, HISTORIC STRUCTURES 5, 6, and 7

Three barracks were constructed as housing for the enlisted men at Fort Scott during the early fort constructional period. These barracks were all of approximately the same size and were evidently quite similar in arrangement and construction. Each of the structures reputedly measured 65 ft long and 32.5 ft wide and each had a 10 ft wide porch on the front or parade ground side which ran the entire length of the building and which was supported by six columns. A broad flight of stairs was located in the center of the parade ground side of each structure to give access to the porch. Thompson (1968: 31-32) indicates that the ground floor of each structure was subdivided into six rooms which included a kitchen, a cook's quarters, a mess hall, a laundress' room and two storerooms. Two of the quarters, Historic Structure 5 and Historic Structure 6, were originally designed as dragoon barracks although only one of these (HS5) functioned for any length of time as a dragoon barracks. Historic Structure 6, while it was designed as a dragoon barracks, almost immediately was put into use as an infantry barracks. Historic Structure 7 was designed and functioned strictly as an infantry barracks. As is indicated on the plan of Fort Scott for 1848 (Figure 2), HS6 was

situated on the east side of the parade ground exactly opposite HS5. Historic Structure 7 was situated at the southwest edge of the parade ground with its front to the north or parade ground side.

A close examination of the 1848 plan of Fort Scott indicates that the view shown of Historic Structure 5 and Historic Structure 6 are evidently of the main floor or, in modern terminology, second floor (Figure 2). This is indicated by the placement of the stairs in the center of each structure toward the parade ground side. The view shown of Historic Structure 7 lacks the stair placement and this has been interpreted as a ground floor or basement floor view. This view shows the type of ground floor subdivision that has been inferred by Thompson (1968:31-32). At the east and west ends of Historic Structure 7 are shown double chimney foundations, each single foundation being contained in a small, square to rectangular-shaped room. Two larger rooms, of unequal size, are located in the center of the structure, with the larger of these two rooms being located to the west.

Since all three of the enlisted men's barracks had been demolished prior to the current investigations at Fort Scott, the restoration of these structures could depend only on a combination of archeological and historical evidence. While archeology could obviously provide little in the way of information about the upper floor of each of these structures, the foundations of the lower basement floors were at least partially extant for each of the structures and the excavation of these features provided critically needed data as to the placement and size of the structures and various features within each structure. Each of the enlisted men's barracks was a two-story structure which lacked a true basement and which had a foundation of native limestone. Each of the structures reputedly measured 65 ft long and 32.5 ft wide and each apparently had a 10 ft wide porch located on the front or parade ground side. The foundations (including some internal support foundations) were constructed of native limestone. The structures were framed and weather-boarded and were presumably built with lumber sawn in the army's sawmill at Fort Scott. The interior walls of each structure were apparently lathed and plastered. The floors of each structure were wood and the flooring of the ground floor and porch area were the last details of construction for each structure. The 10 ft wide porch located on the parade ground side of each structure was supported by six equally spaced columns which were each comprised of square-cut limestone slabs.

Historic Structure 5, Dragoon Barracks

The suspected area of Historic Structure 5, the Dragoon Barracks, was overlain by a modern lumberyard when Fort Scott was first visited by Society archeologists. This lumberyard was eventually razed so that the exploratory excavations could take place. Excavation in the vicinity of the Dragoon Barracks was quite extensive as it was

necessary to document both the modern foundation elements that were present in the area and also the early fort foundation elements. Accordingly, an excavation of 4,700 sq ft was completed in this vicinity. Fortuitous placement of the modern lumberyard foundation had resulted in almost no loss of the structural details of the Dragoon Barracks foundation. The excavated original foundation of the Dragoon Barracks was discovered to be rectangular in shape with a length of 65 ft and a width of 32.5 ft (Figure 6). This agrees exactly with the historic sources in terms of the foundation size. The footing trench in which the limestone footing rock was placed measured 2 ft wide and the individual tabular-shaped pieces of limestone that were incorporated into the foundation averaged 2 ft long and 1 ft wide.

Chimney or fireplace foundations were located on the interior of the north and south walls (Figure 6). The north chimney foundation measured 15.5 ft in length and it extended out from the wall for a distance of just slightly less than 3 ft. The south chimney foundation was slightly over 10 ft long and it had a width of slightly less than 3 ft. Three internal wall foundation footings were uncovered. These were oriented parallel to the north and south exterior foundation walls and extended the full width of the structure. These interior foundation footings were 2 ft wide and they had horizontal limestone slabs in them that were identical to those uncovered in the perimeter footing trenches. These were evidently footings upon which interior walls were placed and they may also have served as a foundation for the wood flooring. Four rectangular areas were delimited within the interior of the structure on the ground or basement floor. The two end rectangles (which according to Thompson were further subdivided into two rooms each) measured approximately 12 ft wide by 28 ft long. The more northly of the interior rectangles measured 28 ft long by 12.5 ft wide and the more southerly of these areas measured 28 ft long by 16.5 ft wide. Four other internal structural features were noted during the excavation of Historic Structure 5. These are four square internal footings that measure 2.5 ft on a side. Two of these are situated in the large central room and the other two are situated in the smaller central room. They are oriented east-west with a spacing of approximately 10.5 ft from east to west and each footing is located at approximately 7.5 ft in from the north and south walls. While these four column supports do not appear on any of the enlisted men's barracks on the 1848 plan (Figure 2), it can be noted that both the Dragoon Barracks (HS5) and the first of the infantry barracks (HS6) had upper floors or second floors that were divided into four rooms. The walls separating the two large rooms at either end were shown in roughly the same location as the four column support areas that were delimited within the excavation of Historic Structure 5 (Figure 2 and 6). Thus, it is suspected that these were supports for the heavy upper walls of the main floor of the Dragoon Barracks.

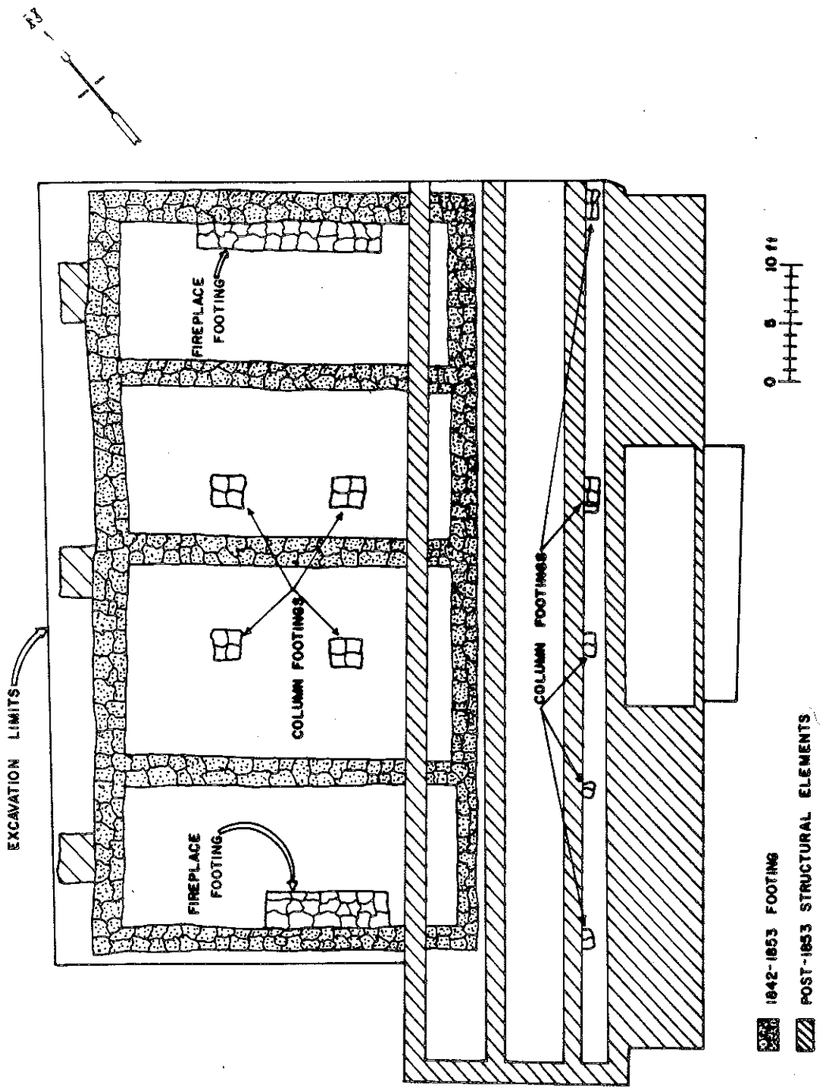

Figure 6: 14BO302, Historic Structure 5, Dragoon Barracks.

Five of the original six column supports were located on the east side or parade ground side of the structure. These column supports were spaced from 12 ft to 13 ft apart and set in a straight line that paralleled the east foundation wall. They were situated 10 ft out (from the center of the column supports) from the east side of that foundation trench. Three additional structural features were noted on the west side of the foundation of Historic Structure 4. These consisted of stone blocks that extended out from the west wall of the foundation at somewhat regular intervals. The individual features were each 4.5 ft long from north to south and they extended out from the wall for a distance of approximately 3 ft. They were spaced 24 ft apart, starting 6 ft south of the north wall line. Barr (1982) has indicated that these features were made of a local sandstone and not of the typical limestone that was used in most other stone construction at Fort Scott, and he suggests that these are later features that were not associated with the primary foundation of Historic Structure 4, but instead were associated with later remodeling of the structure.

Historic Structure 6, Infantry Barracks

Excavations within the vicinity of Historic Structure 6 were complicated by the presence of a number of extraneous and more recent structural elements. Included were portions of at least two structures and a foundation from a subsurface basement. Nevertheless, sufficient structural elements from the early constructional period were located to observe a similarity of form between the Historic Structure 6 foundation and the better-preserved foundation associated with Historic Structure 5, the Dragoon Barracks. The north end of Historic Structure 6 had been completely obliterated due to the construction of a modern house with a basement (Figure 7). In fact, a 40 ft by 18 ft concrete slab with cement porches projecting out three sides, was still present at the northwest corner of the excavation and it could not be removed at the time of excavation (Plate 3). Elements of another recent foundation were located toward the southeast side of the excavation and a trench for pipe was present at the northeast edge. Nevertheless, at least some elements of the original foundation were still present. The south footing trench was present in its entirety and still contained limestone slab rock. Elements of the east and west footing trenches were also present, but the stone that was once in these trenches had evidently been robbed for other construction. Two footing trenches (empty of rock) were present on the interior and were parallel to the south wall of the structure and ran for the full width of the original building. All of the footing trenches were approximately 2 ft in width.

The two rooms defined by the three extant east-west footing trenches are of approximately the same size as rooms defined in Historic Structure 5. The more southerly of these rooms was approximately 12 ft in width with an east-west internal length of 27.5 ft,

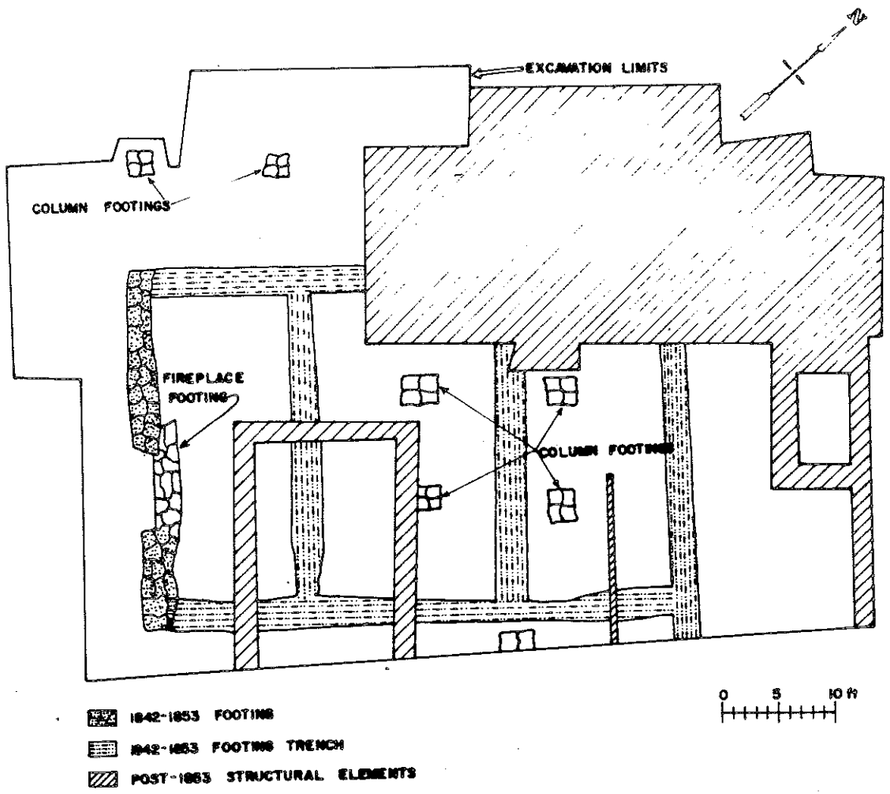

Figure 7: 14BO302, Historic Structure 6, Infantry Barracks.

and the central room 27.5 ft long east to west and 16 ft wide north to south. The third, or furthest north, room is 27.5 ft long east to west and 12.5 ft wide north to south.

Four column supports (square and measuring 2 ft to 3 ft on a side) were present (one shown on Plate 4) in the interior of the structure in approximately the same location as those defined for Historic Structure 5. A single somewhat irregularly shaped fireplace or chimney footing was present at the south end of the structure. This footing extended in from the wall for a distance of 1.5 ft and measured approximately 16 ft in length.

Two external column supports were present. These column supports were located 9.5 ft out from the edge of the west footing trench and they were spaced 12.5 ft apart. All of the column supports were composed of limestone and the two external ones were evidently column supports for the heavy porch which extended out on the parade ground side of the structure. In summary, the extant early footing trenches and column supports recovered from the area of Historic Structure 6 present a pattern that is very similar in its basic outline to that identified for the more complete enlisted men's barracks, HS5. The only overall measurement that could be obtained was the structure's width which was 32.5 ft, a measurement that is in accord with that obtained for Historic Structure 5. The location and size of the rooms, and the presence of four internal column supports, lends further support to the theory that at least these two enlisted men's barracks were built to the same plan.

A rather extensive excavation was conducted to the east of Historic Structure 6 in an area where some surface rubble had suggested the presence of subsurface structural elements. A rectangular excavation of over 1,000 sq ft was conducted in this area (less than 100 yds to the east of the southeast corner of HS6) and this investigation revealed the presence of a stone footing for a two-room structure and an associated latrine and drainage system (Figure 8, Plate 5). The structure uncovered during this excavation measured 26 ft north to south by 16 ft east to west. It was outlined by a 2 ft wide footing trench which still contained limestone slab rock. The uncovered foundation footing was roughly rectangular in shape and an internal bearing wall was also present which ran east to west and subdivided the structure into two compartments, one measuring 13 ft square and the other measuring 13 ft by approximately 7 ft. Two smaller structure foundations were located immediately to the north of this two-room structure foundation. The more southern of the two was a circular cistern or pit toilet which had limestone rock walls (rather crudely laid) and which had a diameter of 6 ft. The second auxiliary structure was located immediately north of the round footing and, in fact, the south wall of this second structure shared a portion of the wall of the round footing (Plate 5). This second structure was

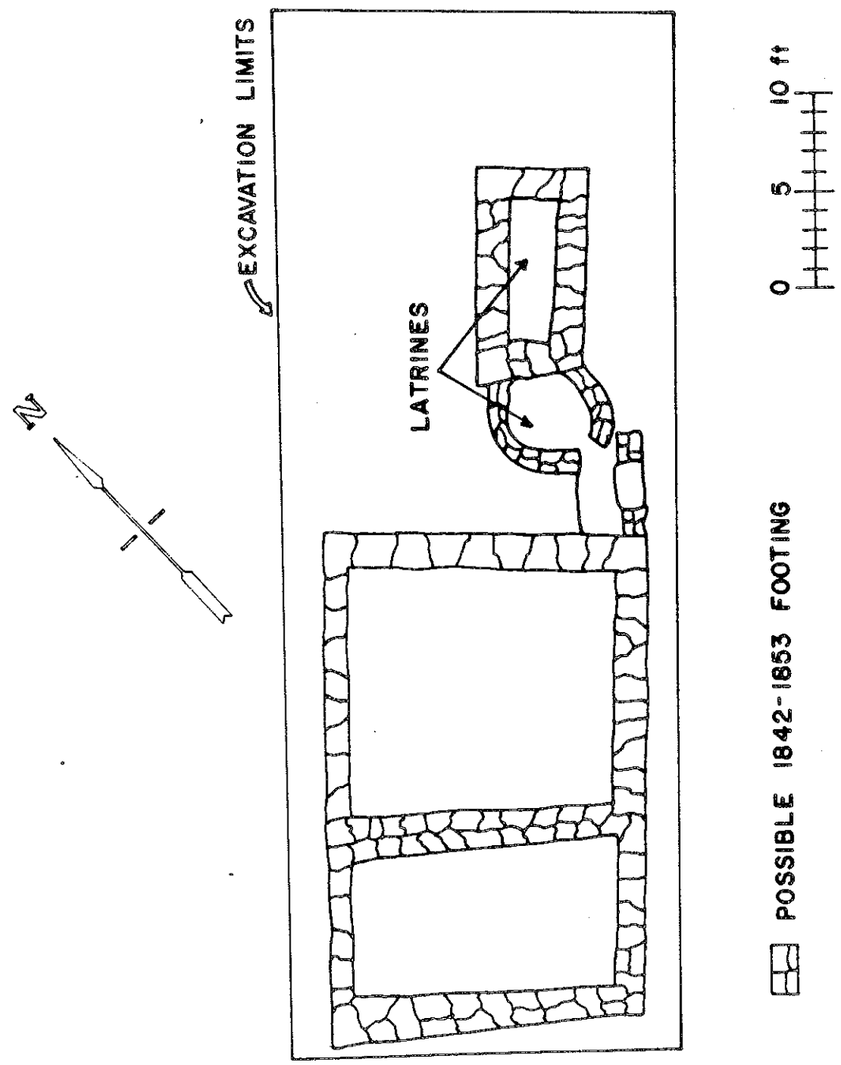

Figure 8: 14B0302, Historic Structure 6, Associated Outbuildings.

rectangular in shape with a north-south length of 11 ft and an east-west width of 6 ft. This rectangular structure had walls and a floor that were constructed of very carefully prepared and laid limestone slabs. In fact, the inner walls of this structure were dressed and the tool marks from this shaping were still evident. Both the circular and rectangular features yielded considerable numbers of artifacts and at least a small percentage of these dated to the 1860s or earlier. The larger two-room structure, to the south of these cistern or latrine foundations, contained few artifacts and those that were recovered dated after the turn of the century.

The origin and affiliation of the three structures described above (two-room structure, rock-lined circular shaft, and rectangular rock-lined pit) are still something of a mystery. Their placement in the same general area as that shown for a two-room structure depicted on the 1848 plan of Fort Scott (Figure 2) might suggest that these structural elements are a residue from a structural complex associated with the early period of military occupancy at Fort Scott. However, Thomas P. Barr, the project archeologist, believes that the actual location of the two-room structure shown on the 1848 plan had been totally eliminated during road construction in the area (Barr 1982). Barr further believes that the large two-room structure is of late (post-1900) construction (Barr 1982). He believes that the two smaller structures are of earlier construction, either from the early Fort Scott military period or from a time shortly after that (circa 1853 to 1870) (Barr 1982). The author of this report examined current aerial photographs and U.S.G.S. topographic maps of the Fort Scott area and, based on this information and on a hurried physical inspection of the Fort Scott area conducted by the author in 1981, it does not seem at all likely that the construction of modern highway US 69 intruded into the area shown on the 1848 plan as containing the two-room structure. If the 1848 plan is at all accurate in its scale (and other measurements support its accuracy), then the illustrated two-room structure to the east of HS6 was located less than 100 yds to the east of this structure. While the specific locations of the structural elements uncovered by Barr were not recorded in terms of other Fort Scott structures, Barr (1982) has noted that they were located less than 100 yds to the east of HS6. Accordingly, the author still believes that this two-room structure, with associated latrines and/or cistern, is an excellent candidate for being a fort-related structure.

Historic Structure 7, Infantry Barracks

The area where HS7 was thought to be located had been considerably disturbed by modern construction activity. In fact, standing structures had to be razed before the archeological investigations could take place. Historic Structure 7 was the only enlisted men's barracks at Fort Scott which was designed, from the outset, as an infantry barracks. Historic Structure 6, as previously noted, housed

infantry troops for most of its post history, but it was designed as a dragoon barracks. Thompson (1968:37) notes that HS7 may have differed slightly in terms of its interior arrangements from the other two enlisted men's barracks but, unfortunately, no documents are presently known which detail these differences. The 1848 plan of Fort Scott (Figure 2) evidently displays the ground floor of this structure rather than the first or upper floor. This plan indicates that the ground floor of HS7 was subdivided into six rooms. The long axis of HS7 was east-west and two small rooms (with associated fireplaces) were located at each end of the structure on the ground floor. Two other rooms, one somewhat larger than the other, were located in the center of the structure.

Approximately 5,500 sq ft of earth was removed from the vicinity of HS7 during the archeological investigations. The area had been severely disturbed by modern construction and foundation elements from at least two different modern structures overlay the original HS7 foundation. Nevertheless, the east foundation trench of HS7 was uncovered in its entirety and portions of the north and south wall trenches were also present as well as sections of two internal linear footings (Figure 9, Plate 6). The extant footing trench sections still contained limestone slabs and traces of lime-based mortar were present. The structure had a north-south dimension of 32 ft, a measurement which is consistent with the widths of the other two enlisted men's barracks. The entire west end of HS7 had been subjected to so much disturbance that no structural elements could be identified. A complete fireplace footing (12.5 ft long and extending 2.5 ft into the interior of the structure) was located at the east end of the structure. The size of this footing suggests that it may have been a double fireplace footing. Two internal footings paralleled the east wall of HS7 and divided the structure at the east end into two nearly equal spaces. The eastern rectangular room had internal measurements of 12 ft by 28 ft, while the room to the west of this measured 13 ft by 28 ft. A single square column support was discovered in the north half to the westernmost of the two room spaces. The placement of this support was in the same general location as internal column supports identified in association with HS5 and HS6. These column supports were evidently important structural elements within each of the enlisted men's barracks. A single external column support was identified 9 ft north of the northeast corner of HS7 and this was certainly one of the six column supports which held up the heavy porch on the parade ground side of the structure. The only other structural feature identified during the excavation that was possibly related to the early constructional period was an area of flagstone (18 ft north-south and 14 ft east-west) which was located at the southwest edge of the excavation. This flagstone may have been placed in the area at some time after HS7 was destroyed, as it appears that at least a portion of the flagstone would have been within the foundation limit of HS7. This is a constructional feature that was not noted for any of the other living quarters at Fort Scott. The

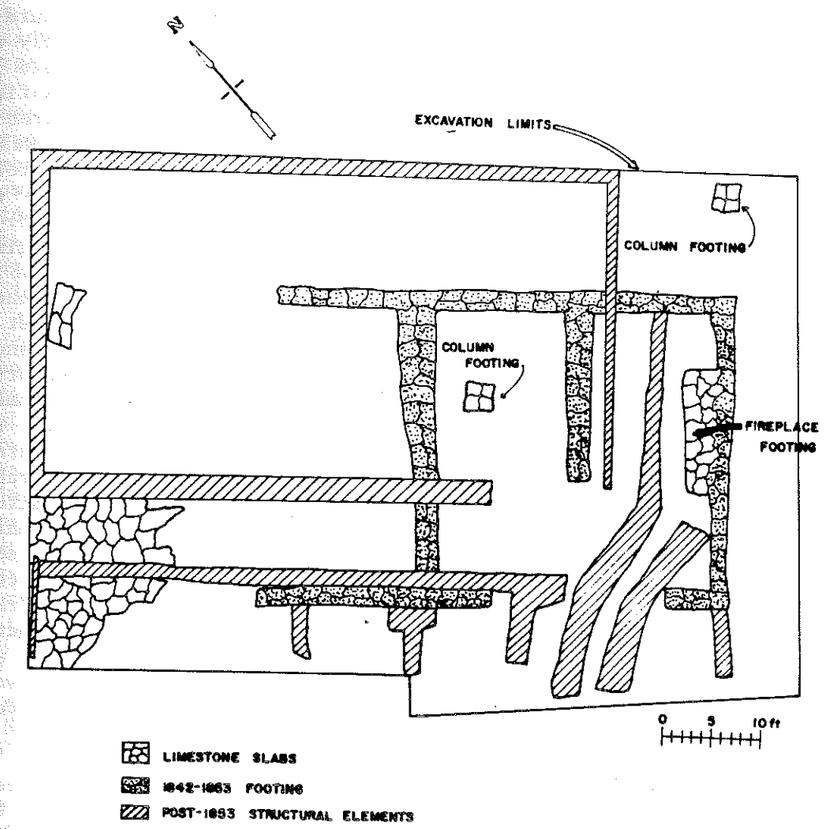

Figure 9: 14BO302, Historic Structure 7, Infantry Barracks.

structures, according to historic sources, had simple plank floors on the interiors.

HOSPITAL, HISTORIC STRUCTURE 8

The Hospital was a large, framed and weather-boarded structure on the south side of the parade ground at Fort Scott which originally was completely encircled by a porch on the first or upper story (Plate 7). The frame of the structure was still standing when the site was first visited by Society archeologists although it had been much altered by the postmilitary occupation (Plate 8). Historic Structure 8 was a two-story structure which lacked a true basement, although the ground floor was considered to be the basement and the upper floor was considered to be the main floor. Thompson (1967:181 and 1968:43) noted that there was some question as to the dimension of the original structure. It was variously described as being 52 ft long by 48 ft wide or 48 ft long by 32 ft wide. Actual measurement of the foundation, excluding the porches, indicates that it was 48 ft long east to west and 32 ft wide north to south. A 10 ft wide porch or verandah ran completely around the main floor of the building and was supported by stone pillars. Thompson further notes (1968:43) that the basement was divided into six rooms and the main floor was divided into two large rooms or wards which were separated by a hall and an internal stairway. When the Hospital area was first visited by Society archeologists, it was being utilized as a storehouse for a nearby furniture store. The primary structural elements that remained from the early fort construction period consisted of the heavy timber frame, some lath, and portions of the original internal stairwell. This structure had been completely covered over with sheet metal and later frame additions extended well out past the limits of the original perimeter foundation. In fact, three sides of the verandah (east, west, and south) were still enclosed during the Society investigations. A wall from a recent city garage was located at the east end of the structure in an area where the original east edge of the porch was located.

While the Hospital area had been very severely altered by post-fort activities in the latter part of the nineteenth century and the twentieth century, a number of historic documents (particularly photographs) provided important evidence as to its external appearance. The first of these pieces of evidence is provided by the 1848 plan of Fort Scott (Figure 2). This plan clearly shows that the Hospital complex was a rectangular structure that had its long axis oriented east-west. The plan, which is presumably of the main floor of the structure, shows two large rooms (one at the east and one at the west) that are separated by a broad hallway. Two double chimney foundations are shown at either end of the structure, one to the east and one to the west. A 10 ft wide verandah is shown completely encircling the foundation of the structure and this verandah was supported by 24 pillars or pillar supports. Also shown on the 1848

plan are two smaller auxiliary structures to the south of the Hospital complex. These two structures were set approximately 75 ft behind the Hospital complex. Thompson's 1967 report on Fort Scott contains three photographs, all apparently dating from 1863 or later, of the Hospital complex (Thompson 1967; Figures 3, 4, and 5). Two of these photographs show the south elevation or south end of the building and one was taken from the parade ground looking toward the north face of the building. Clearly shown on all of the photographs are elements of the large verandah that encircled the structure and also shown are many of the pillar supports and their placement. It can also be noted on these photographs that no external stairways were present on the structure at the time that the photographs were taken. This is compatible with the 1848 plan of Fort Scott which, while presumably showing the upper floor of the structure, contains no information or evidence to suggest that external stairwells were present. As noted, elements of an internal stairwell were still present on the structure when it was first investigated by National Park Service personnel and Society archeologists, and this presumably provided the needed access to the porch area on the second or upper story. The photographs contain other information about constructional details that are important both to the historic architect and to the archeologist. Two large chimneys were located at either end of the structure, one to the east and one to the west, and these presumably vented the double fireplaces that were located on the ground floor, and possibly on the second floor, of the structure. One of the Thompson photographs (1967, Figure 4) shows a small storeroom located underneath the verandah at the west end of the building. This is a constructional feature that was eventually documented through archeological investigations and it was discovered that there were actually two external storerooms, one located at the west end of the structure and the other at the east end of the structure (Figure 10).

In 1976, Tom Barr received copies of six early photographs that were taken at Fort Scott. These were provided to Barr by the Museum of New Mexico in Santa Fe and they were photographs that were taken in 1867 by J.T. Parker. While five of these photographs were of the town of Fort Scott and not of the Fort Scott military complex, the sixth photograph was a view of the fort complex which was taken from the southeast looking northwest (Plate 7). This photo provided important information about a number of structures, including both Historic Structure 8 and Historic Structure 9. While the photograph provides little in the way of new information in regard to Historic Structure 8, it does agree closely, in terms of constructional details, with the photographs illustrated in Thompson's report. In particular, Figure 3 in Thompson's 1967 report clearly shows the existence of at least one detached auxiliary structure that was located to the south of Historic Structure 8 and the Parker photo also shows the location of this structure.

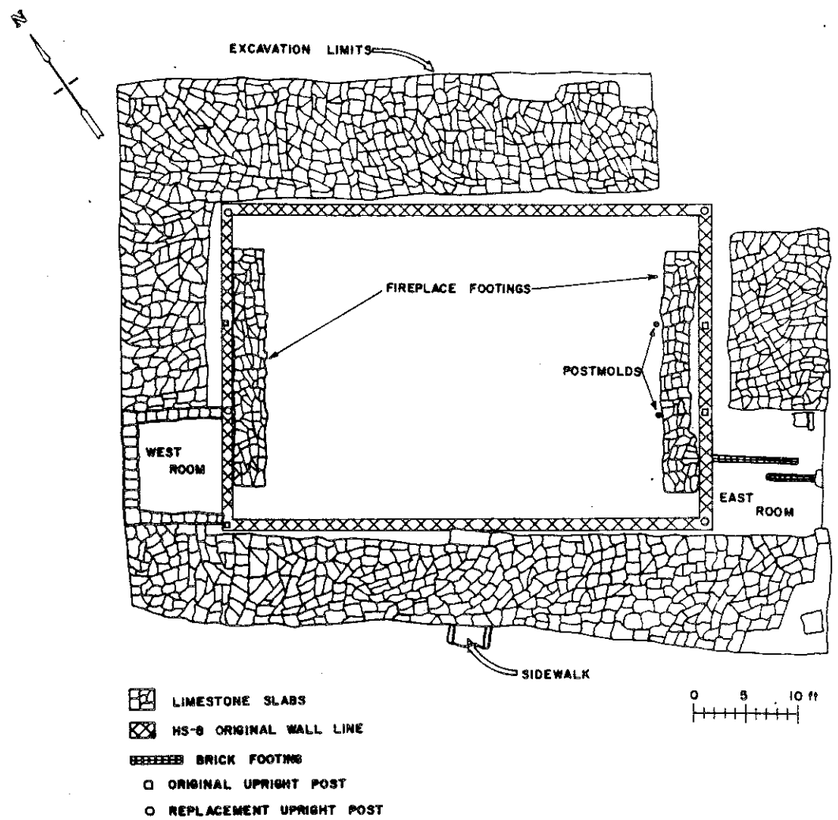

Figure 10: 14B0302, Historic Structure 8, Hospital.

The archeological excavations performed by the Society in the area of Historic Structure 8 were confined primarily to the area just outside the perimeter foundation and to two areas within the building, one at the west and one at the east, where chimney foundations were eventually uncovered (Figure 10). Excavation on the outside of the structure uncovered a significant portion of a carefully laid flagstone walkway which was situated beneath the porch area and which, like the porch area, encircled the structure. This flagstone extended out from the perimeter wall of the structure for a distance of at least 10 ft on all sides. The only portion of the flagstone walkway that was not uncovered was at the northeast corner where excavation was not conducted.

Two areas on the outside of the structure were found to be devoid of flagstone. One of these areas was situated on the east side of the building at the south end, and other was located on the west side at the south end of the building (Figure 10). The east area measured 12 ft north to south and 9 ft east to west and the western area measured 10 ft north to south and 8.5 ft east to west. The placement of the western of these two areas was in the same location as that shown for an auxiliary attached structure in one of the photographs of the Hospital complex in Thompson's 1967 report (Thompson 1967, Figure 4). The eastern of the two areas yielded some other structural elements. The north wall line of this 12 ft by 9 ft area was marked by a double row of bricks that formed a possible foundation element for the north wall of the small structure. Whether or not this brick foundation was of the original fort construction period is certainly open to conjecture. The brick in this foundation element may indicate that this was a later element that was not associated with the initial fort construction. Another constructional feature noted in this complex was a brick trough or drain that was oriented east-west and which apparently extended for at least a distance of 5 ft from the center of the room to the east, and presumably to the outer limit or beyond, of the original flagstone verandah. Barr (1982) considers this drain to be a later constructional feature. The drain was constructed by laying up a series of bricks (with their long axis north-south) side by side for a distance of at least 5 ft and then additional bricks were placed on edge with their long axis east-west at either side of this brick line to create a trough.

While good photo-documentary evidence exists to prove the existence of the 24 pillars that supported the heavy porch area of the Hospital, little evidence of these features was found during the archeological excavations. It is presumed that the pillar supports were built of the same flagstone which comprised the flagstone walkway and that they were actually incorporated into the walkway area. Two of the pillar supports that formed the northern and southern limits of the west part of the small auxiliary area were present. These features were located approximately 8 ft out from the wall line of Historic Structure 8 and they were 10 ft apart from north to south.

One additional pillar support was located at the extreme southeast edge of the eastern of the two auxiliary attached building areas. A small amount of flagstone from a probable sidewalk was noted to the rear of the Hospital area and it extended out from the flagstone walkway. This feature was located in the center of the east-west axis of the building and extended out for a distance of at least 2 ft. Investigations within this area were limited because of the ongoing demolition of other structures in the vicinity of the Hospital. Other archeological investigations conducted on the exterior part of Historic Structure 8 consisted of monitoring activities that were performed during the restoration phase of the Fort Scott project. In particular, an area to the north of the center of the north verandah was carefully checked during scraping activity in search of any clues as to whether or not an exterior stairway was ever present on this side of the building. No such evidence was recovered and it is presumed that the historic photographs and the 1848 plan of Fort Scott are correct in terms of the early construction of the Hospital complex.

Excavation within the perimeter foundation of Historic Structure 8 was confined to two areas (one to the east and one to the west) where historic documentation suggested chimney or fireplace foundations had been located (Figure 10). The archeological investigation documented that such foundations were in fact present and that they were of roughly the same size. The west limestone foundation was centered from north to south along the west wall of the structure and it measured 23.5 ft in length and was 3.5 ft wide (Plate 9). The east limestone foundation, which was centered along the east wall of the structure, measured 24.45 ft in length and was at least 3 ft wide.

GUARDHOUSE, HISTORIC STRUCTURE 9

The Guardhouse was a one-story building made primarily of local limestone and it had a fairly steeply pitched A-frame roof. The 1848 plan of Fort Scott (Figure 2) indicates that this structure was 32 ft square and that it had a 10 ft wide porch off the front or parade ground side that was supported by four pillars or columns. The 1848 plan also shows that the floor plan of this structure was comprised of basically four rooms and that one of these rooms, the most southeasterly, was subdivided into smaller areas, presumably cells. Further constructional details of the Guardhouse are provided by two extant photographs. One of these shows the entire east side of the Guardhouse and a portion of the front porch area (Plate 10). This photograph was presumably made after 1870 when the Guardhouse was being utilized by the city of Fort Scott as a city jail. The photograph indicates that the structure had two chimneys, one located at the west end of the building and the other one at the east end of the building, and these appear to be of brick construction. Two of the front column supports for the porch are shown and they are both of stone. One additional feature, which is presumed to be a later

addition, is a stone constructed lean-to which has been added onto the rear or south side of the building. A second photograph that shows the Guardhouse is the 1867 photograph by J.T. Parker (Plate 7). This photograph, which is evidently an earlier photograph than the front view (Plate 10) shows the back or south side of the Guardhouse. It clearly indicates that some of the constructional features indicated on the later photograph are later additions to the structure. Barr (1976) has documented some of these differences in a letter sent to the National Park Service. First of all, he notes that the chimneys shown on the later photograph are evidently a late feature and that the original Guardhouse chimneys were probably made of limestone, although they were situated in the same basic area of the structure as the later brick chimneys. He further notes that the limestone chimneys formed an integral part of the wall on the east and west sides of the structure and that they were not offset, as they appear in the later photograph. The Parker photo (Plate 7) indicates that eaves were not present on the east and west ends of the roof as is shown on the later photo. Instead, the roof line was in a direct line with the wall lines on the east and west elevations. The 1867 Parker photograph shows one doorway and two window placements on the south side of the building, and Barr believes that two of these date from the active years of the fort period. The door, located on the west, may represent a period entryway or possibly a later modification of the structure. The small centrally located window shown on the parker print is interpreted by Barr to be a period opening, and he believes that it may have been a source of ventilation for the cell block. The larger window located at the east end of the building is apparently a later alteration, as this was an area that would have originally functioned as a cell. Another point to note in the Parker photograph is the absence of the lean-to on the south side of the structure. This suggests that the lean-to was added sometime after 1867.

A total of 2,800 sq ft of excavation was opened up in the suspected vicinity of Historic Structure 9 in a search for evidence of early structural remains. Actually, excavation revealed the presence of two stone foundations (Figure 11, Plate 11). The more recent of these was the foundation for a city jail which was built atop the site of the Old Fort Scott Guardhouse. This structure was larger than the original Guardhouse and elements of the city jail foundation intruded into the original Guardhouse area and partially obscured the interpretation of the Guardhouse foundation. Nevertheless, significant portions of the original foundation were found and most of these foundation remnants still contain the structural limestone which was used for the foundations (Figure 11, Plate 11). Major portions of the north, south, and west foundation trenches were uncovered and several internal bearing walls were also located. The foundation trench was approximately 2 ft wide in all areas. Approximately one-half of the north foundation wall had been robbed of stone and the only remaining evidence in this location was the original foundation trench, which had been lengthened slightly on the west side, probably during the

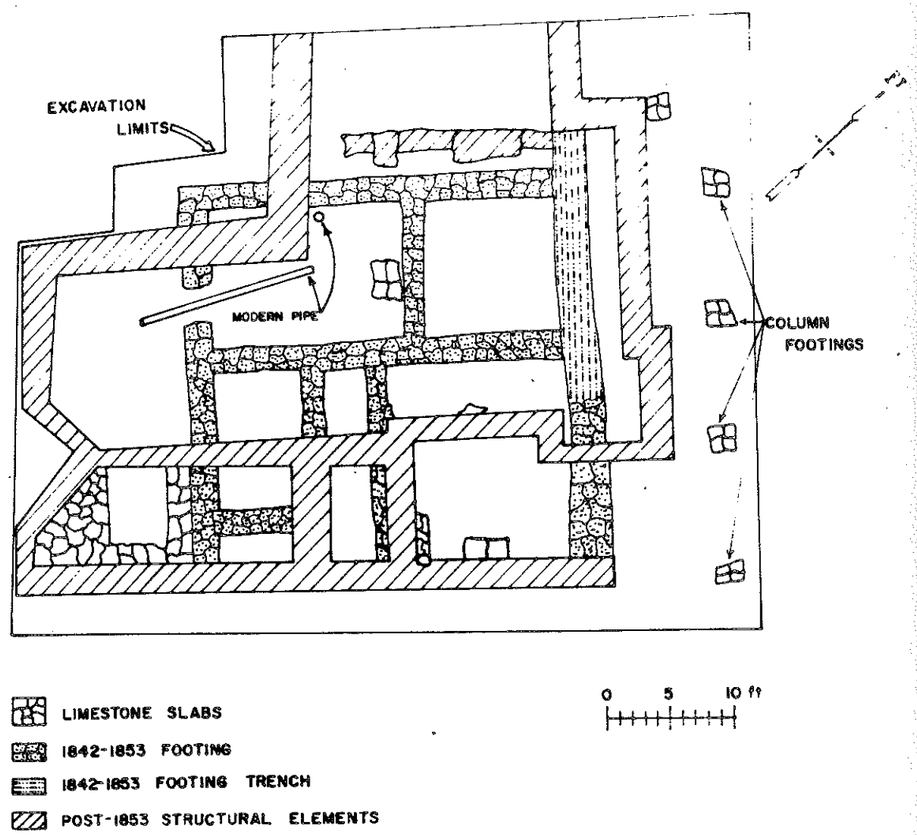

Figure 11: 14BO302, Historic Structure 9, Guardhouse.

removal of the stone from the trench area. The revealed structure measured approximately 32 ft square and the internal foundation trenches exhibited basically the same plan that was shown on the 1848 plan (Figure 2) of Fort Scott. A main bearing wall ran the full length of the building from north to south. This wall was located slightly west of the centerline of the structure and divided the structure into two large areas, the easternmost of these areas measuring 16 ft from east to west and the smaller measuring 10.5 ft east to west. The eastern of these two areas was further subdivided by at least three bearing walls. One of these bearing walls was situated halfway between the north and south external footings of the structure, and was oriented east-west and extended from the presumed location of the east wall of the structure to the central north-south partition. This outlined a large room which had an estimated size of 19 ft north-south by 15.5 ft east-west. This room location was in the northeast quadrant of the structure. The southeast quadrant of the structure was apparently further subdivided. Here, elements of one east-west internal bearing wall and one north-south internal bearing wall were present. Footing trenches from the later city jail obscured much of this area, but the area does nevertheless conform closely to the cell area shown in the southeast corner of the Guardhouse as depicted in the 1848 plan. It seems likely that the southeast quadrant consisted of a hallway and three cells that were located along the south wall of the structure. The west half of Historic Structure 9 was subdivided by an east-west bearing wall that extended from the central north-south bearing wall to the west foundation wall of the structure. This bearing wall isolated two rooms. One of these rooms, located in the northwest quadrant of the structure, measured 10 ft north-south by 10.5 ft east-west and the other, larger room, measured 15 ft north-south by 10.5 ft east-west.

Structural elements from the original Guardhouse were also located to the north of the structure, on the parade ground side. This information consisted of four limestone pillar supports or column supports which were spaced equidistant in a line parallel with the north wall of this structure. This line of column supports was located 10 ft to the north of the structure, and these were obviously pillar supports for the large porch that projected off the parade ground side of the structure. Interestingly, no evidence of flagstone was noted between the column supports and the north wall of the structure, although this was a common feature encountered during excavation of other structural remnants at Fort Scott. An additional area of flagstone was noted off the south wall of HS9 at the east end. This flagstone occurred in the same area where the stone lean-to structure was added onto HS9 after the Fort Scott military post was abandoned and this is presumably a later feature that dates from sometime after 1867.

DRAGOON STABLES, HISTORIC STRUCTURE 10

Historic Structure 10 was a framed and weather-boarded building which had doors at either end and in the middle along its west side. The Dragoon Stables was located on the west side of the parade ground to the south of the Dragoon Barracks, Historic Structure 5 (Figures 2 and 3). When this area was first visited by Society archeologists, modern structures completely overlay the suspected area of the original foundation for Historic Structure 10. These structures were razed before the archeological investigations commenced. According to historic documents, the Dragoon Stables measured approximately 210 ft long on the north-south axis by 32 ft wide on the east-west axis. The 1848 plan of Fort Scott (Figure 2) indicates that the structure contained 68 stalls for animals and that these stalls were oriented along the west and east walls of the structure. Two small rooms, presumably used for storage of tack and other items, were located at the north end of the structure, and three small rooms were evidently located at the south end of the structure. As mentioned, all above-ground evidence of Historic Structure 10 had long ago been removed. Unfortunately, this is one of the structures at the fort for which very little evidence in the way of documents or photo archives has survived. The 1848 plan indicates that this stable area may have been in use as early as 1845, but it was not yet completed by 1848. In fact, this structure may have been one of the first structures put into use at Fort Scott and may have been in use by 1843. In any case, the 1848 plan does provide at least some general information as to the size of the structure and its internal layout (Figure 2). The only other evidence which is known at the present time concerning the nature of the structure is an 1871 lithograph of Fort Scott. This lithograph is reproduced in Thompson's report on the historic structures at Fort Scott (Thompson 1968: Figure 8). The lithograph suggests that this was a single-story structure with a small loft and that a doorway was located on at least the south side and that a window was located directly above this.

At the time that the archeological investigation of Historic Structure 10 was conducted, it was understood that the restoration attempt in the area of Historic Structure 10 would consist of an attempt to ground outline the original foundation of the structure. At some time subsequent to this date, it was determined to rebuild the structure with as much historic authenticity as possible. The ground outlining plan had an affect on the methodology employed in this excavation. This area had been very severely affected by postfort construction activity and it was therefore determined to put in a series of test trenches in search of extant foundation elements. Thus, the archeological excavations performed in the area of Historic Structure 10 were of a more limited nature than most of the other excavations performed at Fort Scott. The presence of modern foundations, roads, sidewalks, etc., also enhanced the difficulty of conducting excavations in this area. Nevertheless, several surviving elements of the perimeter or external foundation of this structure were recovered (Figure 12). Only one corner of the original

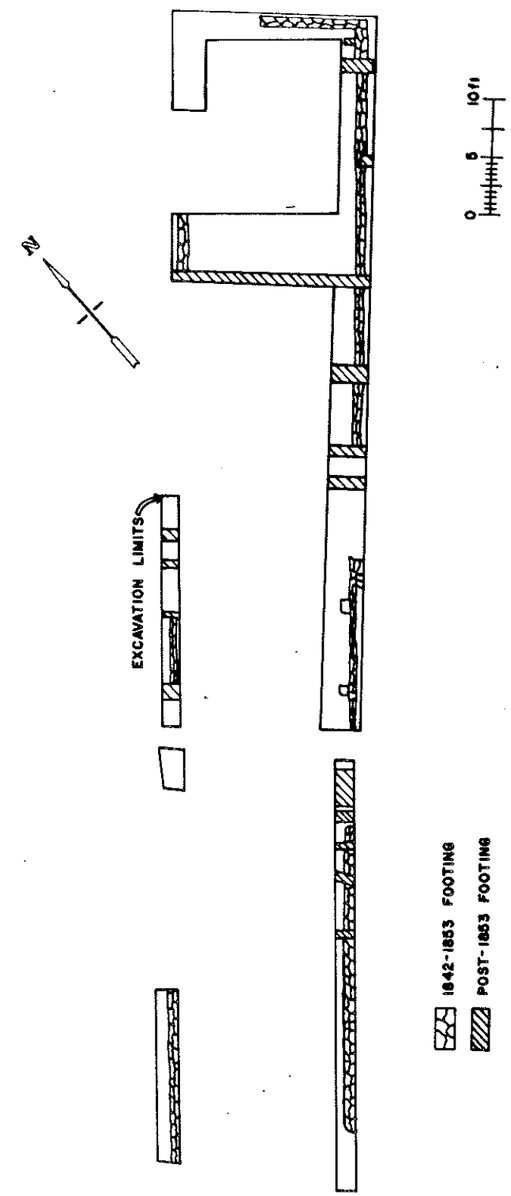

Figure 12: 14BO302, Historic Structure 10, Dragoon Stables.

foundation, the northeast, was verified by the archeological investigations. As was true for most of the other foundation elements at Fort Scott, the foundation of Historic Structure 10 consisted of a 2 ft wide trench which had native limestone within it that had been carefully laid as a footing element. Elements of both the east and west foundations were uncovered and these verified a 32 ft width for the structure, as had been indicated on the 1848 Fort Scott plan (Figure 12). The surviving foundation elements suggest a length of at least 195 ft. Thus, archeology could not verify the 210 ft length reported in the historic sources. As noted, no evidence for the southeast or southwest corners of this structure was uncovered. Excavations within the interior of Historic Structure 10 were very limited and were confined to isolated tests which did not reveal the presence of internal bearing walls of any sort. It is certainly possible that such evidence was still present in areas that were not excavated.

POST HEADQUARTERS AND ORDNANCE STORES, HISTORIC STRUCTURE 11

Historic Structure 11, the Post Headquarters and Ordnance Stores, was a multipurpose building that was a one-story structure that was framed and weather-boarded. It was located on the northwest edge of the parade ground to the west of Historic Structure 1 (Figures 2 and 3). This building apparently functioned both as the post headquarters and as an ordnance storeroom. The site where Historic Structure 11 was thought to be located had been considerably damaged by recent structural intrusions. In particular, a recent house had been built over a portion of the original Historic Structure 11 area, and this house had a basement associated with it. The Post Headquarters and Ordnance Stores, like most of the original structures at Fort Scott, was built without a basement. The basement of the modern foundation had eliminated much of the evidence of Historic Structure 11.

The Post Headquarters and Ordnance Stores building was mentioned frequently in historic documents which cover the period from the early fort period up to the 1870s (Thompson 1967:184, 1968:62-64). However, these sources provide very little information as to the size and constructional nature of this building. The 1848 plan of Fort Scott (Figure 2) indicates that the structure was subdivided into at least three internal rooms and, more likely, five. The long axis of this building was oriented north-south and historic sources are unclear as to the exact north-south dimension. Thompson (1967:184, 1968:63) accepts a dimension of 57 ft for the north-south and 32 ft for the east-west. The 1848 plan of Fort Scott (Figure 2) has a scale on it which indicates that the structure may have been 65 ft long on the north-south axis and 32 ft wide on the east-west. The most northerly of the rooms within the structure, according to the 1848 plan, was the "Gunhouse". The center room (which may have been subdivided into two smaller rooms) contained the ordnance storeroom and the commanding

officer's office. The more southerly of the three large room areas (which also may have been subdivided into two smaller rooms) apparently housed the court martial room and an additional office for the commanding officer.

A rectangular excavation of approximately 3,000 sq ft was conducted in the suspected area of Historic Structure 11 in an attempt to find evidence of the early foundation. As noted, the presence of a modern foundation with a full basement much obscured the location of this early fort structure. This modern basement had almost totally obliterated all internal evidence of Historic Structure 11 and had apparently removed a portion of the east foundation wall of the structure (Figure 13). In addition, a north-south trending brick retaining wall (of recent origin) intruded into the area of HS11. Nevertheless, significant elements of the original perimeter of the foundation wall of HS11 were discovered during excavation (Figure 13). This included most of the north foundation wall of the structure, most of the west wall of the structure, elements of either the south wall or an internal bearing wall, and portions of the east wall. Comparison of the revealed footing with the 1848 plan, and with historic sources, indicates at least some correspondence between the recovered foundation and these accounts. The 2 ft wide footing trench contained locally derived limestone as foundation material, just as did most of the other uncovered structural footings at Fort Scott. The width of this structure, as revealed by archeological investigations, was 32 ft. The north-south, or long dimension, of the structure is still somewhat open to question. A footing trench was uncovered at the south end of the structure which ran roughly east-west, although the east end of this trench was located slightly to the north of the west end. This trench was located at 56.5 ft south of the extreme north end of the north foundation wall of the revealed structure. This footing trench was evidently somewhat irregular as the eastern two-thirds of it had a north-south dimension of 3 ft while the extreme western part of the footing trench measured just 2 ft wide. The east and west footing trenches both extended to the south of this east-west trending footing trench for a distance of approximately 9 ft. The full length of these two north-south trending footing trenches was approximately 65 ft, and this dimension agrees well with the 1848 plan of Fort Scott. However, no evidence of an east-west oriented footing trench was located adjacent to either the south end of the east footing or the south end of the west footing. Accordingly, the overall dimension of Historic Structure 11 is still unknown. At this point, it would appear that the only type of evidence that could firmly establish the north-south dimension for this structure would be either of an archival or photo-documentary type.

QUARTERMASTER AND SUBSISTENCE STOREROOMS, HISTORIC STRUCTURE 12

The original plan for the investigation of the Fort Scott military complex called for a rather extensive archeological investigation

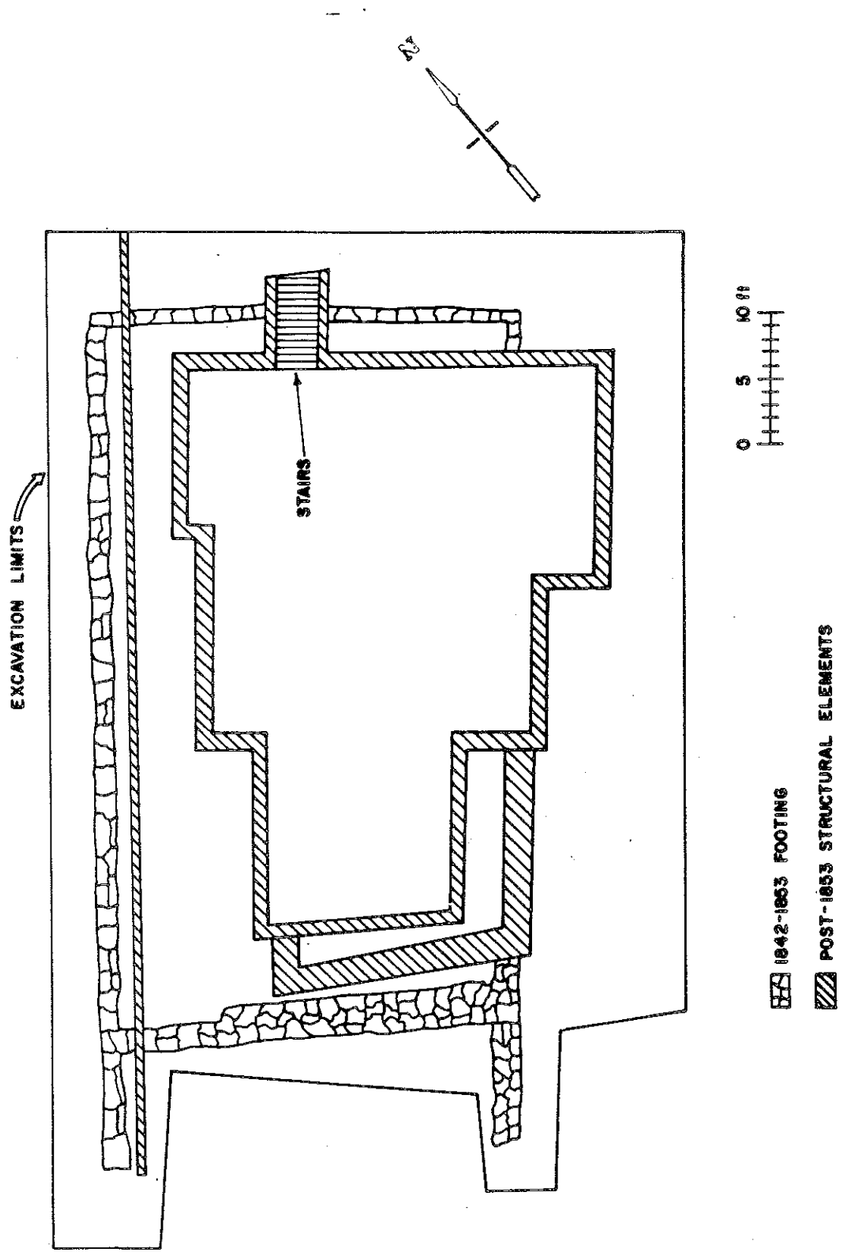

Figure 13: 14B0302, Historic Structure 11, Post Headquarters and Ordnance Stores.

in the suspected vicinity of Historic Structure 12. This was based on the assumption that the two-story house which was located in the suspected area of HS12 was a structure of recent derivation (Thompson 1967:185, 1968:64). However, when the two-story house was eventually vacated by the occupants, Thomas P. Barr, project archeologist, conducted an intensive visual inspection of the frame of the two-story building and of the cellar that lay underneath it and he discovered that this was, in fact, the original Quartermaster and Subsistence Storerooms, although it had been much modified. Interestingly, the cellar dated from the early fort period and this was evidently the only structure from the early fort period that had a basement. Since the structure was still standing, it was not subjected to archeological excavation. Instead, the structure was investigated closely by historic architects to determine its original configuration.

QUARTERMASTER'S STABLES, HISTORIC STRUCTURE 13

The complex which herein is called Historic Structure 13 was not a single structural element. Historic Structure 13, or the complex so designated, was located to the east of the row of officer's quarters and to the northeast of Historic Structure 6 (Figures 2 and 3). The complex so designated is labeled on the 1848 plan of Fort Scott as the "Quartermaster's Stables, Shops, etc." (Figure 2). According to the 1848 plan, this was a large rectangular area which had its long axis to the north and which had an interior courtyard. Little exists in the way of historic documents or photo archives to indicate the nature of the Historic Structure 13 complex. This was apparently one of the last complexes to be constructed at Fort Scott as it was not started until 1848 (Thompson 1968:65). The area designated as Historic Structure 13 included more than one structure or building. An interior court was apparently designed as a corral and work area, while a 21-stall stable was located on the east side (Figure 2). Six additional small rooms may have been located north of the gate of the enclosure on the west side, and these may have served as corn and oat cribs (Thompson 1968:66). Three larger rooms were planned for the west side of the enclosure, south of the gate. Historic Structure 30, an extant stone building which evidently dates from the early military occupation at Fort Scott, is presently located within the general area which has been designated as Historic Structure 13. This standing structure is most likely associated with the complex designated as Quartermaster and Subsistence Storerooms, although the specific utilization of the structure is not known. The 1848 plan of Fort Scott indicates that the area occupied by the Quartermaster and Subsistence Storerooms measured approximately 140 ft on the north-south axis by 115 ft on the east-west axis (Figure 2).

Excavations in the vicinity of Historic Structure 13 were limited to test trenches designed to reveal elements of the limestone-lined foundation that apparently encircled the rectangular area (Figure 14). Historic Structure 30 is presently located at the extreme southwest edge of the area designated as Historic Structure 13. An excavation was performed starting at the northwest corner of Historic Structure 30 and extending north from there. A 2.5 ft wide footing trench (with most of the stone removed) was discovered which extended for 118 ft north of the northwest corner of HS30. The corner of an east-west foundation, set at a right angle to the north-south foundation trench just described, was encountered at the extreme northern limits of this first trench. A small exploratory trench was then opened to the east for a distance of 7 ft. This resulted in the discovery of a 4 ft section of the north part of the foundation wall that once surrounded HS13. A second excavation trench was placed at the south end of HS13, extending from the southeast corner of HS30 to the east and then to the north. This resulted in the discovery of another footing trench (oriented east-west) which extended for a distance of 100 ft to the east of the southeast corner of HS30. At this point, a corner of another north-south retaining wall, or foundation wall, was uncovered and this was traced to the north for a distance of 54 ft. If the southwest corner of HS30 was indeed the southwest corner of Historic Structure 13, then a resulting measurement for the complex designated as HS13 is 142 ft on the north-south axis by 117.5 ft on the east-west axis.

BAKE SHOP,
HISTORIC STRUCTURE 14

This structure was still standing when Fort Scott received archeological investigations and accordingly no archeological excavation was performed in this vicinity.

WELL,
HISTORIC STRUCTURE 15

The Well at Fort Scott, Historic Structure 15, was one of three structures that was originally located within the limits of the parade ground (Figure 2). The three structures, HS15, HS16, and HS17, were placed in a line from north to south in the center of the parade ground and HS15 was the more northerly of these structures. The actual Well was apparently a 65 ft deep well which had been blasted down through various layers of limestone, slate, and coal. The specific location of this well was never in question, since the hole for the well was still in existence when the site was visited by Society archeologists. At that time it was covered with a heavy concrete cap. The 1848 plan of Fort Scott (Figure 2) indicates that an octagonal structure surrounded the well. As illustrated in Thompson (1967: Figure 4), this structure consisted of an octagonal canopy which covered the well and which was composed of eight equally spaced

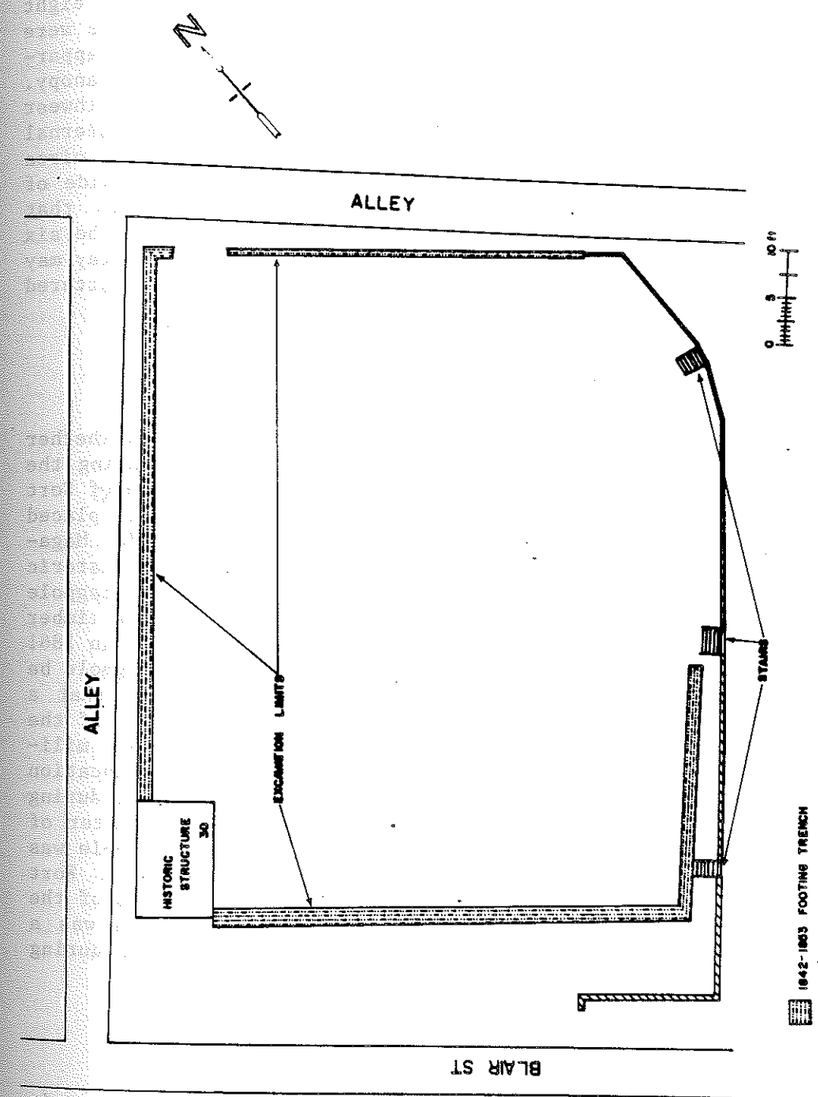

Figure 14: 14BO302, Historic Structure 13, Quartermaster's Stables.

PROPERTY OF
HISTORIC PRESERVATION DEPT.

white columns that supported a low-domed roof. The excavation performed in the area of HS15 was designed to provide specific information as to the location of column supports and any other features that were located within the octagonal structure. Six of the eight stone footings for the column supports were uncovered and these were made of native limestone (Figure 15). Two of the footings had apparently been removed sometime after the destruction of the Well canopy. The two missing column supports were located at the west and northwest sides of the structure. The revealed octagonal shape had external side lengths of approximately 8.5 ft and an overall diameter of circa 20 ft. Also uncovered in this vicinity (and laying just outside of the column support foundations) were a series of flagstones that formed a narrow walkway (1 to 1.5 ft wide) all the way around the six extant sides of the octagonal structure. Portions of this walkway may have been integral with flagstone sidewalks that reportedly quartered the parade ground.

FLAGPOLE, HISTORIC STRUCTURE 16

Historic documentation does not indicate with certainty whether or not a flagpole was ever actually erected at Fort Scott during the period from 1842 to 1853 (Thompson 1967, 1968). The 1848 plan of Fort Scott (Figure 2) indicates that the Flagpole was intended to be placed in the center of the parade ground, to the north of the Powder Magazine (Historic Structure 17), and to the south of the Well (Historic Structure 15). As is also indicated on the 1848 plan, the Flagpole had not been erected by that date because of a lack of suitable timber from which to construct it. Thompson (1968:53) indicates that an 1861 newspaper article contained an editorial suggesting that a flagpole be erected on the plaza. This lends support to the suggestion that a Flagpole was not erected at Fort Scott, at least in the center of the parade ground, during the active years to the early Fort Scott military post. The archeological investigations of the suspected location of the Flagpole consisted of a monitoring activity conducted during the removal of a modern flower bed that was located in the center of the parade ground. No evidence of a Flagpole footing or posthole was discovered during this monitoring activity. The 1848 plan of Fort Scott (Figure 2) shows an unidentified object on the south side of the Flagpole site and Thompson (1968:53) has suggested that this was a sundial. No evidence of this structural element was uncovered during the monitoring activity.

POWDER MAGAZINE, HISTORIC STRUCTURE 17

The Powder Magazine was located at the south side of the parade ground in a line with the Well (HS15) and the suspected Flagpole location (HS16). The 1848 plan of Fort Scott (Figure 2) indicates that the Powder Magazine was an octagonal structure with a diameter of

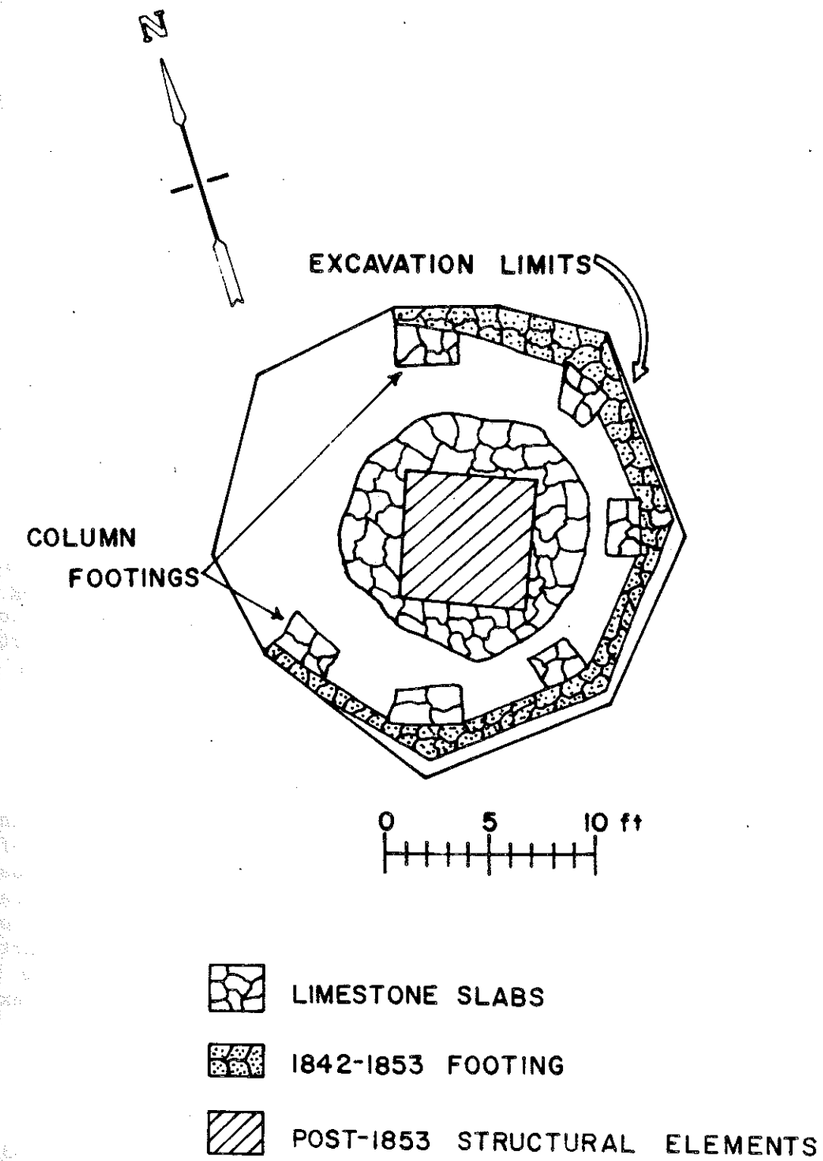

Figure 15: 14BO302, Historic Structure 15, Well.

approximately 20 ft. Extant historic photographs (Thompson 1967: Figure 4) indicate that the Powder Magazine had walls that were made of brick and was roofed with tin.

The archeological investigations performed in the vicinity of Historic Structure 17 (shown in Figure 16) were summarized by Barr (1969:2) as follows:

> A grid system composed of 5 ft squares was superimposed over that area suspected of containing foundations of the Powder Magazine. Upon the completion of the excavation the remains of a small, 20 by 20 ft, octagonal structure was uncovered. The sides of the octagon measured 8.5 ft with the footing trench measuring 2.5 ft in width. Small amounts of debris consisting primarily of angular limestone fragments were uncovered on the northern edge of the magazine. These limestone fragments were all that remained of the foundation.

STONE BUILDING,
HISTORIC STRUCTURE 30

This structure is still standing and was not investigated by archeological techniques, although the restoration of the building was at least partially supervised by Thomas Barr. As indicated previously, this structure is within the general limits of HS13 (Quartermaster's Stables) and it may be a structure associated with the complex.

STABLES AND CARRIAGE HOUSES,
HISTORIC STRUCTURE 31 and HISTORIC STRUCTURE 32

The structures labeled HS31 and HS32 are still standing in their original locations. These two structures were apparently built after the military abandonment of Fort Scott in 1853 and they were probably not built until after the Civil War. Historic Structure 31 is located immediately to the north of Officer's Quarters #2 (HS2) and Historic Structure 32 is located immediately to the north of Officer's Quarters #4 (HS4). Because of the relatively complete nature of the two buildings and their late constructional date, archeological excavations were not conducted in either of the two areas.

WAGON SCALE HOUSE,
HISTORIC STRUCTURE 33

The location that has been described as Historic Structure 33 is in an area where no structures are shown on the 1848 army plan of Fort Scott (Figure 2). This area is to the east of Historic Structure 9 (Guardhouse) and to the south of Historic Structure 6 (Infantry

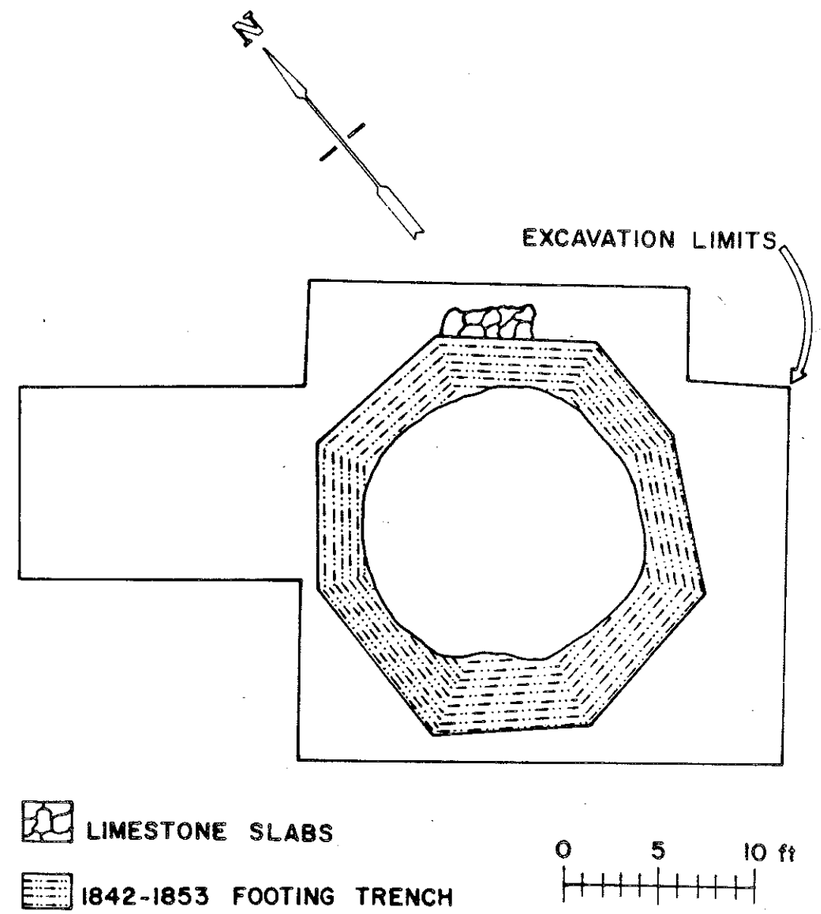

Figure 16: 14BO302, Historic Structure 17, Powder Magazine.

Barracks). The structure location is thus at the extreme southeast end of the Fort Scott military complex (Figure 3). A small frame house was standing in this location when Thompson conducted his historic studies at Fort Scott (1967, 1968). Charles W. Goodlander (1900:7) had noted the presence of a structure in this vicinity in 1858 when he first arrived at Fort Scott and he stated that this building had been a wagon scale house for fort purposes. An unidentified source informed Thompson (1968:74) that this standing frame structure was the earliest civilian house still standing at Fort Scott and that it was originally constructed as a hay scale house. Thompson noted that the standing structure appeared to be of very recent origin, although he did not carefully inspect the interior of this structure (1968:74). Thompson concluded that another structure that dated from the period after the abandonment of Fort Scott by the military in 1853 had once stood here. The recent structure described by Thompson had been razed by the time that Barr began his archeological investigations at Fort Scott. He tested this area in search of early foundation elements. While his tests in this area did uncover isolated artifacts, no evidence of any early foundation was revealed.

FORT SCOTT MATERIAL CULTURE

The materials recovered from Fort Scott, both artifactual and ecological, are quite numerous and varied. In excess of 36,800 individual catalogue numbers were assigned to materials from Fort Scott that were processed through the archeological laboratory of the Kansas State Historical Society. These include objects made of metal, leather, glass, ceramics, paper, bone, rubber, plastic, wood, cloth, shell, etc., as well as remnants of bricks, mortar, coal, and plaster and numerous examples of animal bone and vegetal remains. Both military and civilian artifacts are represented in the sample and many items can be related to specific functions such as transportation, construction, weaponry, clothing, recreation, subsistence, adornment, etc. Datable items cover a temporal range from the very early history of the fort (1840s) right up to the mid-twentieth century. The continuous occupation of the fort area since its beginnings in 1842, and the subsequent disturbance of virtually every fort-related structure by postmilitary occupation, has virtually eliminated primary association information for the bulk of the collected materials. That is, early artifacts were very seldom encountered in an undisturbed or primary context. In almost every case, early period artifacts were discovered in association with post-1900 artifacts. This very confusing stratigraphic situation obviously presented the authors with great problems in attempting an analysis of the Fort Scott material culture. Thus, although the authors recognize that specific and very precise locational information for artifact provenance can be of great value in determining function and construction of historic structures, it was determined that such detailed analysis was impossible to achieve for site 14BO302 at this time. Accordingly, in the following discussion of material culture from Fort Scott, the artifacts are provenienced, in most cases, by references to the primary structure (e.g., Historic Structure 1, Historic Structure 2, etc.) with which they were associated.

A further complication encountered during the analysis of the material culture from Fort Scott resulted from the condition of the material. Thousands of iron and steel objects were recovered from the site and the majority of these were in a very poor state of preservation. Corrosion of some specimens was in such an advanced state that very little of the original metal remained. In addition, many specimens were heavily encrusted with asphalt and other modern construction materials and this could not be removed without severely damaging the poorly preserved objects. Better preserved iron and steel objects are amenable to various preservation techniques. Selected metal items from the Fort Scott inventory were treated in an electrolytic bath to halt the decay process and this proved quite successful in several instances. Such treatment is slow and tedious and it was not within the capabilities of the Society's archeological laboratory to employ this method for all materials that required it. Thus, while all

materials have been housed since their collection in the relatively well-controlled atmospheric condition of the archeological storage facility at the Kansas State Historical Society, this has not prevented further deterioration of some specimens. In particular, badly rusted iron objects in the collection biodegraded even while being gently handled during the analysis. Many of the other recovered materials have been better stabilized. Fragile bone, shell, leather, and wood objects were treated with dilute glue solutions, such as polyvinyl acetate in an acetone base, to stabilize them.

The materials collected from Fort Scott have value and importance because of the size, diversity, and temporal range of the collection. In the following discussion the authors have attempted to emphasize this diversity and to pinpoint those items which can be most securely dated to at least their time of manufacture. The size of the collection precluded a specific description of each item. Nor is this necessary for much of the collection. Machine-made square or round wire nails are, by and large, notable for their repetition. Detailed descriptions are provided for those items which are thought to be particularly diagnostic or which best illustrate portions of the long chronology of Fort Scott. Military-related items are thus given considerable attention as are such temporally important items as glass containers, coins, buttons, ceramic containers, and arms and ammunition. The basic organization of the material culture section of this report is to group artifacts and classes of artifacts into functional categories. This should allow at least some insights into the range of activities that have taken place at this complex and important historic site. The primary importance of the specimens recovered at Fort Scott, at least at the present time, lies in their interpretive values. Accordingly, the present report has been rather profusely illustrated with photographs of the more unique or interesting artifacts.

WEAPONS, AMMUNITION AND RELATED ITEMS

Firearms

Firearms are represented by a flintlock cock, a percussion hammer, a frizzen, a brass barrel band, a breech tang screw, a possible nose cap section, and a tip end of a powder flask. It is quite likely that other, unrecognizable, firearms parts and furniture are present in the category of miscellaneous iron and steel.

A front barrel band from a muzzle loading musket or rifle was recovered (Plate 12, A). This specimen is made of brass and has a length at the top of 72.5 mm. This is a double-strapped band with each strap being 13 mm wide. A brass blade sight, which is integral with the band, is located on the rearmost of the two bands. A hole located on the right side of the band evidently engaged a stud from a spring positioned behind the band. This band is quite similar in

shape to the front band on the Model 1816, U.S. Flintlock Musket except that the front band on that model was smaller and made entirely of iron, except for the blade sight which was brass (Reilly 1970:2-3). In fact, many of the succeeding U.S. arms, including the Model 1817, U.S. Flintlock Artillery Musket and the U.S. Contract Navy Musket which was made after 1816 all have similar front barrel bands, though made of iron (Reilly 1970:11, 17). A German musket on display at the Kansas State Historical Society has a front barrel band which is identical in all respects to the barrel band from Fort Scott. The complete musket was found in the ruins of Lawrence, Kansas following the 1863 guerrilla raid on that town by a band of men led by William Quantrill. The lockplate of this musket has a maker's name "Neise" and a date stamped in it which is either 1825 or 1829. This is a percussion arm at the present time although it probably was originally a flintlock which was later converted to percussion. Although the percussion system, utilizing the copper percussion cap, was invented in 1807 and was utilized as early as 1816, it apparently was not widely adapted until the 1830s and, in fact, it was not adapted by the U.S. Government until 1841 (Gluckman 1948:188). Many of the conversions of flintlock to percussion did not involve changing the lock but instead consisted of substitutions of percussion hammer, drum, etc. for the flintlock cock, frizzen, pan, etc. Numerous foreign flintlocks and percussion arms, including German firearms, were imported into the U.S. during the Civil War (Edwards 1962:74-75).

A flintlock cock, made of iron and badly corroded, was recovered from Historic Structure 9 (Plate 12, B). The top jaw and top jaw screw are both missing from the specimen. The cock is approximately 60 mm in height and is a right side cock. The lockplate and firearm of which this cock was presumably a part could not be determined, although numerous military muskets manufactured from 1800 to 1820 had similar cocks (Brown 1968).

A single percussion hammer, made of iron and badly corroded, was recovered from Historic Structure 5 (Plate 12, C). This is a right side hammer that is somewhat more gracile than the heavier hammers found on the Model 1841, U.S. Percussion Rifle or the Model 1855, U.S. Percussion Rifle and it is also constructed in more of an S-shape.

A very badly preserved portion of an iron frizzen was recovered in association with Historic Structure 5. This specimen is in such a corroded state that no measurements or additional observations can be made at this time.

A probable breech tang screw was discovered in association with Historic Structure 7 (Plate 12, E). This specimen is a flathead screw of the machine type (no taper) and the threading is restricted to 22 mm at the tip end. The screw is made of hard brass and it has an overall length of 69.5 mm and a head diameter of 10 mm. The screw diameter is 5 mm and the head is of the countersunk variety.

The possible nose cap section is a simple piece of flat brass that has a cylindrical shape with one-third to one-half of the cylinder present. This specimen measures 25 mm long, 17 mm in diameter, and is made of 2 mm thick flat brass. This specimen was recovered from Historic Structure 7.

Gunflints

One complete gunflint (Plate 12, D) was recovered from Historic Structure 6 and a section of another gunflint was found in association with Historic Structure 11. Both are of the amber color and translucency associated with "French" gunflints. The complete specimen, which is 23 mm long, 23 mm wide, and 7 mm thick, has the gnawed heel and general configuration of a French-made gunflint (Carlson 1979:65).

Powder Flask

A single example of a possible powder flask spigot was recovered from Historic Structure 3. This specimen, which is cylindrical in shape and which has an expanding conical-shaped tip, is hollow. The specimen has an overall length of 41 mm and a diameter of 13 mm. While this specimen is tentatively identified as a spigot or spout from a powder flask, it should be noted that the material from which it is made (brass) is quite thick, measuring 2 mm in thickness. This specimen is somewhat heavier than other powder flask spouts that are contained in the collections of the Kansas State Historical Society.

Ammunition

The 99 specimens of ammunition recovered at Fort Scott include 32 cartridges, eight shotgun shells, 11 percussion caps, 14 bullets, and 34 pieces of ball and shot. The distribution of these items is shown in Table 1.

Cartridges

Three types of cartridges were recovered from 14BO302: 1) pinfire, 2) rimfire, and 3) centerfire-external. A single example of a pinfire cartridge was recovered (Plate 13, A). Logan (1959:4) notes that the pinfire may have been invented by M. Le Faucheux as early as 1836. This was evidently the first self-exploding cartridge to see general use. The present example is a 12 mm diameter brass case which has a length of 12 mm. The pinfire element is still present and it projects out from the wall of the cartridge near the base. This element has a diameter of 2.5 mm and a length of 4 mm. No headstamp is visible. The cartridge is quite similar in size and construction to a pinfire cartridge illustrated in Logan (1959:55) that is attributed to a German manufacturer, Braun and Bloem, and Logan indicates that several European manufacturers produced this cartridge in the years prior to 1836.

TABLE 1
14BO302, Distribution of Ammunition Recovered at Fort Scott

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Pinfire Cartridge, 12 mm						1													
Rimfire Cartridges																			
.22 long					1		1						1						
.22 short				1					1								6		
.22 short bullets																	1		
.32									2										
.38							1				2								
.44							2												
.58							1												
Centerfire Cartridges																			
.32					1														
.38									1		1								
.44								1											
.50									1										
30-06											1								
.50 machine gun									1										
Shotgun Shells																			
12 gauge pinfire					1														
12 gauge	1				1	2	1				1								
Conical Lead Bullets																			
.52 Minie'																			
.58 Minie'						2	1		5		1								
.69 Minie'						1			1										
.52 Sharps									1		1								
.52 Solid									1										
Ball and Buckshot																			
7 to 17 mm diameter	1				6	5			15	2	2	1					2		
Percussion Caps																			
Musket						6			3										
Ground-Edge						1			1										

Twenty-two rimfire cartridges and two complete rimfire bullets were recovered from the site. Five different calibers are represented in the collection: .22, .32, .38, .44, and .58. The rimfire cartridge was apparently invented in France in 1845 (Barnes 1965:271) but it wasn't widely used until 1857 when Smith and Wesson developed the .22 short. By the 1860s, rimfire cartridges were being produced in larger calibers such as the .44 Henry and .56-56 Spencer (Barnes 1965:271). Ten of the rimfire cartridges and the two complete rimfire bullets recovered from Fort Scott are .22 caliber shorts (example on Plate 13, B). As noted previously, .22 short cartridges are the earliest manufactured rimfire cartridges (Barnes 1965:273). This round is still manufactured and used today. Only two headstamps were noted in the .22 short cartridge category. The first of these is a Maltese cross. Logan (1959:204) notes that the Maltese cross was a headstamp utilized by the Union Cap & Chemical Co. whose name was later changed to Western Cartridge Co. The second headstamp noted on a .22 short cartridge consisted of a raised "US" that is contained within a raised circle. This cartridge was apparently manufactured by the United States Cartridge Company and Logan (1959:191) notes that the raised stamp is the earlier form used by this cartridge manufacturer. Teague and Shenk (1977:147-148) suggest a dating range from 1870 to 1936 for this cartridge type. Three .22 long or .22 long rifle cartridges were recovered. Herskovitz (1978:47) notes that the .22 long was developed as early as 1871 as a black powder load and the .22 long rifle was developed in 1887 by the J. Stevens Arms and Tool Company. Two of the .22 long or .22 long rifle cartridges had the sunken letter "U" as a headstamp, indicating that they were manufactured by the Union Metallic Cartridge Company (which later merged with Remington). Fontana and Greenleaf (1962:82) note that this cartridge type may date from the 1880s.

Three rimfire cartridges of .32 caliber were recovered from the site. No headstamps were noted on these cartridges. Two of the cartridges were sufficiently intact to allow for a measurement of their length. One of these was 14 mm long, and the other was 20 mm long. The shorter of these two appears to fit into the category of .32 short cartridge as described by Logan (1959:65). Barnes (1965:277) notes that the .32 short rimfire was first produced by Smith and Wesson in 1860 for use as a revolver load and it was later made by a number of manufacturers for use in both revolvers and rifles. The second cartridge is evidently a .32 long caliber cartridge. This cartridge was manufactured from 1861 to 1936 (Barnes 1965:277).

Three rimfire cartridges were recovered from Fort Scott which are of .38 caliber (example on Plate 13, C). Two of the specimens, both lacking headstamps, have lengths of 19.3 mm. The third specimen, which was crushed, has a raised "H" in a depressed panel, indicating that it was manufactured by Winchester Repeating Arms during or after

1866. This specimen may be an example of an early internally primed centerfire cartridge.

Two .44 caliber rimfire cartridges were recovered. Both are extremely short, being just 12 mm long. One of the specimens contains a nearly obliterated headstamp which may be a letter "B" in a raised pattern.

A single example of a rimfire cartridge in a .58 caliber was recovered from Fort Scott. This specimen is crushed so it is difficult to obtain accurate measurements. It has an estimated length of 20 mm and no headstamp is present. This example compares closely with the .58 Joslyn Carbine cartridge illustrated in Logan (1959:72). Logan notes that the .58 Joslyn Rimfire Carbine has patent dates of October 8, 1861 and June 24, 1862 and that the government purchased 515,416 of these cartridges during the Civil War (Logan 1959:73). The cartridges were evidently manufactured by the Union Metallic Cartridge Co. and the example illustrated in Logan's book lacks a headstamp (Logan 1959:72-73).

Eight centerfire cartridges were recovered and all appear to be of the externally primed type. One relatively undiagnostic .32 caliber example was recovered. This example is unfired but it has apparently been cut off so that an undetermined portion of the tip end is missing. The extant portion of the cartridge measures 14.4 mm and no headstamp is present. Three .38 caliber cartridges were recovered which are also missing part of their lengths and which lack headstamps. All three are externally primed and the longest extant section measures 19 mm. One example of a .44 caliber externally primed cartridge was recovered. This specimen is missing a portion of the mouth or tip end. It has a headstamp which reads "UMC .44-40", indicating that it was manufactured by the Union Metallic Cartridge Company, established in 1867, which eventually merged with Remington. The .44-40 caliber cartridge was manufactured for use in the Winchester Model 1873 lever-action rifle and, in 1878, the Colt's Frontier Six Shooter was adapted to use this cartridge (Fontana and Greenleaf 1962:81). A single example of a .50 caliber cartridge recovered from Fort Scott appears to be of the external primer type (Plate 13, D). This specimen, which lacks a headstamp, is 47 mm long. It conforms quite closely to the 50-70 Musket (or .50 Government) cartridge illustrated and discussed in Cartridges (Logan 1959:148). Carlyle Smith (1960:235) notes that the .50 Government cartridge was manufactured circa 1880 for use in U.S. Model 1866 and later rifles as well as in Sharps carbines. Logan (1959:148) notes that this cartridge was manufactured as late as 1896. Presumably, any of the externally primed, centerfire cartridges discussed above could date to the late nineteenth century although they all appear to postdate the military occupations at the fort.

Two additional cartridges obviously date to the twentieth century. One of these is a 30-06 cartridge with the following headstamp "F A 11 08" (Plate 13, E). This cartridge type was developed for use in the Springfield Rifle in 1906 (Logan 1959:117-118). This specific example was evidently produced at the Frankford Arsenal in 1908 and it is a government cartridge. The second example appears to be a .50 caliber machine gun cartridge which has had a machine screw inserted through the primer opening. This specimen has a headstamp which reads "S L 43", indicating that is was made during the Second World War. The cartridge case measures 100 mm in length and it has a definite undercut and extractor flange at the head.

Shotgun Shells

Eight shotgun shells, all 12 gauge, were recovered from Fort Scott. Seven of these shotgun shell bases are centerfire and the eighth specimen is an example of an early pinfire type. The pinfire shell base is the Lefaucheux type (patented in 1835 or 1836 in France) and it has an embossed "12" for a headstamp (Plate 13, F). No information was available as to manufacturer, although faint lettering was also present on the base. The specimen is identical to a specimen illustrated in Fort Bowie Material Culture (Herskovitz 1978: Figure 15, D) although the Fort Scott example is missing the pinfire element. Herskovitz (1978:51) notes that this cartridge type was exported to the United States in limited numbers and was apparently used to a limited extent during the Civil War. One of the centerfire shotgun shell bases is of the high brass type and the other six specimens are low brass. Headstamps could be discerned for six of the centerfire shotgun shell bases and paper was present inside two of the bases. Three of the headstamps, all slightly different, were manufactured by the Winchester Repeating Arms Company. Headstamps on two specimens are "Winchester New Rival" (Plate 13, G) and "1901 12 New Rival". Carlyle Smith (1960:235) has suggested a manufacturing date from 1890 to 1900 for the "New Rival" 12 gauge, low-base brass shotshell. The 1901 date on one of the two specimens from Fort Scott suggests slightly later dating, and the words "New Rival" suggest that these shotshells may have been intended for use with smokeless powder. Winchester began experimenting with smokeless powder in 1888, but it wasn't until 1893 that they began to list smokeless powder cartridges in company catalogs (Williamson 1952:143). The third Winchester shotshell has a headstamp which reads "Winchester No. 12 Repeater" (Plate 13, H). A date for the production of this shell could not be determined. The single high base brass shotshell (measuring 17 mm in height) has a headstamp which reads "Peters No. 12 Target" (Plate 13, I). One brass shotshell base, with a headstamp which is partially obscured, reads "UMC", indicating that it was manufactured by the Union Metallic Cartridge Company. The UMC Company apparently produced 12 gauge shotshells beginning in 1874 (Herskovitz 1978:51). The only other shotshell which has a headstamp is largely indecipherable but does have a "12" stamped on it.

Bullets

Fourteen lead bullets from combustible cartridges were recovered at Fort Scott (examples on Plate 13, J-N). The most commonly encountered bullets were of the Minie' type with three calibers represented: .52 (one example), .58 (eight examples), and .69 (two examples). The Minie' Balls are all of a conical shape with deep, hollow bases. The Minie' system was apparently developed in 1851 and was subsequently adapted, with some modification, for use in various .58 caliber Civil War muskets, Models 1855, 1861, 1863, and 1864 (Lewis 1956:14; C. Smith 1960:236; Logan 1959:6, 16). The .69 caliber Minie' Ball was adapted for use in the .69 caliber rifled musket which was introduced to U.S. forces in 1855 (Herskovitz 1978:52). Carlyle Smith notes that the .58 caliber Minie' Ball was last made in 1865 (Smith 1960:236). The .52 caliber Minie' Ball is represented by a single specimen from Fort Scott. In construction this specimen is identical to the .58 caliber Minie' but it is not known when this was produced (though presumably during the Civil War period) nor is it known for what arm it was intended. The respective weights of the Minie' Balls are given below in Table 2.

TABLE 2

14BO302, Weights in grams of Minie' Balls

.52 caliber	25.0 gms
.58 caliber	26.9
	27.2
	27.2
	28.7
	29.9
	30.0
	30.6
	34.5
.69 caliber	46.3
	46.9

Two .52 caliber Sharps bullets were identified. The diameter of the .52 caliber Sharps bullet is actually slightly larger. The two examples measure .54 inch in diameter. This cartridge type was used in the Model 1859 Sharps breech loading percussion military rifles and carbines (Logan 1959:14). One of the recovered Sharps bullets weighs 28.8 gms and the other weighs 29.0 gms.

One .52 caliber, solid lead conical bullet, weighing 26.8 gms, was also recovered at Fort Scott. This specimen is a simple cone in

shape with a flat base. A slight swelling was noted at the base, suggesting a method for attaching the lead to a paper or linen base.

Ball and Buckshot

This category includes round lead balls of various sizes and weights which were presumably projectiles for flintlock and percussion muzzle-loading arms and which could have been encapsulated within cartridges or used separately (examples on Plate 13, O-R). Thirty-four pieces of ball and/or buckshot were recovered. These range in diameter from 7 mm to 17 mm and in weight from 2.2 gms to 26.8 gms. The majority of these specimens are obviously balls as sprue marks and mold seams are still visible on their spherical surfaces. Five of the smaller specimens, with diameters ranging from 7 mm to 8 mm, may be buckshot as they lack evidence of such sprues and mold seams.

Percussion Caps

Two types of percussion caps were recovered at Fort Scott (examples on Plate 13, S, T). Nine examples of "musket" or "top hat" percussion caps were encountered and two small, ground-edge percussion caps, sometimes called revolver caps, were discovered. As Herskovitz has noted (1978:52), correlation of percussion caps to specific weapons is not possible because the nipples on percussion weapons were interchangeable and of various sizes.

Edged Weapons

Daggers (two examples)

A very badly corroded example of a probable dagger was recovered from Historic Structure 10 (Plate 14, A). This specimen is represented by an oval-shaped cross guard which measures 59 mm in length, 19 mm in width, and which is just slightly less than 3 mm in thickness. A 30 mm long section of a tapered tang extends from one face of the cross guard and a 99 mm length of blade extends out the other side. The blade and the tang are extremely corroded. What may be a portion of a metal scabbard surrounds the blade on the blade side of the cross guard.

A second probable dagger is represented by the find of a brass quillon or guard in Historic Structure 9 (Plate 14, B). This specimen is of the full quillon or cross guard type and it measures 53 mm long, 13 mm wide, and 3 mm thick. It is slotted for a narrow tang and this rectangular slot measures 9 mm long by 5 mm wide.

Bayonet

A conical, brass bayonet scabbard tip was recovered from Historic Structure 9, the Guardhouse (Plate 14, C). This bayonet tip is of a

style most often associated with the U.S. Model 1855 scabbard for the angular bayonet of the U.S. Rifle-Musket, Model 1855 to 1870 (Hardin 1964:34). Actually, this type of tip was present on bayonet scabbards dating as early as 1819 (U.S. Rifle, Model 1819) (Hardin 1964:25-26). The excavated specimen is 82 mm long and 17.5 mm wide at its widest portion. It is tapered, with one (the reverse) side flattened with two small rivet holes in it. It has a conical, wasp-waisted finial. In size, this specimen is closest to the bayonet scabbard tip of the Winchester Repeating Rifle, Model 1866 (Hardin 1964:55-56).

Possible Sword Scabbard

A single example of a front part of a very badly rusted scabbard was recovered from Fort Scott. This specimen consists of a 310 mm length of iron or steel which is oval in cross section. It is approximately 32 mm wide and 20 mm thick. Corrosion has so permeated the metal that it is doubtful if any of the metal retains its original composition. Nevertheless, the shape of the specimen, and its relative lightness, suggest that this is a scabbard section for a straight-bladed sword or saber.

MILITARY UNIFORM PARTS

Insignia

Cap and Collar Insignia (four examples)

Three brass and one pewter objects were recovered from Fort Scott which are evidently either cap or collar insignia from military uniforms. The first of these is a thin piece of brass which is the top half of a flaming grenade device (Plate 15, A). This specimen is 34 mm in height and is 28 mm wide and is stamped out in the design of a flame with the front part of the specimen being convex and the back hollow. This device was apparently worn on coat collars and on caps of enlisted personnel of the Ordnance Branch (Campbell and Howell 1963:29-30). Campbell and Howell (1963:29, Figure 48) illustrate a flaming grenade device that was issued to enlisted ordnance in 1851 that is similar in some respects to the present specimen, although their illustrated specimen shows the flame motif in a more spread out fashion. Howell and Kloster (1969:41, Figure 34) reproduce a War Department lithograph from 1839 which illustrates a flaming grenade to be used by the Ordnance Branch on the 1839 forage cap. Again, the flame element on this specimen is somewhat more spread out than on the specimen recovered from Fort Scott. A second example of branch insignia consists of a thin piece of brass in the shape of a sword handle and part of a scabbard with attachment rings present (Plate 15, B). This specimen, which is also stamped with a concave front and a hollow back, is evidently a portion of the crossed saber device which was utilized by cavalry troops. The specimen is incomplete and it was not possible to determine whether this is an example of the early

large form (first worn in the late 1850s) or of the smaller version which was produced for the forage cap in the 1870s (Brinckerhoff 1972:13). The early form was issued for wear with the Jeff Davis hat and with the kepi.

Two metal company letters were recovered from Historic Structure 9. The first of these is a small white metal or pewter letter "B" (Plate 15, C). This specimen measures 18 mm in height, 17 mm wide, and is 2 mm thick. Campbell and Howell (1963:11) indicate that company letters made of pewter were used at least since 1812. These letter devices were commonly employed in a variety of cap and hat styles by the U.S. military in the nineteenth century. While it is difficult to assign this particular letter to any particular company, it is noted that Company B of the First Infantry arrived at Fort Scott in July of 1845 (Thompson 1967:30). The second company letter, which was probably also employed as a hat device, is made of thin brass with a hollow back. This is the letter "G" and it measures 26 mm in height and width and it is made of very thin brass that is less than 1 mm thick (Plate 15, D). The letter may have been gilded, as a small gold residue is still observable on the front of the device. Dating and specific assignment of this letter to a particular company is quite difficult. The brass company letter was utilized during the entire period of the Fort Scott military occupation from 1842 to up into the 1870s. In reviewing the companies that were stationed at Fort Scott during the period from 1842 to 1853, Thompson (1967) does not list Company G of any branch as being stationed at the fort. However, Company G of the dragoons was located at Fort Leavenworth in July of 1844 and took part in several activities with Company A of Fort Scott (Thompson 1967:45). However, this company letter could just as likely have been affiliated with a company occupying Fort Scott during the Civil War. Howell (1975:3-5) indicates that the company letters which lack a means of attachment on their reverse faces are a type that apparently predate 1854.

Epaulette Parts (five examples)

Brass scales from epaulettes of two different types were recovered from Fort Scott. While none of the scales is complete, they are complete enough to allow for identification as to the type of epaulette of which they formed a part. Four of the brass scales were recovered from Historic Structure 11 and are of essentially identical type and may once have formed a part of a single epaulette (example on Plate 15, E). These four scales are evidently parts of an epaulette that was of an early type issued to the U.S. forces (Brinckerhoff 1972:33). The individual scales, which are incomplete, consist of a flat band of brass which is 65 mm in width and which is slightly greater than 1 mm in thickness. The distal end of the epaulette scale is marked by three lobes, with the center lobe being nearly twice as large as the two side lobes. Small iron rivets are located equidistant along the top or proximal margin of the epaulette scale and

these were used to attach the scales one to another. This is evidently the style of epaulette that was worn from the 1830s to the late 1850s (Brinckerhoff 1972:33). The fifth epaulette scale recovered at Fort Scott was found in conjunction with Historic Structure 30 (Plate 15, F). This epaulette is of a later style, probably the style that was adapted in 1854. The construction of this specimen is quite similar to that of the aforementioned four specimens. It is made of thin brass and the distal end is marked by a three-lobe pattern while the upper or proximal end is sinuous. Two rivet holes are located along the upper margin of this specimen. This specimen is considerably smaller than the other four. It measures only 53 mm in width and is made of thinner brass of less than 1 mm thickness.

Military Cartridge Box Plate

The single example of an oval-shaped military plate recovered from Fort Scott was found in association with Historic Structure 9 (Plate 15, G). This specimen, which measures 87 mm long by 58 mm wide, is a large lead-backed oval buckle which has a raised "U.S." in the center. The obverse or front face of this is made of thin, stamped brass and it was originally convex in shape with a lead-filled hollow back. Two parallel iron wires are still visible in the lead back and these originally were joined together to form two wire loops on the back, at opposite ends of the plate. This style of plate was first authorized by army regulations in 1839 for enlisted men and was specified for use on the cavalry and dragoon waist belt (Brinckerhoff 1972:20-21). However, the waist belt type had a different attachment method on the lead back. The waist belt utilized a one-piece iron hook which had two studs. The plate recovered from Fort Scott was evidently utilized on the flap of either the large infantry cartridge box (1840 to 1870s) or on the small cavalry cartridge box during the 1860s and early 1870s (Brinckerhoff 1972:20-21).

Adjustment Hooks

One complete adjustment hook (Plate 15, H) and sections of two other adjustment hooks were recovered at Fort Scott. The complete specimen was found in association with Historic Structure 10 and the incomplete specimens were found in association with Historic Structures 17 and 11. The adjustment hooks are made of a heavy brass rod that has been flattened, apparently by hammering, and then bent up at one end to form a hook. Two holes have been drilled through the opposite or proximal end of the complete specimen for attaching it to a belt or strap. The complete specimen has an overall length of 72 mm and it has a maximum width at the proximal end of 8 mm. The brass from which this specimen is made ranges from 3 mm to 4 mm in thickness. While a precise identification of the function of these specimens cannot be made, they may have been adjustment hooks used on haversacks or shoulder strap hooks for saber belts. Several similar,

though not identical, specimens were identified at Fort Bowie (Herskovitz 1978:36, Figure 11, D-I).

Guidon Finial

A single example of a heavy brass guidon finial was recovered from Historic Structure 11 (Plate 15, I). While not a uniform part, it has been included in this section for convenience of illustration. This partially hollow specimen has an overall length of 55 mm and a diameter at the base of 20 mm. The finial element is in an acorn shape and the base of the specimen is concave to accept an inserted pole tip. A 2.5 mm diameter hole is drilled through the sidewall to allow for insertion of a pin, nail, or screw to hold the finial securely on the pole. A specific identification of this item as a military item cannot be made at this time, although it very likely was utilized by the military.

Military Buttons

A total of 35 military buttons of the Sanders type (S-type) and one Stf-type button were recovered from the Old Fort Scott investigations. Their distribution is shown in Table 3. Thirty-four of these were associated with fort-related structures and one was a surface find.

The Sanders button construction type was patented by B. Sanders in 1823 (Johnson 1948:13). It was a three-part button made from quite thin metal. The upper blank was first formed, usually in a convex shape, by pressing it into a hardened steel die (Luscomb 1967:17). The under blank was shaped in a similar fashion with the addition of a brazed-on brass loop shank (Johnson 1948:14). The blanks were then pressed together with the edge of the front piece turned over the edge of the back piece. Johnson (1948:13) notes that this is the best construction method for durable, quality buttons and that it is still used. Nearly all of the Sanders type buttons were originally gilded or plated with materials that ranged from yellow lacquer to pure gold (Johnson 1948:7-8). On the 35 S-type buttons recovered from Fort Scott, gilding is present in small amounts on only two specimens.

The thirty-five S-type buttons have a common die stamp or device on the front plate. This motif, called a "Line Eagle Device" consists of "...an eagle displayed, head to right, wings extended upwards, olive branch with three to seven (but normally five) leaves in right talon, three arrows in left. Lined Spade Shield on breast" (Johnson 1948:25). Considerable variation occurs within this device category in the Fort Scott sample and this allows for more discrete formal and temporal classification of at least a portion of these military buttons. This variation is manifested most frequently on the shield element. Shields ranged from recessed to raised and had fields that ranged from lined to blank with raised letters. Raised letters noted

TABLE 3

14BO302, Distribution of S-type and Stf-type Military Buttons

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
S-Type, Line Eagle																			
Dragoon (1883-1850)			1		5	2													
Dragoon (1840-1861)					1	2													
Calvary (1855-1870)									1										
Infantry (1821-1840)											1								
Infantry (1840-1855)			1				1		1										
Army Rifles (1850-1862)																	1		
General Service (1855-1884)			1		2	2			4									1	1
Unidentified					2	3			1		1								
Stf-Type, General Staff (1870-1902)																			

within the field included "D", "C", "R", and "I" and these refer to particular branches or arms of the U.S. military service.

Eleven of the S-type, Line Eagle Device buttons have a "D" on the shield field, indicating that they are dragoon buttons. Using the classificatory scheme devised by Johnson (1948), eight of these buttons, all with a "D" on a level field, can be dated in terms of manufacture to the period from 1833 to 1850 (examples on Plate 16, A, B). These specimens range in diameter from 13 mm to 19 mm with most examples (six) measuring 14 mm in diameter. This subtype was apparently issued to both officers and enlisted men (Johnson 1948:57). Six backplates contain information about manufacturers. The following stamps were noted:

SCOVILLS	EXTRA	- 1 example
SCOVILLS		- 2 examples
SCOVILLS & CO.		- 2 examples
SCOVILLS	WATERBURY	- 1 example

Three of the dragoon buttons (example on Plate 16, C), which were also apparently issued to both officers and enlisted men, have the raised "D" on a recessed shield and have a manufacturing date from 1840 to 1861 (Johnson 1948:58). These examples ranged from 14 mm to 15 mm in diameter and only one backplate stamp (SCOVILLS & CO. EXTRA) could be read.

Six of the eleven dragoon buttons were recovered from the Dragoon Barracks (HS5), four were found in association with HS6 (Infantry Barracks) and the eleventh specimen was recovered from HS3 (Officer's Quarters).

A single example of a U.S. Cavalry, S-type, Line Eagle Device button was recovered from 14B0302 (Plate 16, D). This specimen has a raised "C" on a recessed shield and it has a manufacturing dating span from 1855 to 1870 (Johnson 1948:62). The specimen measures 16 mm in diameter and was recovered in association with the Guardhouse, HS9. Johnson (1948:62) notes that this button type was issued only to officers.

Four infantry buttons of the S-type, Line Eagle Device were recovered from Fort Scott. One of these has an "I" on a raised shield (Plate 16, E) and this specimen has a manufacturing range from 1821 to 1840 (Johnson 1948:49). This button has a diameter of 15 mm and a backplate stamp which could not be deciphered. Johnson (1948:49) notes that this was solely an officer's button type. The other three infantry buttons each have an "I" on a recessed shield and, according to Johnson (1948:50) have a manufacturing date range from 1840 to 1854 (example on Plate 16, F). One specimen measures 14 mm in diameter, one is 16 mm in diameter, and the other measures 20 mm in diameter.

This type was apparently issued to both officers and enlisted men. Two of the recovered infantry buttons were found in association with the Guardhouse, HS9. The third specimen was recovered from the fill of HS7, an infantry barracks and the fourth was in HS3, an officer's quarters.

One example of a U.S. Army Rifles S-type, Line Eagle Device button was recovered from the Guardhouse, HS9 (Plate 16, G). This specimen has an "R" on a recessed shield and it has a manufacturing date range from 1850 to 1862 (Johnson 1948:60). The lone example measures 15 mm in diameter and has a backplate stamp which reads "SCOVILL EXTRA QUALITY".

In 1854, the General Service style of S-type, Line Eagle Device button replaced the previous types, which had arms letters on the shields, for enlisted men (Johnson 1948:65). The new button type was virtually identical to the earlier type except that the field of the shield consisted of a lined field, with horizontal lines typically present at the top of the shield and vertical lines below them. In 1902 this button type became regulation for officers as well as enlisted men, with the exception of the Engineer Corps (Johnson 1948:65). Herskovitz (1978:39) notes that two general sizes of General Service buttons are known, "...a coat size and a smaller vest, cuff, or jacket size...." Brinckerhoff (1972:5) notes that slight changes occurred in the General Service button after 1884 which allow for separation of the type into an 1855 to 1883 category and an 1884 to 1902 category. The earlier variety is characterized by a "...recessed, wide; flat, and lined shield on the eagle's breast. The eagles' wings are narrow and long. From 1884 on, the eagle bears a smaller shield raised, and the eagle generally has short, wide wings and a long neck" (Brinckerhoff 1972:5).

Eleven General Service buttons were recovered from Fort Scott and they are all of the earlier (1855-1883) type (examples on Plate 16, H, I). These examples range in diameter from 14 mm to 20 mm. Four of the specimens were recovered from HS9, the Guardhouse, and two specimens were recovered from HS5, the Dragoon Barracks, and HS6, an infantry barracks. One specimen was also recovered from each of the following structures; HS3, an officer's quarters and the Wagon Scale structure, HS33. The eleventh example was found on the surface of the site. Only three of the General Service buttons had backplate stamps which could be deciphered. Two of these are marked "SCOVILLS EXTRA" and the third is marked "EXTRA QUALITY".

Five additional S-type buttons with Line Eagle Device were recovered in such a decomposed state that it could not be determined if they are of the General Service type or of other types. These specimens range in diameter from 14 mm to 19 mm. Two were recovered from HS5 (Dragoon Barracks), and one each from HS6 (Infantry

Barracks), HS9 (Guardhouse), and HS11 (Post Headquarters and Ordnance Stores).

Two additional badly corroded military buttons of S-type were recovered from HS6 (Infantry Barracks). Both examples measure 19 mm in diameter.

One Staff type (Stf-type) button was recovered from Fort Scott (Plate 16, J). Johnson (1948:14-15) notes that the Stf-type is a four-part button that is similar to, and apparently derived from, the Sanders type. It has an additional part which consists of a separate annular ring which clamps the back and front plates together. The Stf-type button recovered at Fort Scott has, on its convex front plate, a Staff Eagle Device. Johnson (1948:25) describes the Staff Eagle Device as follows:

> This is an Eagle Displayed, head to right, wings extended upwards, four arrows (exceptions with three, five or six stated) in right talon, Olive Branch with normally five leaves in left talon. A Lined Union shield on breast, 24 stars encircling (exceptions with from twenty to thirty stars stated).

This device occurs on several General Staff buttons that date from 1832-1902 (Johnson 1948:33-34). The Fort Scott example has the characteristics of the General Staff button of 1870 to 1902. It has a Staff Eagle Device with an eared shield. Thirteen stars are contained within the upper of chief part of the shield field and the lower part consists of parallel, incised, vertical lines. Twenty-three stars encircle the Staff Eagle Device. This specimen measures 22 mm in diameter and it has a backplate stamp which reads "EXTRA QUALITY". It was recovered from the fill of HS5, the Dragoon Barracks.

CLOTHING AND ADORNMENT

Included in the category of clothing and adornment items from Fort Scott are numerous buttons, studs, clothing fasteners and rivets, footwear, cloth, and leather. A number of the buttons, buckles, and other fastening devices considered in this section might have been used by military personnel at Fort Scott but these buttons are of such common type that they could equally well have been used by civilians. Other specimens are clearly of civilian origin as indicated by their ornate appearance and some of these are of types that were not produced until after the military occupation of Fort Scott had ended.

Buttons

Metal Buttons

One hundred and eight metal buttons or button parts were recovered from Fort Scott which were either obviously nonmilitary or were of such common type that they could not definitely be affiliated with any of the military occupations (see Table 4 for provenience). Several different button types are represented in the sample and, for convenience, the 108 specimens have been classified (by and large) by their method of construction (following Brown 1968:251-267) with particular emphasis on button backs and shanks (see Plate 17, A-F for a representative selection). An exception occurs in the category of suspender buttons because, due to peculiar back and shank construction, these can with more reliability be assigned to a functional classification (Brown 1968:266). The most common metals represented in the collection are iron, steel, brass, copper, lead, pewter, and various related alloys.

Forty-three of the recovered miscellaneous metal buttons are of sew-through type. All of these specimens are circular disks that are perforated centrally with one, two, or four holes. The vast majority (38) have four holes. The circular disk sew-throughs range in diameter from 13 mm to 27 mm. Twenty-seven of the four-hole disks are plain (lacking decoration) and nine four-hole disks have partially crosshatched obverse faces. Any or all of these specimens could be military buttons. Herskovitz (1978:38) illustrates similar buttons from Fort Bowie, Arizona, and he ascribes them to such special function items of military apparel as suspender and overall buttons. Two, somewhat unique, four-hole sew-through buttons were recovered which have stamped letters on their fronts or backs. One of these is marked "EXTRA" and the other, which has a recessed panel, is marked "KEY". Only three two-hole sew-through metal buttons were recovered. Two of these are marked or decorated, one with blue paint and the other with black-painted, stamped (but indecipherable) letters. This latter example may be Japanning, a technique in which buttons were covered with a hard, black varnish (Brown 1968:258). The single-hole sew-through type (which may have had some other type of fastener) is unique in that the center hole is square. This specimen, measuring 15 mm on each side, has a stamp "ANSONIA BRASS CO." on one face.

Five buttons were identified as being suspender buttons. Four of these, ranging in size from 13 mm to 17 mm, have rod self-shanks which divide a central opening (Brown 1968:266-267). These specimens also have partial crosshatching on one face. The fifth example, measuring 16 mm in diameter, has a four-way bird cage back (Brown 1968:266-267) and a partially decipherable stamp "J--OLMES & CO."

Fourteen metal buttons have simple, metal loop shanks which are typically brazed onto the centers of the button backs. Six of these, ranging in size from 14 mm to 38 mm, are simple, flat disks. One specimen, measuring 15 mm on a side, is square. Several decorated

TABLE 4
14BO302, Distribution of Buttons

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
METAL BUTTONS																			
Sew-Through Buttons		1	1	2	6	6	2		16		3	1	1				2	2	
Suspender Buttons			1		1				3										
Loop Shank						6		2	3		3								
Split Shank						1													
Self Shank					1														
S-Type					1	2					2					1			
Modified S-Type						1													
Provisional S-Type			3		4	5	2		6		4								
Unidentifiable					4	3	1		1	1	3								
BONE BUTTONS																			
Sew-Through																			
Flat Disk with panel recess		1	2			6	1		3		1		1						
Simple Flat Disk			1			1													
Concave Front						1													
Shelf-Shank						1											1		
SHELL BUTTONS																			
Sew-Through																			
Flat Disk with panel recess		1	7	4	6	18	5	1	21	3	18						1	1	
Simple Flat Disk			2	1	5	6	3	1	3	3	2								
Flat Disk with raised panel					4	1	1	8		6		1						1	
Concave Disk									1		1								
Flat Disk front, convex back									1										
Flat Disk with incising			1		2	6			7	1	4								
Self-Shank						2					2								
Metal Shank			1		1	4	1		3										

TABLE 4 (Continued)
14BO302, Distribution of Buttons

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
GLASS BUTTONS																			
Black Glass																			
Metal Shank					1	5	1	1	1								2		
Bridge Shank						1			1		1								
Indeterminate						1													
Clear Glass																			
Metal Shank					1	2					2								
Indeterminate						1			1										
CERAMIC BUTTONS																			
Sew-Through	1	1	15	5	26	96	18	12	57	9	53						1		
Metal Shank					4	12	3		7		4								
Self-Shank			2	1									1						
Composite			3			1													
COMPOSITION BUTTONS																			
Hard Rubber																			
Sew-Through		1			2	2			4		2								
Metal Shank							1												
Plastic/Cellulite																			
Sew-Through				1		3	1										1		
Self-Shank																1			
STUDS (Cuff, Shirt, Shirtwaist)																			
White Opaque Porcelain						3	1												
Gold											1								

disk buttons with loop shanks were recovered. Two of these, ranging from 13 mm to 18 mm in diameter, have stamped floral and geometric patterns on their front faces. One large disk, 35 mm in diameter, has a stamped or cast, rope-edge pattern. Two fabric-covered disks (28 mm and 39 mm in diameter) were recovered. Another specimen, which is 17 mm in diameter, has a front plate stamp which reads "WASHINGTON DEE CEE". The finial example is a concave disk with a cast, effigy human head (helmeted) in the center of the concavity. This specimen has a brass or copper front overlaying an iron back.

A single example of a split shank button was recovered from Fort Scott. This example, which measures 21 mm in diameter, is convex and has a single circle stamped on the front. The split shank was brazed onto the center of the convex back.

One self-shank metal button of the bridge type shank (Brown 1968:264) was recovered from the site. This specimen is a flat oval in shape and has a maximum length of 15 mm and a width of 10 mm. A remnant of gild was noted on the button front.

Six nonmilitary metal buttons of the S- or Sanders Type were recovered. One example, measuring 17 mm in diameter, is a convex disk with parallel lines all across the front. A second convex disk (13 mm in diameter), is fabric covered while a third (17 mm in diameter), has a stamped oak nut design on the front. One, flat top disk (17 mm in diameter), has the stamped letter "KEY" on the front. Another flat top disk (19 mm in diameter), is leather covered and has a painted design (a bow and arrow) and a painted name "YEOMEN" on its front. One disk-shaped S-type button was noted (26 mm diameter), which has a recessed panel. The panel has a shell inlay in the cavity and the surrounding border has been stamped with a floral pattern.

A modified S-type button, similar in construction to the Stf-type described earlier, was recovered. This specimen, which measures 14 mm in diameter, has a convex iron front and back and the expected loop shank. A separate annular ring of copper was used to join the front and backplates.

Twenty-four metal button sections were recovered from the site which may be of the S-type. These specimens consist of backplate sections of buttons and a number of them may be backplates from military buttons of the S-type.

Thirteen additional metal button sections were recovered from the site which are so corroded that they could not be further identified.

In terms of the general provenience of miscellaneous metal buttons, the highest concentrations were found in association with HS9 (Guardhouse), HS6 (Infantry Barracks), HS5 (Dragoon Barracks), and HS11 (Post Headquarters and Ordnance Stores).

Bone Buttons

Twenty bone buttons were recovered from Fort Scott and their distribution is shown in Table 4. A number of bone button types are shown in Plate 17 (G-K). Eighteen of the bone buttons are sew-through buttons, with one, two, four, or five holes present. The most frequently occurring bone buttons were four-hole, flat, disk-shaped buttons which had a recessed panel in which the holes were located. These specimens range from 13 to 18 mm in diameter. One similar flat disk-shaped bone button was recovered which had a recessed panel in which two holes were located. This specimen measured 14 mm in diameter. One additional specimen of the same type with the recessed panel had five holes drilled through the panel and the specimen measured 17 mm in diameter. Two bone buttons lacked the recessed panel but in other respects were similar to the aforementioned buttons. One of these specimens is a one-hole button and measured 20 mm in diameter. The second specimen is a two-hole button and the button measured 14 mm in diameter. One bone disk button has a concave front and convex back and two holes are placed toward the center of it. This specimen measured 25 mm in diameter. Two examples of self-shank bone buttons were encountered at 14BO302. Both of these specimens measured 8 mm in diameter and both have convex fronts. The bone shank is a simple projection off the button back that has a horizontal hole drilled through it. Bone buttons were found distributed throughout many of the structures at Old Fort Scott but they were found most abundantly in HS6 (Infantry Barracks) and in HS9 (the Guardhouse).

Shell Buttons

One hundred seventy-three buttons were recovered from Fort Scott which are made mostly or totally of shell. Their distribution is shown in Table 4 and Plate 18, A-F contains a representative sample of shell buttons. Most of these are in a somewhat weathered state and it could not be determined whether marine shell or freshwater mussel shell was the material used. One hundred fifty-nine of the shell buttons were of the sew-through variety, ten had expanding metal shanks, and four had self-shanks. The sew-through variety were all of the same general type with minor variations. One of these variations consists of flat disks which have recessed panels. Fifty-eight four-hole buttons were recovered which fit this type and which lack decoration completely. These specimens range in size from 7 mm to 21 mm with most of the buttons falling into the 7 mm to 15 mm category. Twenty-nine two-hole buttons with recessed panels and lacking decoration were also recovered from 14BO302. These specimens ranged in size from 10 mm to 21 mm with most of them falling in the 13 mm to 18 mm range. Another minor category consisted of flat disks which lacked any recess. In other words, they were plano-plano on both faces. Seventeen such flat disks were recovered that had four holes drilled through the center. These ranged in size from 7 mm to 15 mm with most of them falling in the range from 7 mm to 12 mm. Nine similar specimens, but with two holes instead of four holes, were recovered. These specimens range from 10 mm to 21 mm in size. Twenty-two flat disk,

sew-through shell buttons were recovered which have a raised circular panel on the front face. These specimens range from 10 mm to 21 mm in diameter with most of them falling in the range from 13 mm to 15 mm. Two sew-through shell buttons were recovered from Fort Scott that have a front face that is concave and a convex back. These specimens are both perforated with four holes in the center. One of them measures 12 mm in diameter and the other measures 9 mm in diameter. One sew-through shell button was recovered which has a flat disk front and a convex back. This specimen measures 16 mm in diameter and it has two holes drilled through it in the center. Twenty-one sew-through, flat disk shell buttons were recovered which have incising on their fronts. Eleven of these were of the four-hole variety and ranged in size from 7 mm to 21 mm with most occurring in the 10 mm to 12 mm range. Three similar incised sew-through disks were recovered which have a three-hole pattern. All of these measured 10 mm in maximum diameter. Three specimens of a two-hole variety of the same incised type were recovered from Fort Scott. These measured 10 mm to 18 mm in diameter. Four specimens of similar incised sew-through disk type were recovered which had a single hole perforating the center of the button. These measure from 10 mm to 25 mm in diameter.

Ten of the shell buttons recovered from Fort Scott had attached metal shanks on the flat backsides. The front faces of these buttons are typically flat to slightly conical and, centered on the backside, is a small hole which has an inverted V-shape in cross section. Circular, expanding brass shanks were then inserted into this expanding cone. These buttons ranged in diameter from 13 mm to 21 mm.

Four self-shank, flat disk shell buttons were recovered from Fort Scott. These are typically plano-plano in cross section and they have a small protuberance off the backside which forms the shank. Typically, a small horizontal perforation is placed in this protuberance. These specimens range from 11 mm to 28 mm in diameter.

Thirteen of the investigated structures at Fort Scott yielded shell buttons but these buttons were found in most abundance in HS9 (Guardhouse), HS6 (Infantry Barracks), and HS11 (Post Headquarters and Ordnance Stores).

Two additional items were recovered from Fort Scott which may have association with the shell buttons that were discovered here. These appear to be shell button blanks. One is a section of shell, which measures 49 mm by 48 mm by 11 mm, which has a drilled hole in it of 18 mm diameter (Plate 18, G). The second specimen measures 26 mm by 24 mm by 8 mm and has a 15 mm hole drilled through it. It is unknown whether shell button-making was performed in the Fort Scott area, although other locations in southeast Kansas were button-making centers. One specimen was found in HS9 and the other was recovered from HS6.

Glass Buttons

A total of 22 glass buttons were recovered from 14BO302 and their distribution is shown in Table 4. Sixteen of these are of the black glass type (examples on Plate 20, A-D) and six are of clear or colored glass (example on Plate 20, E). Fastening devices on the glass buttons range from the sew-through variety to metal shanks to bridge shanks.

Black Glass: A single example of a sew-through button of black glass was recovered. This specimen is a flat disk that has two holes inset into a recessed central panel and the specimen has a faceted border. It measures 16 mm in diameter. The 10 metal shank, black glass buttons recovered from Fort Scott are of quite variable type. They range in diameter from 13 mm to 30 mm and they include both flat disk fronts and convex fronts and most are highly polished. Decoration includes both faceting and various types of floral molded patterns. Three of the black glass buttons are of the bridge shank variety (Brown 1968:264). Two of the bridge shank, black glass buttons are flat disks that measure 15 mm and 18 mm in diameter, respectively. One has a scalloped edge and the other has an iridescent, concave face upon which is placed the pattern of a cabin. The third example of a bridge shank, black glass button is a diamond-shaped, polished button which is faceted and has a heraldic subject on the top panel. This specimen measures approximately 18 mm by 10 mm in diameter. One additional black glass button is a flat disk which is faceted and polished and which measures 12 mm in diameter. There is no indication of a fastening device on this example.

Clear Glass: Seven examples of clear glass buttons were recovered from Fort Scott of which five are of the metal shank pattern and the remaining two lack any indication of fastening devices. These specimens range in diameter from 12 mm to 21 mm. Typically, they are either convex on the front face or have a raised, molded pattern. The patterns include floral, geometric, and basket weave designs. Both frosted and polished glass fronts are noted in the sample. The coloration of the specimens ranges from clear to milk glass to green glass. The metal fasteners found on the clear glass buttons range from simple loop shanks to brass backs and mountings, and one example is a glass pearl that has been inset into an S-type metal button.

Ceramic Buttons

Three hundred and twenty-seven ceramic buttons were recovered from 14BO302. Their distribution is shown in Table 4. All of these buttons are either china or porcelain buttons (Luscomb 1967:38, 156-158). Some of the buttons incorporate some other elements, such as metal, in the form of shanks or in other forms of composite buttons. Recognized button types include sew-through, metal shank, self-shank, cutout shank, brass rivet shank, and wood shank buttons.

It is possible that some of the buttons, particularly the porcelain or china sew-through disk buttons, are of a military origin. Some of these ceramic buttons are quite obviously of nonmilitary origin.

The most common ceramic button type from Fort Scott is simple sew-through china buttons that are perforated with one, two, or four holes in the center panel (examples on Plate 19, A-G). Two hundred and ninety-four of the recovered ceramic buttons from Fort Scott are of this type and they thus constitute 90 percent of the ceramic button sample. Two hundred and thirty-six of these sew-through porcelain buttons are small, undecorated, flat, china disks that have a recessed center panel with four small holes. These buttons range in size from 7 mm to 23 mm, although the majority of the specimens fall into the 10 mm to 18 mm range and by far the largest number of four-hole buttons are in the range of from 10 mm to 12 mm in diameter. These buttons are of a size and structure quite similar to modern shirt buttons and buttons located on other light clothing items. Thirteen buttons were recovered from Fort Scott which are identical to four-hole buttons except that they have only two holes. These specimens range from 7 mm to 21 mm in diameter and were found most commonly in the 13 mm to 15 mm diameter range. A single example of a plain, white disk, without the recessed center panel, was noted that had a single perforation. Twenty buttons were recovered from Fort Scott which are plain, white, sew-through porcelain buttons with a recessed center panel but with the addition of a shell or fluted edge on the button front. This category includes predominantly four-hole buttons but also two-hole buttons and the specimens range in size from 7 mm to 18 mm, with most specimens occurring in the 10 mm to 12 mm range. Nineteen sew-through porcelain buttons had decorative transfer designs applied on top of the white body. These are similar to what Luscomb (1967:31) has called calico buttons. Basically these are china buttons with decorative patterns that are similar to the decorative patterns employed on cotton fabrics during the latter half of the nineteenth century. Luscomb (1967:31) notes that such small calico buttons were made by the 1840s in France and England and in America by 1848. These buttons range in diameter from 10 mm to 24 mm and the majority of these specimens from Fort Scott fall into the 10 mm to 12 mm range. Five additional buttons are similar in composition to the previously mentioned china sew-through buttons with the exception that they have a colored glaze added on all over the surface of the button. Two examples of four-hole buttons (10 mm diameter) were recovered that had an overall green glaze and one example of a two-hole (12 mm), green glaze, china button was recovered. One specimen (10 mm diameter) of a four-hole button has an overall pink glaze and one two-hole button (17 mm diameter) has an overall brown glaze. One additional sew-through china button recovered from the site has a concave front with two holes in the center. This specimen also exhibits a twisted cord pattern in relief on the front face.

The next most frequently encountered type of porcelain button is a two-part button that incorporates a metal shank with a porcelain or china body (examples on Plate 19, H-K). These examples typically have convex fronts, although a few are somewhat flattened on the top face. In profile, these buttons are usually plano-convex with the plano surface being the backside of the button. The metal shanks found upon these buttons are typically loop type wire shanks that are embedded into the center of the porcelain back. Seventeen examples of plain, white, convex front, metal shank buttons were recovered from Fort Scott. These examples range in size from 4 mm to 15 mm. Ten of the examples are within a size range from 10 mm to 12 mm in diameter. Three examples of similar buttons were recovered which have, in addition to the previously mentioned features, a design in relief on the convex front. This design is typically geometric or floral. These specimens range in size from 13 mm to 20 mm in diameter. Two similar buttons lack the design in relief but are covered overall with a glaze. One specimen (measuring 8 mm in diameter) has an overall blue glaze and the other specimen (11 mm diameter) has an overall green glaze. One example of a conical bull's-eye (Brown 1968:28) was recovered from the site. This specimen is similar to the previously described metal shank buttons but the design consists of colored concentric circles on the convex front.

Four examples of self-shank porcelain buttons were recovered from Fort Scott. Self-shank buttons are porcelain buttons wherein a shank protrudes from the back of the button but the shank is composed of the same material as the button and was molded at the same time as the rest of the button. Three of the porcelain self-shank buttons (all approximately 11 mm in diameter) have a simple, molded, ceramic protrusion from the backside with a horizontal hole drilled through for suspension. The fourth specimen, measuring 12 mm in diameter, is hollow and has a single perforation on the top face and two perforations on the shank. This is similar to what Brown (1968:267) has called a vertical hole button.

Several composite buttons were recovered from Fort Scott which incorporate porcelain and metal or wood in a more complex fashion than the simple metal loop shank buttons. One of these specimens, a white porcelain button that is plano-convex in cross section, and which measures 23 mm in diameter, has a full brass mounting on the back and extending up onto the porcelain edges, and it has a cutout shank on the back which has been produced by cutting and raising the metal back of the button (Plate 19, L). Four concave, porcelain disk buttons (22 mm in diameter) were recovered which all have full, brass rivet shanks that protrude through the front face of the button. One of the more interesting composite buttons is a disk type button with a metal shank. This specimen is apparently made out of a redware rather than the more typical porcelain or china of the other ceramic buttons. This redware is overlain with a highly lustrous brown-green glaze and the button measures 22 mm in diameter. Another interesting ceramic

button is a porcelain button which is set into a wood disk which in turn has a self-shank (Plate 20, J). This specimen measures 25 mm in diameter. In form, the wooden disk and self-shank formed a husk of an oak nut and the porcelain inset forms the bottom of the nut. The wood is of a dark coloration and the porcelain is white.

In terms of the provenience of the ceramic buttons recovered from 14BO302, it can be noted that these buttons were found most abundantly in HS6 (Infantry Barracks), HS9 (Guardhouse), and HS11 (Post Headquarters and Ordnance Stores).

Composition Buttons

Composition buttons include buttons made out of synthetic substances or out of a material that is composed of a mixture of substances. The Fort Scott sample includes both hard rubber buttons and plastic cellulite buttons and their distribution is shown in Table 4. Nineteen composition buttons were recovered from Old Fort Scott and 12 of these are of hard rubber. It was in the period from 1849 to 1851 when Nelson Goodyear patented a process for hard rubber, and most of the rubber buttons from Fort Scott probably postdate that 1851 date by several years (Luscomb 1967:91). The first synthetic plastics were apparently made in the United States in 1869 by John Wesley Hyatt and so presumably the plastic or cellulite buttons in the collection date after that period (Luscomb 1967:154).

Twelve of the composition buttons are of the hard rubber construction which is usually associated with the Goodyear 1851 patent (examples on Plate 20, F-H). Eleven of these are of the sew-through type, with both two-hole and four-hole sew-throughs represented in the sample. Ten specimens are simple, circular, flat disk sew-throughs with either two holes or four holes. Two specimens, measuring 28 mm in diameter and 15 mm in diameter respectively, have four holes set into a recessed panel. Three two-hole buttons are also of the circular, flat disk type with the recessed panel. These specimens measure 14 mm to 15 mm in diameter. Five specimens, measuring 14 mm to 19 mm in diameter, are circular, flat disk sew-throughs with a two-hole pattern set into a flat panel. One example of a square, sew-through button with a concave front face and four holes was recovered which measures 14 mm on the side. A single shank type, hard rubber button was recovered from the site. This specimen is a circular disk that measures 15 mm in diameter and it has a metal loop shank attachment on the backplate. The hard rubber buttons range color from a uniform black to dark olive gray. Seven of the hard rubber buttons contain stamps that indicate that all of them were probably made by the Novelty Rubber Company which was in existence from 1855 to 1870 (Luscomb 1967:140). Four of the specimens have stamps that read "GOODYEAR'S P = T./N.R.Co.". Two specimens have upon them a stamp that reads "GOODYEAR'S P = T./1851.N.R.Co." and one specimen is marked simply "Novelty Rubber Co.".

Seven plastic or cellulite buttons were recovered from 14BO302. Six of these are of the sew-through type with either two holes or four holes contained in the panel, and one is a self-shank button. One of the sew-through buttons is a simple flat clear disk which has two holes drilled in its face. This specimen measures 18 mm in diameter. Two sew-through buttons were recovered which are opaque disks which have a recessed panel in which two holes have been placed (examples on Plate 20, I). These specimens measure 19 mm and 15 mm in diameter. One additional two-hole sew-through disk button with a recessed panel is of a maroon color and measures 19 mm in overall diameter. One of the four-hole sew-through buttons, measuring 19 mm in diameter, is an opaque, circular disk with a panel recess. The other four-hole sew-through plastic button, which measures 14 mm in diameter, is made of a semitranslucent plastic or cellulite. This example is a circular disk which has a recessed panel in which the four holes are set. A single self-shank button is made of a red plastic and is conical in shape on the front face and flat on the back. A plastic self-shank, with a horizontal hole, projects from the flattened backside. This button is quite small, measuring only 9 mm in diameter.

Composition buttons were found most abundantly in HS6 (Infantry Barracks) and HS9 (the Guardhouse).

Studs

Five button-like objects were recovered from 14BO302 which were obviously not intended for sewing on fabric but which are, nevertheless, clothing fasteners. These are small studs which were presumably used to fasten cuffs, shirts, shirtwaists, vests, etc. (Luscomb 1967:191). They consist of a button-like disk that has a built-up post on the back face. The post terminates in a smaller disk. Four of the recovered studs are made of white porcelain and three of these examples have concentric circles on the flat front face (example on Plate 19, M). The front disks on these specimens range from 9 mm to 12 mm in diameter. The fifth specimen is made of metal, either solid gold or gold plated (Plate 19, N). This specimen has a concave front face which measures 12 mm in diameter. A stamp on this face reads "KREMENTZ PLATE". The horizontal distribution of the five studs is shown in Table 4.

Button Hooks

Two small iron or steel button hooks were recovered from Fort Scott. One of these was recovered from Historic Structure 4 and the other one was recovered in association with Historic Structure 11. The more simple of these items is a handmade specimen which consists of a wire hook made out of 4 mm diameter wire (Plate 21, A). This specimen measures 98 mm in overall length and one end has been bent to form a sharpened hook. The other end is also fashioned into a sharp point. This item appears to be a small hook for drawing buttons

through a buttonhole. The second button hook specimen is of similar type but it seems more carefully made (Plate 21, B). This specimen has an overall length of 78 mm and the proximal end has been formed into an eyelet shape, apparently as a holding device. The distal end has been formed into a hook shape. This specimen is quite similar to a shoe button hook identified at Johnny Ward's Ranch (Fontana and Greenleaf 1962:86-87).

Clothing Fasteners

A large number of complete and incomplete clothing fasteners were recovered from Fort Scott. The distribution of these items is shown in Table 5. Most of the items of this type that have survived are of nonferrous metal and thus resisted corrosion. The most commonly used material for the making of fastening devices (at least those that have survived) was either brass or copper, with brass predominating. Fastening devices considered in the present section include such items as buckles, stays, scarf holders, and pins.

A considerable reliance on buckles as fastening devices is indicated in the Fort Scott inventory and this variety undoubtedly reflects both military and civilian usage. However, uniformity of shape and lack of identifying marks on these specimens makes it very difficult to separate military from civilian items in this category. Suggested use of buckles at Fort Scott include such diverse functions as buckles on shoes, belt buckles, suspender buckles, corset and garter fasteners, spurs, weapon slings, harness, uniform accoutrements of various types, etc. The few large iron or steel buckles that were identified at Fort Scott have been dealt with in a separate section because it is probable that many of these were used with harness equipment. The fasteners at Fort Scott come in several styles and sizes. The simplest buckle style is represented by a plain rectangle of flattened brass which has beveled edges on both the inside and outside edges (Plate 21, C). This specimen, which measures 56 mm in length and 35 mm in width, is made of flat brass and has a thickness of 1 mm. Two small, soldered areas are still visible on the reverse face on opposite sides of the long axis of the buckle. Rectangular buckles of much more complex form were also recovered from Fort Scott. One of these is a large, rectangular buckle which has a floral decoration on the obverse face (Plate 21, D). This specimen is made of brass and it measures 57 mm in length and is 42 mm wide. It is made of stamped brass and it has an oval cutout with two tongues of brass extending from either end of the cutout, which serve to hold a separate fastener. The fastener is of the two-prong variety with a belt attachment loop located opposite the prongs. The fastener swivels on the two tongue-like projections. Another small rectangular buckle has a single tongue which is wrapped around one of the long edges. This small specimen, which is also made of brass, measures 20 mm in length by 16 mm in width. Rectangular buckles with center bars and two- and three-tongued fasteners were also recovered from Fort Scott. A

TABLE 5
14BO302, Clothing Fasteners

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Rectangular Buckles			2		2	2		1		2	2		1						1
Buckle Slides									1		2		1						
Wire Buckles with swivel bases									1		1								
Hook and Eye					1				1										
Brass Strap Fasteners											1								1
Miscellaneous Buckles			1			1	1		1	1	2		2						
Pins					1												1		

typical example measures 41 mm in length by 23 mm wide. Specimens of this type may have been used as suspender fasteners or on some other type of cloth or synthetic material where it didn't matter if the sharp points of the fastener protruded through the fabric. A very heavy brass or copper buckle was recovered from Fort Scott which is rectangular in shape, except that the front corners of the buckle have been rounded off (Plate 21, E). This specimen measures 60 mm in length and is 45 mm wide and is made of metal that is approximately 5 mm in thickness. It apparently had an iron tongue which was wrapped around the back edge. Some very badly corroded iron is still present in this area of the specimen. A number of other buckle types made of light gauge copper, brass, and iron, and which apparently served as fastening devices for various clothing accoutrements, also occur in the sample. A number of these are simple slides that range from rectangular to square to oval to irregular in shape (examples on Plate 21, F, G), while others are wire buckles with swivel bases and projecting sharp pointed fastening tines (Plate 21, H). Some of these specimens employ a hook and eye device in conjunction with a tongued buckle. Other examples of plain hook and eyes were found at the site, including one wire hook from a hook and eye corset fastener (Plate 21, I). This small specimen is quite similar to hook and eye corset fasteners illustrated in the 1895 Montgomery Ward and Company, catalogue number 57 (Dover Publications 1969:89).

Another fastener device of somewhat different type is represented by a small heart-shaped brass object (Plate 21, J). This small specimen is 17 mm in height and 12 mm wide and it has a keyhole-like cutout. Two small brass rivets are still present at the top of the plate. A portion of a similar object was recovered from Fort Bowie and it was identified as an eyelet connected with a spring steel band that was probably used on a corset (Herskovitz 1978:37-38, Figure 12, D).

One of the more interesting buckle or fastener types recovered from the site consists of one complete and one incomplete brass strap fastener. The complete example consists of a flattened brass strap of 16 mm width which has been folded over and riveted with a single, tubular, copper rivet on the reverse face (Plate 21, K). The opening between the two sides of the strap measures 36 mm in width and 2 mm in thickness. The brass strap has a horizontal, rectangular cutout on the front face and a flat, brass fastener projects downward from this cutout. The fastener consists of a hook and tongue formed of one piece of thin brass and it is of the holdfast type. This specimen has an overall height of 35 mm and is 37 mm wide and is made out of 1 mm thick brass. This type of fastener would have been suitable for insertion of a leather belt or strap through the brass strap and would have then allowed for the suspension of some object from the fastener which could be easily removed and put back on. It is suspected that this may be a military item, but no documentation for this could be found.

Three other brass fasteners were found at Fort Scott for which we cannot assign a specific function. One of these is a small rectangular piece which measures 26 mm by 12 mm and which has a thumb rest on the end (Plate 21, L). This small specimen has the edges turned down toward the reverse face and a small wire rod projects through these turned down edges. This was apparently the top part of a fastener of some type. The obverse face has the stamped letter "DAISY" upon it. A second complex fastener consists of a flat piece of brass which has been bent, perforated, and formed into a U-shape with projecting edges that extend up beyond the U (Plate 21, M). It is incomplete but it apparently had a handle element which forced the U-shaped brass together. It is possible that this is some sort of scarf holder or necktie fastening device, although it could not be identified with certainty. Another possible scarf holder was recovered from Fort Scott which is made of very thin brass and which is incomplete (Plate 21, N). This specimen again consists of a flat strip of brass which has been formed into a decorative shape and which was then bent over to form a U-shape, suggesting that it is a holding device, possibly for a scarf.

Only two pins were recovered during the excavations at Fort Scott. One of these is a conventional safety pin of modern type. This specimen measures 52 mm in length. The second specimen is a straight pin of nickel-plated steel and it measures 47 mm in length. The proximal end of the pin has been bent into a circle.

Footwear

Shoe/Boot Leather

Six fragments of shoe leather, including parts of heels, soles, and uppers, were recovered. The single portion of an upper part of a shoe or boot was found in HS6 and consisted of a small leather fragment (40 mm long by 16 mm wide) which has four eyelet holes along one edge and a line of stitching holes on either side of the line of holes (Plate 22, A). Two of the eyelet holes still have copper or brass grommets present and the grommets have an internal diameter of 3 mm. A single example of a leather sole was found during the excavation of Historic Structure 8 (Plate 22, B). This specimen is very incomplete, but rectangular holes around the perimeter of the heel element suggest that it was attached to a shoe with square (rectangular in cross section), metal nails. Three very badly corroded iron nails are still present in the heel element. These nails were driven into the leather in a single line toward the front of the heel and perpendicular to the long axis of the shoe. The shoe was apparently of small size, as it had a heel width of only 43 mm. Four heel sections were recovered from Fort Scott (examples on Plate 22, C, D). Two were found in association with Historic Structure 10 and one each was recovered from Historic Structures 6 and 7. These are all horseshoe-shaped heels with straight front edges and they were all constructed of laminated,

thin layers of leather which were held together with headed nails. One example contains an outer row of square brass or brass-covered nails which are set at regular intervals (every 5 mm) around the periphery of the heel. Three additional rows of nails are set in the center part of the heel and are oriented parallel to the long axis of the shoe or boot. Square, iron nails were utilized as fasteners in the remaining three heel sections and these nails are all badly corroded. The iron nails are set all around the perimeters of these heels and additional nails were noted at irregular intervals on the center part of each heel. Fontana and Greenleaf (1962:105-106) have noted that shoe nails replaced wooden pegs as fasteners beginning in about 1812 and that this method of attaching soles and heels has been utilized since that date and is still in use.

Shoe Nails

Five special function nails were recovered from Fort Scott which may be complex nails intended for fastening soles or heels of shoes (example on Plate 22, E). These specimens were all recovered in the same restricted area within the limits of Historic Structure 5. These are two-piece nails which have a core of iron and a thick covering of brass. They have oval heads which measure 5.5 mm by 4.5 mm and the specimens range from 31 mm to 33 mm in length.

Heel Plates

Two heel plates made of sheet brass were recovered from Fort Scott (example on Plate 22, F). One was discovered in association with Historic Structure 6 and the other was found during excavation of Historic Structure 11. Both of these were intended to cover the rearmost portion of shoe or boot heels. They are shaped to conform to that portion of the heel and they are bent up on the rear edge. One specimen is 47 mm long and 13 mm wide and the other is 45 mm long and 11 mm wide. Both examples were attached to heels by nails driven through the bottom of the cleat. Fragments of the nails are still present on one specimen. The smaller specimen was attached with 10 nails and the larger with 11.

Steel Shanks

Ten steel shanks, all presumably from high-heeled women's shoes, were recovered from Historic Structure 6 (example on Plate 22, G). These are evidently made of a hardened steel, possibly spring steel, and they have an average length of 125 mm. In shape they look something like a two-pronged pickle fork, except that they have a notable curvature when viewed in cross section. They have a width of 12.5 mm at the forked end and they taper to 10 mm wide at the opposite end. One specimen is not forked. This example has the same basic shape as the others but, instead of forking, a portion of the steel encircles the tip end, creating a large oval hole which measures 13 mm long by 6

mm wide. It is possible that all of the specimens were originally this shape and that the tip ends of the other specimens have been removed intentionally or through corrosive action. Two very small perforations were also noted on each specimen. One of these is typically located toward the tip of the narrow end and the other is situated just below the V-shaped indentation created by the two prongs. The identification of these specimens was made by two archeologists of the Society staff, Don Rowlison (1982) and Martin Stein (1982). During the analysis of the Fort Scott material culture, they had been shown these objects and questioned as to their possible function. Fortuitously, a week later they encountered a large deposit of ladies high-heeled shoes in a road ditch in western Kansas while performing an archeological survey for the Society. They noted specimens in the soles of the rotting shoes that were identical to the examples from Fort Scott.

Cloth

The only cloth item recovered from Fort Scott is a portion of a men's linen collar which was recovered from Historic Structure 8. While the specimen is incomplete, one of the points is present. The point measures 2 inches (circa 50 mm) in length and it is slightly rounded at the tip.

COINS, TOKENS, AND CLAIM CHECKS

A number of coins, baggage claim checks, and tokens were recovered from Fort Scott. The majority of the coins are of United States of America, issue although two foreign coins were also found. The claim checks are related to the late nineteenth and early twentieth century transportation system in southeast Kansas. Tokens are represented by items related to single events, such as carnivals, as well as trade tokens from established businesses.

Coins

Coins (United States of America)

Thirty-three of the coins recovered from Fort Scott were manufactured by or for the government of the United States of America. Reed has noted that 116 distinct types of regular issue coinage were authorized by the United States between 1792 and 1969 (1969:77). It appears that from 13 to 15 of these types are represented in the Fort Scott collection. The author has followed Reed's example in listing the U.S. coin number, type, name, and inclusive date and the specific individual coin date is listed when it could be determined by examination of the specimen (Reed 1969:77-80). As Reed notes, "U.S. Coin Number" identifies the numerical position of the type in the issue, and 'type' numbers identify its position within a denomination series" (1969:77). As noted in Table 6, five coins, including a one

TABLE 6
14BO302, United States Coins

Denomination	U.S. Coin Number	Type	Name	Inclusive Dates	Coin Date	H.S.
One Cent Large	12	VII	Braided Hair	1839-1857	n.d.	11
One Cent Small	15-16	III or IV	Indian Head	1860-1909	n.d.	3
					n.d.	9
One Cent Small	16	IV	Indian Head	1864-1909	n.d.	17
					188-	3
					1881	17
					1889	9
One Cent Small	17	V	Lincoln Head	1909-1942	1919	7
					1919	17
					1920	17
One Cent Small	19	VII	Lincoln Head	1944-1945	1944	17
One Cent Small	17	V	Lincoln Head	1946-1958	1946	5
					1951	6
					1951	17
Five Cents	26-27	I or II	Shield	1866-1883	n.d.	8
Five Cents	27	II	Shield-no rays	1867-1883	1868	8
					1868	6
					1868	11
					1869	6
					1872	17
					1883	9
					n.d.	5
					n.d.	7
					n.d.	9
Five Cents	29	IV	Liberty Head	1883-1912	1886	5 & 10
					1897	9
					1912	6
Half Dime	37	IV	Liberty Cap	1829-1837	1829	5
Half Dime	39	VI	Liberty Seated	1838-1860	1840	6
					1841	10
Dime	43	III	Liberty Cap	1809-1837	n.d.	9
Dime	46	VI	Liberty Seated	1860-1891	1875	10
Quarter Dollar	59	VIII	Liberty Head	1892-1916	1908	7

cent large, three half dimes, and one dime, definitely predate the Civil War. Sixteen coins of various denominations date from immediately post-Civil War to the turn of the century. Nine coins, seven of which are Lincoln Head pennies, date after the turn of the century. Interestingly, two coins have one or more perforations that were introduced after they were minted. The one cent large has a single perforation (punched rather than drilled) in the area where the date should occur. The 1840 half dime has two small and centrally located perforations, suggesting that it was sewn onto cloth or leather. A representative sample of United States coins recovered at Fort Scott is shown on Plates 23 and 24 of this report.

Coins (Foreign)

Two foreign coins were recovered from Fort Scott. One is of Mexican origin and the other is Canadian. The Mexican coin is a silver real with a date of 1802 clearly visible on the obverse face (Plate 24, E). Raymond notes that this coin was issued during the period from 1788 to 1808 when Mexico was under Spanish rule (1953:13). The obverse face contains a portrait of Charles IV. One is tempted to assign the depositional history of this coin at Fort Scott to the period immediately following the Mexican-American War (1846-1847) although the frequent intercourse and trade conducted along the Santa Fe Trail preceded and postdated that period and thus the coin could have an earlier or later depositional history. The second coin was issued by the Bank of Upper Canada. It is a halfpenny coin and it has an 1857 date on the obverse face (Plate 24, F). This was apparently the last year that this coin was issued as Raymond (1953:8) notes that it was issued from 1850 to 1857.

Coin (Unidentified)

One coin was recovered from Historic Structure 6 which is so badly corroded that no legend or inscription is visible on either face. This specimen is 20 mm in diameter and 2 mm thick and it has two holes drilled through it near the border and directly opposite one from another.

Tokens

Three privately struck trade tokens and two small medallions were recovered from Fort Scott. All three of the tokens presumably date prior to 1865, because in 1864 the U.S. Congress passed an act which forbid private individuals to issue any form of money (Hetrich and Guttag 1924:5). In fact, most tokens were issued during the Civil War. Beginning in 1862, all metallic currency was gradually withdrawn from circulation by the U.S. Government (Hetrich and Guttag 1924). Hoarding of coins occurred and in a short time there was a drastic shortage of metallic currency. Tradesmen began issuing their own coins to combat this shortage and it has been estimated that 25

million private tokens were put into circulation in the United States during the period from 1861 to 1864 (Hetrich and Guttag 1924:5). The most unusual of the three tokens from Fort Scott is a small metal disk, found in HS6, which is of the same size as the One Dollar Liberty Head gold coin (United States of America) which was issued in the period from 1849 to 1854 (Plate 24, G). The obverse face of this token is identical to the official U.S. coin, as it consists of the Liberty head surrounded by a field of thirteen six-point stars. The reverse side of the token contains a "1", the year "1864", and two half wreaths of laurel which are crossed at the stems and bound by a ribbon and bow. These elements are found on the official U.S. coin, except that the official coin was not made in the year 1864. The token lacks two motifs that are found on the official coin. First, the word "DOLLAR" is interjected between the "1" and the date on the official coin. Second, the legend "UNITED STATES OF AMERICA" occupies the outer border of the reverse face of the official example. The token has two further discrepancies from the official version. In place of "UNITED STATES OF AMERICA", this specimen has a field of 11 six-point stars on the reverse side. Furthermore, the coin is not made of gold, although gilded areas indicate that it originally had a gold wash or plate. This specimen is particularly interesting because published sources on tokens indicate that they were usually issued in very small denominations, with one cent being the most common (Hetrich and Guttag 1924, Schenkman 1975). Instead of being a legitimate trade token, it seems likely that this specimen is a true forgery.

The second trade token, also a circular disk, was recovered from Historic Structure 6 (Plate 24, H). This example is apparently made from copper and it has been perforated, after issue, for suspension. On the obverse face it bear the inscription "DRUGS/DRY GOODS/GROCERIES/HARDWARE/NOTIONS" and on the reverse side, a flower with petals and the legend "UNITED WE STAND/DIVIDED WE FALL". Unfortunately, the business that is represented does not appear on the coin. The reverse side of the coin is identical to several Civil War examples (Nos. 601 to 604) illustrated in Civil War Tokens and Tradesmen's Cards (Hetrich and Guttag 1924).

The third trade token is octagonal in shape and has an eagle with outspread wings on the obverse face and, above the eagle, is "118 E. Wall" (Plate 24, I). This presumably refers to a business located on Wall Street (a Fort Scott street that is still in existence). The reverse face states "GOOD FOR 2½ IN TRADE". This brass or copper specimen was also recovered from Historic Structure 6.

One of the two small medallions recovered at Fort Scott (measuring 31 mm high and 28 mm wide) is heart-shaped and has a suspension loop on the top. On the obverse side it has the following stamp "ELKS CARNIVAL/SEPT/PORTLAND, OREGON/1902". The specimen was recovered from Historic Structure 6 and it is made of copper. The second medallion is a circular brass disk (29 mm diameter) with red and blue paint

still present on the obverse face and with blue paint extant on the reverse face. The obverse face has a centrally located shield (which forms the breast of an eagle) and which has upon it the stamped and painted legend "NICOLY/S". The eagle, with outspread wings, is highlighted with red paint. Above it is the word "PRODUCCIONES" and beneath it the words "--A.V. INSUREBENTES SUR 114-414/MEXICO/4 O.F.". The reverse side states "CINE PERIODIC/NICOLY/ENPRIMERO Y UNICO/ NOTICIERO CENTRO AMERICANO". Presumably, this is some type of moving picture token from the early years of the twentieth century. This specimen was recovered from Historic Structure 6.

Claim Checks

Six flat metal objects, of various shapes, were recovered from Fort Scott. All of these specimens have rectangular cutouts near the top for attachment to straps and all are presumably baggage claim checks affiliated with transportation. Most of them appear to be railroad claim checks although some may be associated with other transportation mediums such as stage lines or intercity electrified railways. One claim check is made of brass and is in the shape of a shield. On the obverse face it is marked "Fort Scott Omnibus Line/ 67/Claim Check" (Plate 25, A). Also located on the obverse side, at the very top of the shield, is the name of the manufacturer, W.W. Wilcox, Chicago. A check of the available city directories for Fort Scott between the years 1866 and 1905 indicates that a horse drawn omnibus line was operated from 1889 until at least 1898. The city directory for 1889-1890 has the first listing for the Fort Scott Omnibus and Carriage Line with Mrs. J.M. Terry as proprietor and Herbert Terry as manager (Hoye Directory Company 1889:72). By 1891, the name of the business had been changed to Fort Scott Omnibus and Hack Line (Leader Directory Company 1891:83). The 1896-1897 city directory lists the business under still a different name--Fort Scott Carriage and Omnibus Line (Hoye Directory Company 1896) and it maintained this name until at least 1898 (Chittenden Directory Company 1898). A gap in the available directories occurs between the years 1899 and 1904. The 1905 city directory contains no mention of an omnibus line and Herbert Terry, previously the manager of the omnibus line, had by this time entered into a grocery and feed store business (Polk 1905).

The second claim check, also made of brass and shield-shaped, was recovered from Historic Structure 10. It has a legend on the obverse face which reads "K.O. Co./77/Mo.R.Ft.S. & G.R./to M.K. & T. R.R." (Plate 25, B). While it is not clear what the "K.O. Co." stands for, the meaning of the remainder of the stamp is clear. In 1865 a charter was granted to the Kansas and Neosho Valley Railroad to construct a line connecting southeast Kansas with Kansas City (Hamilton 1912:51). The Kansas and Neosho Valley Railroad did not begin construction on the line and, on August 10, 1868, the road, which had been purchased by James F. Joy, was renamed the Missouri River, Fort Scott and Gulf.

The road was completed as far as Fort Scott in 1869 and it operated under the name (abbreviated) MO.R.Ft.S. & G.R. until March 15, 1879, when it was renamed the Kansas City, Fort Scott and Gulf (Hamilton 1912:51; Blackmar 1912:547). The M.K. & T.R.R. stands for the Missouri, Kansas and Texas Railway (or Railroad) which, according to Richmond (1974:103-104):

> The Union Pacific, Southern Branch, which became the Missouri, Kansas and Texas in 1870 (the "Katy"), was incorporated in 1865 but construction did not begin until 1867. The first shovelful of dirt, marking the start of construction, was turned by the railroad's president on October 15, 1867, and Junction City joined the other towns in Kansas that participated in rail celebrations.

The Missouri, Kansas and Texas Railroad was apparently linked with the Missouri River, Fort Scott and Gulf Railroad in 1870 (Andreas 1883: 1072). It seems clear that the claim check specimen from Fort Scott which refers to these two lines dates in the period from 1870 to 1879.

A third shield-shaped claim check of brass was recovered from Historic Structure 10. This specimen bears, on its obverse face, the following stamp "WESTERN/87/HOUSE" (Plate 25, C). The Western House was one of the two earliest established hotels in Fort Scott. Thompson (1968:38) notes that Historic Structure 7, an infantry barracks dating from the early period at Fort Scott, was converted to a hotel in 1858. Subsequently, this hotel became a focal point of proslavery sentiment. The Western House apparently flourished both before and after the Civil War, though it was occupied by the military as a hospital barracks during the Civil War (Thompson 1968:38-41). Sometime in the early 1870s it ceased to function as a hotel and became, instead, a boarding house. It maintained this function for several years, but the date of its demise is not known (Thompson 1968:41). If we assume that the stamp on the claim check relates directly to this hotel, then the numeral "87" presents a problem, since there is no conceivable way that Historic Structure 7 could have contained 87 rooms.

A fourth claim check, which is basically rectangular in shape, bears the legend "WHAT/39/CHEER" (Plate 25, D). This specimen is made of brass and it was recovered from Historic Structure 9. So far as the author was able to determine, only What Cheer, Iowa bears this name. What Cheer is a small city in Iowa located northeast of Oskaloosa, Iowa. Thomas (1899:2814) notes that in 1880 What Cheer was a small coal mining city which was serviced by two railroads. The Illustrated Historical Atlas of the State of Iowa, 1875 does not show any rail service to that city at that time (Andreas 1875:147).

The fifth claim check is circular in shape, made of thin brass, and rather crudely cut (Plate 25, E). It was recovered from Historic Structure 7 and the only legend it bears is a stamped "2" which appears twice on the obverse face. The wide and irregular spacing of the two numerals suggests that it does not represent the number 22, but simply is a repetition of the number 2.

The sixth claim check is not perforated (Plate 25, F). This example is square in outline with all four corners clipped off. Both faces bear the stamp "09" or "60" depending on how the specimen is oriented.

WEIGHTS AND MEASURES

A single example of a portion of a plate from a spring balance was recovered from Fort Scott (Plate 26, A). This flat, brass front plate had an original length of 155 mm, is 42 mm in width, and is made of brass that is 1 mm thick. The specimen has two holes drilled in it to attach it to the other part of the balance and it is slotted with a vertical, rectangular cutout to accept the spring balance arm. Stamped measures (0-24) are located just to the right side of the vertical slot. Above the slot on the obverse face occur four lines of punched lettering "SALTER'S/IMPROVED/SPRING BALANCE/WARRANTED".

RECREATION

A number of items were recovered from Fort Scott which are related directly to recreational activities. Included in this category are items related both to children's activities (i.e., marbles, porcelain dolls, miniature china, tiddlywinks, and miscellaneous toys) and to adult leisure activities (i.e., playing cards, a die, poker chips, and a checker). Several small bells are also included in this category.

Gaming Pieces

The five gaming pieces recovered from Fort Scott are associated with four different games. One example of a wooden checker with an inset hardwood center was recovered from Historic Structure 5 (Plate 26, B). This specimen is 28 mm in diameter and 10 mm thick and it is rather crudely made (possibly hand formed). A black, plastic poker chip was recovered from Historic Structure 6 (Plate 26, C). This specimen, which is 21 mm in diameter and 3 mm thick, is made from a hard and shiny plastic and it is presumably of fairly recent origin. An example of what may be a much earlier form of poker chip was also found at Fort Scott, although the specific provenience of this second chip is not known. It consists of slightly more than one-half of a very thin (1 mm thick) bone disk which had an original diameter of 34 mm (Plate 26, D). A single tiddlywink was discovered during examination of one of the standing officer's quarters, Historic

Structure 2 (Plate 26, E). This specimen, which measures 16 mm in diameter and 2 mm thick, is made from a semitranslucent red plastic and is presumably of fairly recent origin.

The most interesting of the gaming pieces recovered from the site is a single die which was encountered during excavation of Historic Structure 9 (Plate 26, F). This cubical specimen measures approximately 15 mm on a side but the die is not truly cubical. In fact, it is quite irregular in shape when compared to a modern machine-made die. Thus, the specimen is almost certainly handmade. It is formed from solid bone and each face has been drilled with the appropriate number of depressions from one to six. The uneven spacing of these depressions, and their unequal depths, again indicates that this specimen is handmade with simple tools. This die cannot be precisely dated but the crude workmanship certainly suggests an early, and possibly military, period in the fort's history.

Playing Cards

Twenty-nine playing or gaming cards, or fragments, were recovered from Fort Scott and all were found during investigations conducted in one of the fort structures that was still partially intact, the fort Hospital or Historic Structure 8. At least five different decks or packs of cards are represented in the sample. As was common on nineteenth century cards, no numbers are printed on any of the "number" cards. Instead, the number of pips (spade, heart, diamond, club) appearing on each card indicated the card's denomination. Similarly, the court cards (jack, queen and king) have a single or double pip to indicate the suit but they lack the "J", "Q", or "K" letters to indicate which card is represented. Thus, the identification of the court cards was made simply by viewing the figure portrayed on the card. Nineteen of the cards found at Fort Scott are evidently from the same deck and six other cards are from a companion deck of identical size. The backs of all twenty-five of these cards have an asterisk-like pattern which is interrupted by single dots (examples on Plate 27, A, B). The nineteen cards which are of one deck have this pattern printed in red and the six cards of the companion deck have the pattern printed in blue. These cards were each made in two pieces and the backs were subsequently glued to the fronts. The most diagnostic of these cards is an ace of spades which indicates that the card was manufactured by Samuel Hart of the Philadelphia Card Manufactory (Plate 27, C). As was common with many card manufacturing firms during the middle part of the nineteenth century, the ace of spades was the most diagnostic card in the deck and typically contained information about the maker or manufacturer of the cards as well as some rather common motifs (Hargrave 1966). Samuel Hart was a playing card manufacturer who operated out of Philadelphia from 1849 until 1871 (Hargrave 1966:448). During the twenty-two years of the firm's existence, the designs used on the ace of spades changed and the designs on other playing cards, particularly the court cards, also

underwent changes. The ace of spades in the Fort Scott collection has, at the top, a flying eagle with radiating lines projecting upward. These lines terminate in a series of 15 stars. The eagle holds a banner in its beak which has upon it the legend "American Manufacture". Below this is an ornamental oval within which is a single ace denoting that this is the ace of spades. Surrounding the perimeter of the oval are the words "PHILA. CARD MANUFACTORY". At the bottom of the card is printed, in blue ink, Samuel Hart. Precise information as to the dating of this particular ace of spades is not available. However, the court cards contained in the sample provided additional information. The six court cards that are found in the red-colored deck and the companion deck of blue back color, are all depictions of single-headed figures and all are of a pattern that Hargrave (1966:291) attributes to the very earliest years of Samuel Hart's card manufactory (Plate 27, D-F). "Number" cards from the Samuel Hart decks are shown in Plate 27, G-J. Several additional observations can be made about these decks of cards. First of all, the backs are quite unevenly trimmed. The cards are rounded at the corners which is an innovation that has been attributed to Samuel Hart (Hargrave 1966). In terms of general unevenness and crudity, it was noted that several of the cards have very uneven glue lines where the faces have been glued to the back. The court cards employ a four-color print pattern with blue, yellow, red, and black colors being contained on each of them. The black is of a particularly rich and intense value. The blue back companion deck is represented by three court cards (all queens), two fragments of cards of the spade suit but of unknown denomination, and another back which lacks the front. The fragments of the three queens have all been intentionally torn apart at approximately the same point on the card (example on Plate 27, F). Two of these court cards have black writing around the margin "George Kelso/Fort Scott". One of the fragments of a spade suit card of unknown denomination also has writing on the face "A Kem".

The two other single-headed court cards in the Fort Scott collection are of slightly different type from the Hart decks in terms of the depiction of the king and jack that occurs on each (Plate 27, K, L). These two cards both have square corners rather than the rounded corners of the Samuel Hart deck. The back of one of the cards (king of spades) has a very complex decoration of printed blue lines upon it and the other (the jack of diamonds) has a yellow-colored back with a cherry blossom depicted in green ink. The only double-headed card in the Fort Scott collection is a jack of spades which is missing its back (Plate 27, M). This specimen has somewhat rounded corners and has been perforated numerous times with a pin from the front side. The only remaining card in the Fort Scott collection is the front panel of a five of spades.

Ceramic Dolls and Figurines

Ceramic dolls of various sizes and constructional styles were well represented in the Fort Scott material inventory. While the finished products of the doll-making art are variously labeled as bisque, china, porcelain, and parian, the clay base from which all of these specimens are made appears to be a fine-grained, homogeneous, light clay that could probably best be described as a porcelain clay (Angione 1973:18-37). In ceramic technology, bisque, or biscuit ware, is considered to be unglazed ceramic ware that is hard fired and vitreous. In terms of the doll-making industry, bisque dolls are considered to be finished pieces which exhibit a matte or nonglossy surface. Bisque ware can also include those doll types that have tinted, flesh-colored nonglossy surfaces and even some painted decoration (Coleman and Coleman 1968:74; Angione 1973:26-28). The terms china and porcelain dolls, as used in the doll-making industry, are similar categories in that both refer to doll heads or doll parts that have vitreous glassy glazes. China dolls are the more common glazed doll types while the porcelain and parian types are finer glazes (Angione 1973:28-37). For the purpose of this report, the ceramic dolls recovered from Fort Scott are considered to be either bisque dolls or china/porcelain dolls.

Fifty-six of the 103 doll parts recovered from Fort Scott may be classed as glazed china/porcelain, as they exhibit vitreous and light reflective surfaces. The remaining 46 specimens are all either unglazed or have a matte finish. Twenty-seven of these specimens have a pinkish, flesh-colored tint, while the remaining 19 specimens are unglazed white examples. The distribution of the 103 recovered ceramic doll artifacts at Fort Scott is shown in Table 7. Decorated ceramic dolls were made by a complex manufacturing process in which the leather-hard, mold-made doll parts were fired first in a kiln for a fairly long period of time in an unglazed state. Subsequently, the pieces were sanded to smooth them down and any necessary decoration was added. In the case of the flesh-colored bisque wares, this decoration often included shades of blues, reds, blacks, and browns as highlights for the facial features and, in the case of the glazed or porcelain dolls, the colors included an even greater range (including greens, grays, oranges, etc.) and the coloration was often also included on molded shoes and other appurtenances of dress. Subsequently, the pieces were refired for a shorter period of time to ensure that the painted-on glazes firmly adhered to the dolls (Angione 1973:18-37). The majority of the dolls in the Fort Scott collection (if not all of the specimens) were apparently formed in liquid pour molds as opposed to the slightly earlier press-mold technique for ceramic doll manufacture.

As indicated above, the Fort Scott dolls show considerable diversity in terms of both construction and size. Three very small dolls, all with missing parts, are solid ceramic dolls. The most complete of these is a small china or porcelain doll which has a clear glaze over a white body (Plate 28, A). This specimen measures 49 mm

TABLE 7
14BO302, Distribution of Ceramic Doll Parts, Figurines, Miniature Dishes, Miscellaneous Toys and Bells

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Ceramic Doll Parts		1	14	2	6	42	2	2	9	1	17		4						3
Ceramic Figurine				1															
Miniature Dishes																			
Porcelain/China			2	2	9				2		5		1						
Milk Glass			1																
Lead			1																
Miscellaneous Toys																			
Metal		1	1		4			1		1				1		2			1
Plastic					1														
Bells			1		3														

tall and consists of a standing and unclad adult woman. Some attention has been paid to details of the face and hair. The hair is depicted as a very dark brown or black hair style that ends just above the neck element and which partially frames the face. The lips and nostrils are marked with red paint and the eyes and eyebrows are outlined with brown paint. The cheeks have been touched up with some sort of blushing or pink tint. A second nearly complete small ceramic doll (with the head missing) depicts a standing figure (unclad) with the feet together and with the arms touching the abdomen (Plate 28, B). This specimen is missing the head but it seems to be of a type that has been described as a "Frozen Charlotte" (Coleman and Coleman 1968:142). A residue of blue paint is located at the foot element of the specimen and the back of the doll is marked with incised numbers in two rows "340/6". The single figurine recovered from Fort Scott is of the same general type as these small, solid dolls (Plate 28, C). It is a solid ceramic figurine with an attached stand or base and, standing upon the base, is a figure of a man dressed in a long coat that comes down at least to the upper part of the thighs. The head of this specimen is missing. Like the first of the described solid ceramic dolls, this specimen has a clear glaze over a white body.

The most common doll type occurring in the Fort Scott collection is represented by numerous specimens of composite dolls. That is, many of the mid- to late-nineteenth century and early twentieth century children's dolls were constructed of a variety of materials. Often the body of the doll was made of a soft material such as cloth or kid (leather) while the arms and legs were made of other materials (china, wood, etc.). The most common material used for the heads of the composite dolls was fired clay. Ninety-nine of the 103 doll parts from Fort Scott are elements of composite dolls. The simplest of these specimens is a very small, solid doll made of unglazed or bisque ceramic material. This small, mold-made specimen is missing one foot and the head (Plate 28, D). The arms are also missing, although they were not formed in one piece with the rest of the doll. The arms of this specimen were evidently joined or articulated to the shoulder element of the doll by means of a metal wire (probably iron) which protruded completely through the shoulder area from left to right. While the arms are missing, the wire is still visible in the hole. This specimen has an estimated original height of 50 mm and the specimen is a depiction of a nude standing figure, probably adult.

Head elements of composite dolls are represented in the Fort Scott collection by both hollow and solid types. One nearly complete solid head (of glazed china) is a depiction of an adult woman with an elaborate hairdo and with the only decoration consisting of a slight pinkish tint on the cheek elements (Plate 28, E). One complete hollow bisque ceramic doll head was recovered from Fort Scott and numerous incomplete specimens were recovered. The complete specimen is a small hollow head which is open on the top and which has a hole in the bottom where the neck element is located (Plate 28, F). This specimen

is 40 mm in height and it appears to be a depiction of a female figure, although not necessarily an adult. This is obviously a mold-made specimen and it is flesh colored with the lips being outlined in red paint, the eyes outlined in blue and black paint, and the eyebrows in brown paint. The ears are present, but they are a part of the mold rather than of the added-on type. The neck of this specimen is constricting and it appears to be a swivel neck of the ball and socket type which would have been used with a two-piece doll head. That is, the head itself formed one-half of the head element, as it fit into a shoulder or yoke element in a way that would allow it to be turned from side to side. The back of the head has the following numbers and letters impressed on it "No. 2½/S".

A much larger, but unfortunately very incomplete, portion of a pink-tinted bisque doll head was recovered from Fort Scott. This particular head is of the type in which the head and shoulder were formed in one piece, so that the head could not swivel. This doll head is hollow and at least some paint was used in decorating the face element. The lower part of the yoke or collar has several perforations in it to allow for it to be sewed onto a cloth or leather doll body. This specimen had an estimated original height of 75 mm and the back of the shoulder area is somewhat incompletely marked with four lines of incised lettering and numbering "370/AM-O-DEP/ARMAND MARSEILLE/made in Germany". Coleman and Coleman (1968:428) indicate that the porcelain factory established by Armond Marseille operated from 1865 until at least 1925. The number "370" on this particular doll apparently refers to the fact that it is a shoulder head rather than a socket head such as the previously described specimen. Coleman and Coleman (1968:428) suggest that this particular style of shoulder head was developed shortly after the turn of the century, perhaps in 1904.

Another hollow and flesh-colored bisque doll head is represented by most of the face of an otherwise incomplete specimen (Plate 28, G). This specimen is quite interesting, as the eyes are cutout and so is the mouth. The mouth is outlined by red paint and the eyes are outlined by eyebrows and eyelashes in brown paint. A small applied rectangle of clay is located on the inside of the specimen in the nose area and projecting down into the mouth area. From the front, this gives the appearance of teeth set in the doll's mouth.

One additional complete ceramic head of the unglazed or bisque type was recovered from Fort Scott which is particularly interesting. This specimen includes the head and torso of a female figure that apparently once had attached arms and legs (Plate 28, H). The specimen has an elaborate hairdo with a part in the middle. Flattened areas occur in the vicinity of the shoulder and at the base of the torso on both sides, and small perforations run horizontally through the specimen in both areas. It is evident that attached legs and arms were once present on the specimen although the method of attachment is not certain. It could have been either a wire, cord, or even some

elastic material. The extant portion of the specimen measures 77 mm in height. The back of the specimen has two lines of lettering incised upon it "LWCo/NIPPON". This specimen was evidently made in Japan and is most likely a copy of a European doll. Objects marked "NIPPON" are considered by antique collectors to be older than objects marked Japan, although a precise estimation of the date of this specimen cannot be made (Angione 1973:328). Angione notes that Japanese copies of European dolls usually date after the turn of the twentieth century, and that many of them date to the period immediately following World War I (1973:328).

Articulated or jointed dolls are also represented in the Fort Scott collection by a number of limb elements, both arms and legs. The most common limb elements are solid or semihollow porcelain arms and legs which have a groove that is located just below the proximal end and that evidently was used for attaching the arm or the leg to a cloth or kid body (examples on Plate 18, I, J). Material was apparently stretched over the limb and threads were then wound around the groove, which pressed the material into the groove and secured the limb to the body. These specimens occur both in glazed and unglazed forms. The smallest of the specimens of this type that was recovered is a leg element which measures only 17 mm in length and which has a brown-painted shoe element upon it. The largest specimen of this type in the collection is an arm, with clearly distinguished fingers, which measures 46 mm in length.

A second attachment method for limbs is represented in the collection by a single example of an unglazed leg which has a pierced self-loop on the proximal articulating end (Plate 28, K). This leg element measures 50 mm in length. Several hollow arms and legs were recovered from Fort Scott which contain no observable information about the attachment method that was used (examples on Plate 28, L-N). Both glazed and unglazed specimens are represented and several of the examples have fairly elaborate paint applications, particularly shoe elements. Two examples of this type depict high-heeled buttoned-up shoes (Plate 28, M, N). The largest extant leg specimen of this type is 80 mm in length and the largest hand element is 60 mm in length. These specimens may have been glued onto composite bodies of some type.

One other doll part was recovered from Fort Scott which is worthy of mention. This is a half doll represented by portions of the lower half of a doll body (Plate 28, O). It is made of hollow porcelain and it has a groove at the belt level for attachment to some sort of a composite upper body. The naked body parts are of a white unglazed clay while the shoe or boot element is glazed with a purple paint around the top of the boot element.

Little precise information was derived from the study of the dolls that would relate to their chronology. The two marked examples

give at least some indication of a dating to the late nineteenth or early twentieth century. In general, ceramic dolls of many types have been popular items since at least 1850 in the United States. Many of the early ceramic dolls, and in fact most of the dolls of this type found at historic sites, were apparently produced in foreign countries, particularly Germany. Ceramic dolls apparently reached a height of popularity during the 1860s through 1890s (Coleman and Coleman 1968:138-154). One thing that makes the dating of the Fort Scott dolls particularly difficult is the lack of doll parts which exhibit certain datable characteristics, such as spring joints, flange-type joints, wire-framed joints, etc. The manufacturing techniques employed on the Fort Scott specimens are thus of a type that could date from 1850 to well into the 1900s.

Miniature Dishes

The twenty-one small ceramic dishes found at Fort Scott are all copies in miniature of standard size ceramic dishes. The distribution of these specimens is shown in Table 7. Included in this category are four tea and/or coffee cups, three saucers, one or possibly two pitchers, five plates, two lids with finials, and one shallow dish (examples on Plate 29, A-G). The majority of the specimens are made from rather low-fired porcelain or china and they exhibit a plain, white glaze. The two small pitcher fragments (the largest measures 37 mm in height by 22 mm in diameter and has an attached loop handle) are decorated with a vitreous brown glaze (Plate 29, A). These specimens have a series of small raised dots and some raised panel elements upon them. One of the small plates, represented by one-half of the specimen, is decorated on the observe face with an underglaze painted design which includes black, blue, green, and gold coloration (Plate 29, B). The only marked specimens in the category of ceramic toy dishes are a teacup and a small plate that are marked on the reverse face with a stamped or sponged label "made in Japan" (Plate 29, F, G). The outside of the teacup and the obverse face of the plate are both decorated with a very similar pattern, suggesting that they are elements of a single similar pattern, suggesting that they are elements of a single small tea set. This pattern consists of a bird sitting on a somewhat stylized tree branch. The bird has a red head, yellow breast, and blue feathering on the body and tail, and the tree branch is black.

The single example of a milk glass toy recovered at the site is a small deep bowl which has two attached handles on opposite sides of the vessel near the rim (Plate 29, H). This specimen has an external orifice diameter of 25 mm and a base diameter of 18 mm and it stands 22 mm in height. The base is marked with raised letters "JAPAN". A single example of a metal toy pitcher was recovered from Fort Scott (Plate 29, I). It measures 22 mm in height and it has a foot attached to it. This specimen was apparently made in a two-piece mold and it is made of a lead or lead-based alloy. A barely visible decoration is

present on both sides of the pitcher and it appears to be a molded decoration in an oval pattern.

Miscellaneous Toys

The 12 metal toys recovered from Fort Scott are quite miscellaneous in terms of their type, although all seem to be associated predominantly with males. The distribution of these specimens is shown in Table 7. Six vehicles are represented in the collection. The most recent of these is a modern example of a toy fire engine. This small specimen, which is 89 mm in overall length, is made of a corrosion resistant alloy and is painted on the outside with red paint. It has four rubber tires which are set on small iron wire axles. The reverse face of the specimen has raised letter "MIDGETOY/ ROCKFORD/ILL". A second wheeled vehicle was represented by portions of a badly corroded cast iron cart or car (Plate 30, A). This specimen measures 101 mm in overall length and it has iron axles and iron wheels that are slightly flanged, suggesting that it is a car from a model railroad. A third wheeled vehicle is made up of thin sheet steel or iron. This specimen is incomplete and represents merely the basal part of a car or truck of some sort. It measures 158 mm in overall length and has an estimated width of 51 mm. A single iron wire axle is present which has two rubber wheels on it. The remaining three portions of wheeled vehicles are represented by isolated cast iron wheels which, in two cases, still have portions of the axles present. One of these is of the flange type that may have been utilized on a rail of some sort and the other two look like small replicas of wagon wheels. All three of these are spoked wheels where the spokes were formed as part of the casting process.

Two portions of a cast iron toy revolver were recovered from Fort Scott. The two toy revolver pieces are probably both from the same toy cap pistol. These are both of cast iron and one of them is represented by a complete hammer and the other by a portion of the cylinder and frame of a broken revolver. These two specimens were both found in association with HS17, the Well site. Another badly corroded cast iron toy recovered from Fort Scott appears to be a model of a standing sheep or goat (Plate 30, B). This specimen presently has an overall length of 86 mm, although it was originally somewhat longer than this. A single cast lead toy was recovered from Fort Scott (Plate 30, C). This small toy (66 mm in overall length) consists of a two-part molded piece which includes a rather heavy base upon which a bird perches with outspread wings. The head of the bird is missing but it appears to be an eagle or dove. A long metal stem protrudes out from the tail end feathers of the bird. In appearance, this specimen is quite similar to the canary bird whistle that is illustrated in the 1902 Sears Roebuck and Company catalogue (Crown Publishers 1969:913). The stem of the Fort Scott specimen is hollow, but it does not have a cutout in the side to suggest that it was a

functional whistle. However, at least a portion of the stem is missing, so it is possible that a cutout was once present.

A single example of a small pewter whistle was recovered from Fort Scott (Plate 30, D). This specimen, found in association with Historic Structure 9, has a present length of 42 mm although it must have been somewhat longer originally. A finial is located at the distal end and it is drilled perpendicular to the long axis of the whistle, so that the whistle could be hung on a lanyard or with a cord. The whistle body is somewhat conical in shape, expanding toward the proximal or blowing end. A half-moon cutout is located on the obverse face to allow for the exit of air from the instrument. The mouth piece has been much corroded and flattened. The specimen has a maximum diameter of 15 mm. Francis Lord (1979:198) illustrates a somewhat similar pewter whistle and he attributes it to the period of the Civil War. However, his specimen lacks the finial for attachment. This specimen is probably a whistle used by an adult (possibly even a soldier) rather than by a child.

The remaining metal toy recovered from Fort Scott is a miniature brace and bit formed in a two-piece mold (Plate 30, E). This small specimen, which has an overall length of 27 mm, is made from a metal alloy that has resisted corrosion. It is possible that it is a plated or tinned specimen, as a portion of what appears to be a very thin foil is exfoliating on the shaft of the brace and underneath the foil is a small area of iron.

A small model of a duck was recovered from Fort Scott which is made of molded plastic and which has a yellowish green color (Plate 30, F). This is a standing duck which is placed upon a small circular base. The specimen measures 32 mm in overall height and the detail of the molding is rather precise. The wing and tail feathers are clearly outlined and the web feet are quite clear as well as the bill and the eyes.

Bells

Four small metal bells or bell-like objects were recovered from Fort Scott and their distribution is shown in Table 7. One of these is a loose bell which is formed in two pieces (Plate 30, G). The slightly conical top of the bell has a loop shank fastener that was formed by drilling or punching through the thin metal top of the bell. The lower portion of the bell, including the base and the shoulder, is made of nickel-plated steel and has been formed over or around the top part of the bell. This bell measures 18 mm in height and 18 mm in diameter. The second possible specimen of a small bell is represented by a portion of the cap or upper part of a brass bell which has a steel loop shank that protrudes through it. This small specimen has an estimated diameter of 20 mm. The third example of a small bell may not be a bell at all (Plate 30, H). This small specimen, which

measures 20 mm in length and has a maximum diameter of 18 mm, is formed by conjoining or joining two pieces of nickel-plated steel which have each been formed into a slightly conical shape at one end. Thus, the specimen has a circular cross section in the middle of the specimen, but the two ends taper to a somewhat high conical shape. A single example of a slightly larger bell, of the open bell type, was recovered at Fort Scott (Plate 30, I). This specimen, which is nickel plated, is missing the clapper and the handle or shank. The bell is conical in shape and has a diameter at the orifice of 56 mm and a height of 43 mm.

Marbles

A total of 205 round or roughly spherical, small objects were recovered from 14BO302 which have been identified as marbles, presumably utilized by children. As Table 8 indicates, recovered marble types are quite variable and include stone, clay, crockery, china or porcelain, and glass. The 205 examples range in size from 10 mm in diameter to a maximum of 26 mm in diameter.

Eight examples of stone marbles were recovered from the site (examples on Plate 31, A-E). Four of these are marbles made from calcareous stone and the other four are made from semiprecious stones, including agate (Plate 31, C), onyx (Plate 31, E), and tigereye (Plate 31, D). Germany was the principal producer of stone marbles for export during the eighteenth and nineteenth century (Randall 1971: 102). No calcareous stone marbles were ever produced commercially in the United States. Stone marble production apparently declined in the 1870s, although they continued to be produced up until 1915 (Randall 1971:102). The calcareous examples are generally dull in color, ranging from brown to gray, and they have a normally smooth finish although small facets were often noted on one or more sides (Plate 31, A, B). These are remnants of the cubical stage of the manufacturing process.

Sixty examples of clay marbles were recovered from the site and 59 of these are plain clay marbles (examples on Plate 31, F-H). One clay marble has a red and silver paint application (Plate 31, H). Clay marble production apparently occurred primarily in the last part of the nineteenth and early part of the twentieth centuries in both Europe and the United States (Randall 1971:103). Randall notes 1884 as the date of the first commercially produced clay marbles in the United States and he notes that production continued up until the end of World War I (Randall 1971:103).

Twenty-four crockery marbles were recovered from the site (examples on Plate 31, I, J). These marbles have a clay base with a blue or brown glaze applied on their exterior surfaces. They also generally have small pock marks on their sides, resulting from the ceramic firing process. Randall notes that crockery marbles may have been

TABLE 8
14BO302, Distribution of Marbles

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Stone Marbles																			
Calcareous				1	2				1										
(16-18 mm)																			
agate (16 mm)					1	1													
onyx (14 mm)							1												
tigereye (15 mm)						1													
Clay Marbles																			
Plain (10-21 mm)			3	2	12	12			9	2	16					1	2		
Painted (10 mm)						1													
Crockery Marbles																			
Blue Mottled (13-20 mm)						4	3		1										
Brown Mottled (13-20 mm)					7	1					3	1					1	1	
Blue/Brown Mottled (19 mm)											1								
Porcelain/China Marbles																			
Glazed-Decorated (17-18 mm)						1													
Glazed-Plain (14-17 mm)			1		1				1										
Unglazed-Undecorated (18-35 mm)					4	1	1		2	1	1							1	
Unglazed-Plain (11-26 mm)					4	3	1		4		5							2	
Glass																			
Handmade (11-20 mm)				1	3	2					6					3			
Early Machine-Made (15-23 mm)					1	4			1		3					2			
Late Machine-Made (15-20 mm)		2	4		23	2	1	3			3		1		3		4	1	
Indeterminate (19 mm)														1		1			

made as early as 1842 and that a terminal date for their production is not known (1971:104). Eight of the Fort Scott examples are of a blue mottled glaze and 15 have a brown mottled glaze. One example has a combination of blue and brown mottling.

Thirty-six porcelain or china marbles were recovered from Old Fort Scott (examples on Plate 32, A-D). Randall notes that production of porcelain marbles began in the last third of the eighteenth century in Germany and that a closing date is unknown (Randall 1971:104). Included in the present sample were examples of glazed-decorated (Plate 32, A), glazed-plain (Plate 32, B), unglazed-decorated (Plate 32, C), and unglazed-plain (Plate 32, D). Decoration, when present, usually consisted of thin, colored, concentric rings of red, brown, blue, green, or purple colorations, and sometimes leaf or flowered designs. The bodies of the porcelain marbles were typically white.

Seventy-six examples of glass marbles were recovered from 14BO302. These fell basically into three types: handmade, early machine-made, and late machine-made. Fifteen examples of early handmade glass marbles were noted in the sample (examples on Plate 32, E, F). Commercial production of handmade glass marbles began in Germany in 1846 (Randall 1971:104). German production of handmade glass marbles continued up until World War I. Handmade glass marbles were produced in the United States in the period from 1880 to 1882 and again from 1897 to 1902 (Randall 1971:104). Randall notes that it is impossible to distinguish between German and American-made handmade glass marbles. The 15 handmade glass marbles in the Fort Scott collection are typically clear or translucent marbles which have spirals of various colored ribbons in their centers. The spiral twists meet, or almost meet, at opposing sides of the marble where small, irregular spots are present which mark the points where the marble was twisted and cut from a glass rod, and then ground to a rough finish.

Thirteen examples of early machine-made glass marbles were found in the collection (examples on Plate 32, G, H). Randall (1971:105) notes that the first marble-making machine was put into production in 1901 in Ohio, and that by 1905 machine-made glass marbles were providing stiff competition for handmade varieties. Early machine-made glass marbles (and including the present collection) are typically opaque rather than clear, as were the handmade glass marbles. The early machine-made types also typically have a thick application of swirling colored glass at or very near the surface (Randall 1971:105). The early machine-made glass marbles can be distinguished from the late machine-made marbles by the presence of two roughened spots, opposing each other, on the spherical surface of the objects. Randall (1971:105) notes that these roughened ends were present during the period from 1901 to 1926 and that after 1926 all glass marbles were essentially modern in appearance.

Forty-seven examples of late machine-made glass marbles were recovered from 14BO302 (examples on Plate 32, I, J). These presumably all date after 1926 and they are marked by a considerable variety and diversity of type. Ten examples, all recovered from Historic Structure 6, appear to be Cerise agates as described by Baumann (1970:81-82). Two additional glass marbles were so battered on their external surfaces that no determination of manufacturing method could be made.

PERSONAL POSSESSIONS

Tobacco Pipes

A total of 133 tobacco pipes or tobacco pipe sections were recovered from the excavations in 14BO302 (Table 9). Eighty-two specimens are sections of white, long stem, clay tobacco pipes. Included in this sample are 58 plain stem sections, nine stem sections with diagnostic features, three mouthpieces, seven plain bowl sections, and five bowl sections with diagnostic features (examples are shown in Plate 33). Three relatively complete bowl sections have bowl opening maximum diameters ranging from 12 mm to 21 mm and a height from stem to bowl opening ranging from 39 mm to 41 mm. Several of the bowl and/or stem fragments have a spur or foot at the base of the bowl. One relatively complete white clay pipe has a zoomorphic figure (probably an eagle) on the front of the bowl (Plate 33, A). One other interesting specimen has a floral pattern encircling the pipe bowl in two distinct rings from top to bottom (Plate 33, B). Seated upon the inner or back of the bowl, is a reclining figure of a partially clad female. Three bowls have the letters "T" and "D" impressed into the back of the bowl (examples on Plate 33, C, D). Two of these examples have a circle of stars around the letters with additional stars apparently located at the upper portion near the rim of the bowl. The third specimen has the "T" vertical and the "D" turned on its side. Five stem sections have impressed letters on them running longitudinally. Two examples have stamped on one side what appears to be the name "Henderson" and on the reverse side "Montreal" (Plate 33, E, F). Wilson (1971:18) notes that these pipes may have been products of a Montreal firm founded in 1848 by William Henderson. The Henderson firm was apparently in operation for several years after this. The original Henderson firm was in operation from 1848 to 1854 and subsequent to 1854 the firm was known as the Henderson and Son Company (Wilson 1971:18). The firm apparently discontinued manufacture in 1876 (Wilson 1971:18). One small pipe section has been broken but still has discernible letters on both sides of the stem. Three letters appear on one side and spell out "GOW" and the four letters that are present on the other side are "DAVI". Another stem specimen has a partial word on one side with the letters "SGOW" represented and on the reverse side "MURA" (Plate 33, G). Wilson (1971:20, 37) features similar pipes and attributes them to the Thomas Davidson pipe-making firm of Glasgow, which was in existence from at least 1865

TABLE 9

14BO302, Distribution of Tobacco Pipes and Pipe Sections

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
White Long Stem Clay Pipes																			
Bowl Sections, decorated					1	1		1	4		1						1		
Bowl Sections, plain						3			3										
Mouthpieces				1	1	2	1		4										
Stem Sections, marked					15	11	11	2	15	1	2		1						
Stem Sections, plain																			
Clay Elbow Pipes with Detachable Stems																			
Glazed, decorated				1	2	3	3		1		2								
Glazed, undecorated					1	2				1									
Unglazed, human effigy					1	1			1										
Unglazed, decorated					1	1	1		2										
Unglazed, undecorated					4	3			5		3								
Indeterminate											1								
Briar with Rubber Stem				1						1									
Hard Rubber Pipe Stems			2									2							
Brass Mouthpiece with Wooden Stem							1												
Wooden Stem Section																			1

to 1892. One small stem fragment has the letters "DOUGALL" on one side and an indecipherable set of letters on the other side. Wilson (1971:29) notes the presence of pipes made by the McDougall Company of Glasgow, Scotland at Fort Federman in the period from 1867 to 1882. Production years for the McDougall pipes were apparently from 1853 to 1892 (Wilson 1971:21). One stem section is decorated with a series of transverse and horizontal raised lines and has two opposing panels with the mark "PETER" contained in one panel and "DORNI" in the other (Plate 33, H). Herskovitz (1978:118) notes that Peter Dorni was a pipe maker from northern France who practiced his trade around 1850.

A total of 42 pipe or pipe sections of short-stemmed, clay elbow pipes (with detachable stems) were recovered from 14BO302 (examples shown in Plate 34, A-F). These are typically of red clay base rather than the white clay base noted on the long-stemmed, clay pipes, although gray colors are also represented. Included in this category are glazed-decorated examples, glazed-undecorated examples, unglazed human effigy examples, unglazed-decorated, and unglazed-undecorated specimens. The three anthropomorphic pipes all have depictions of human heads upon them. At least two of these are depictions of males. One complete specimen has an internal bowl diameter of 18 mm at the orifice, is 38 mm in height, and measures 41 mm long (Plate 34, C). This specimen is unglazed and is quite carefully made. The bisque-fired clay base is a very pale brown (Hue 10YR 7/4) in color. A second effigy example lacks most of the stem (Plate 34, D). This specimen has an internal bowl diameter at the orifice of 22 mm and is 41 mm in height. This example is a reddish yellow color (Hue 5YR, 6/6). The third specimen is much less complete and consists of approximately one-half of the front bowl upon which is depicted one-half of a human head with an elaborate coiffure (Plate 34, E). It is noted that none of the short elbow pipe sections in the collection have any stamps or inscriptions suggesting manufacture. Twelve examples of glaze-decorated, short-stem, clay elbow pipes were recovered in the sample. One complete example has an incomplete gray glaze and oblique flutes on the bowl and stem. This example has an interior bowl diameter of 17 mm, a height of 41 mm, and a length of 42 mm. The next most nearly complete of these (Plate 34, A) has a brown slip glaze on the external surface and is unglazed on the interior. This specimen is decorated with a series of bumps or nodes on the bowl of the pipe. This example is the most highly glazed pipe in the collection. The specimen has an interior bowl diameter of 22 mm, is 36 mm in height, and 38 mm in length. Several examples of salt-glazed bowls and stems were also noted in the collection. The most common decoration on the glazed and unglazed pipe bowls consisted of a series of flutes that often covered the entire surface (example on Plate 34, B). These flutes are parallel but can be oriented horizontal, vertical, or at oblique angles. Two such examples measure respectively, 19 mm interior bowl diameter, by 42 mm high, by 46 mm long, and 17 mm interior bowl diameter, 41 mm height, by 40 mm long. One unglazed example, which measures 42 mm in height by 48 mm in length and has an

estimated internal bowl diameter of 18 mm, combines a series of flutes with a small human effigy head depiction on the left side of the bowl (Plate 34, F). The right side of the bowl is missing, but presumably contained a similar motif.

The remaining pipe or pipe sections are represented by two portions of briar pipes with hard rubber stems, five hard rubber pipe stems, one brass mouthpiece with a wooden stem, and a wooden stem section of a probable pipe stem. Since the process of vulcanization of rubber was not patented until 1851 (Herskovitz 1978:132), it is assumed that all of the hard rubber pipe stems and the two hard briar pipes with hard rubber stems date sometime after that period. The more complete of the two briar pipes has a stamp on the stem with the name Chesterfield and immediately above it a three-part leaf with an "X" in the upper part and a "BNB" in the lower two parts or lobes (Plate 34, G). The other partially complete briar pipe stem has a circle of brass around the end of the stem upon which has been stamped a four-part stamp. The first depiction is of an anchor, the second of a five-pointed star, and the third a small bird with outspread wings. Immediately below this is a triangle within which, and in raised letters, are the initials "WD" and beneath them "C". One of the five hard rubber pipe stems is of the screw-in variety while the others are a simple push-in type (Plate 34, H, I).

Folding Knives

Nineteen folding knives or sections of folding knives were recovered from Fort Scott. While a few of these are of a size that would allow for their designation as penknives, the majority are larger and more utilitarian items. Unfortunately, no marks of the makers of these knives were visible on any of the specimens. This can be attributed, in large part, to the fact that the iron and steel components of virtually every example are in a very badly corroded state. Brass liners and bolsters and some handle materials (notably bone, shell, and horn) were better preserved. Three general folding knife types were noted in the sample; single-bladed knives, two-bladed knives, and multibladed knives.

Single-Bladed Folding Knives

Five single-bladed folding knives were recovered during the excavations conducted at 14BO302. Four of these were discovered in association with Historic Structure 11 and the fifth example was found during the excavations conducted in Historic Structure 17. The most unusual of the single-bladed knives is an all steel or iron knife which is in the shape of a running dog (Plate 35, A). This interesting example has an overall length of 80 mm, a width of 25 mm, and a thickness of 10 mm. A small clipped or spay blade is pinned through a bolster which is located at the head end of the running dog. A portion of the badly rusted steel spring protrudes from the back of

the dog. Research has so far revealed little as to the origin or dating of this specimen but it is possible that this is a knife issued by a business firm as an advertising ploy. A second single-bladed folding knife can be classified as a "swell-end jack" (Plate 35, B). This specimen was a large folding knife (98 mm long in the closed position, 23 mm wide at the butt, and 14 mm thick) with a strong steel bolster. The handle slabs or scales were evidently of wood and the liners are of brass. Four small steel pins are still present on both sides. These held the two sides of the liner, the scales, and the spring together. The third single-bladed knife was also of the swell-end jack type, but it is so badly corroded that no measurements could be taken. However, it was evidently of all steel or iron construction and a portion of bone handle slabs was still present. The two remaining single-bladed knives had handles that were parallel and of even thickness. One of these specimens measured 88 mm long in the closed position and the other measured 77 mm long. Both of these specimens had all steel or iron construction with the exception of the handle slabs. The slabs were missing from both specimens.

Two-Bladed Folding Knives

Five two-bladed folding knives were recovered from Fort Scott. One specimen was found in association with each of the following structures: Historic Structures 6, 8, 9, 11, and 17. Two categories of two-bladed knives were noted in the sample. Two specimens had the two blades set at one end of the knives and the remaining three specimens had a blade at each end. The larger of the two double-bladed, single-end folding knives measures 96 mm in length, has a width at the butt of 20 mm, and a thickness of 14 mm (Plate 35, C). The specimen has a single bolster located at the narrow end for the blade's pivoting operation and the bolster is quite short (12 mm). In shape, this specimen is similar to the swell-end jack described above. This is one of the better preserved folding knife examples as both bone handle slabs are still present. One slab has an inset brass shield and the other is a simple slab of polished bone. The second example of a single-end, double-bladed folding knife has brass liners, brass bolsters at either end, and is missing the scales. This specimen has a closed length of 74 mm, width that varies from 9 mm to 15 mm, and a thickness of 10 mm.

The most interesting of the two-bladed, double-ended folding knives is a large example which has shell scales on both sides (Plate 35, D). This specimen has a closed length of 86 mm, a width of 19 mm, and a thickness of 13 mm. It has iron or steel liners and bolsters at both ends which are made of the same material. A linear depression is situated midway on one of the shell slabs, indicating that some type of insert once was present. The second double-ended, two-bladed folding knife is represented by brass liners and horn slabs (mottled brown in color) from a small penknife. This specimen had a closed length of 72 mm, a width of 11 mm, and a thickness of approximately 6

mm. The third specimen of this type is also quite small (64 mm long in the closed position, 13 mm wide, and 10 mm thick) and it has copper or brass liners and scales that are formed integrally.

Multibladed Folding Knives

Four pocketknives were recovered that had more than two blades. Two of these were recovered from the area of Historic Structure 10, one from the vicinity of Historic Structure 6, and one from Historic Structure 9. Only one of these specimens is complete enough to yield reliable measurements (Plate 35, E). This specimen, which is of the multibladed "boy scout" type, has a closed length of 95 mm, a width at the primary bolster of 16 mm, a width at the butt of 22 mm, and a thickness of 19 mm. The specimen still has a remnant of the original wood handles and the knife is of the "easy opener" type with a thumbnail cutout for easy access to the blades. The liners and bolsters are made of brass. The remaining three examples of multibladed folding knives are all quite incomplete. They all appear to be of iron or steel construction throughout (except for the handle slabs), and the handle slabs are missing on all three. One of them has the basic shape of a swell-end jack.

Miscellaneous Folding Knife Parts

Five additional sections of folding knives were recovered which are so incomplete that no determination of their type could be made. Two of these were recovered from Historic Structure 9 and one each from Historic Structures 3, 5, and 13. One of these appears to be a small penknife made of ivory. This specimen has an estimated original length of 58 mm and it was circular in cross section, with an estimated diameter of 10 mm. The knife apparently had no liners as the knife slit was formed simply by cutting a slot into the ivory lengthwise and then pinning a blade in by means of a copper rivet which was pushed through a hole in one end. Therefore, this knife also lacked a spring. Another folding knife specimen is represented by a brass liner from a swell-end jack. This specimen measured 93 mm long, was 21 mm wide at the butt, and 14 mm wide at the opposite or bolster end. The remaining knife parts are all bone handle slabs of medium-sized (circa 80 mm or more long) knives. Two of these slabs, from different knives, are checked and the third is of smoothed bone.

Combs

Four different types of combs are represented in the sample of 19 specimens recovered from 14BO302 (Table 10). Three are made from animal bone, one from brass, one from iron, and the remaining 14 are hard rubber combs. Two of the bone comb sections are a very fine-toothed variety with teeth present on opposite sides (example on Plate 36, A). The first specimen is very thin (1.5 mm), has a width of 39 mm, and is of indeterminate length. Tooth length was 10 mm. The

TABLE 10
14BO302, Distribution of Combs, Toothbrushes, Toothpaste Containers, a Bone Brush Handle and Iron Scissors

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Combs																			
Bone				1															
Metal						1			1										1
Hard Rubber			1			7			4		2								
Bone Handled Tooth-brushes			4		1	1													
Ceramic Toothpaste Containers						2			3										
Bone Brush Handle																	1		
Iron Scissors Parts						4		1			3								

second bone comb section is largely incomplete but is of the same type as the specimen just described. This latter specimen is made from 2 mm thick bone and although the teeth are missing, evidently had 15 teeth per cm of length. The third bone comb section has coarser teeth (13 mm in length) on one side only (Plate 36, B). The example is 2.5 mm thick and 19 mm wide, and is of indeterminate length. The specimen exhibits a slight curvature in transverse section and it has an ornamental projection off the one extant end.

A single incomplete example of a one-sided brass comb was recovered from the site (Plate 36, C). This 122 mm long midsection has coarse circular wire teeth set at approximately 1 mm intervals. The specimen measures 25 mm wide and is 4 mm thick at the back. The comb was apparently made in two parts. First, the teeth were either molded or cut from flat bar stock in one operation, with a strip of brass left at the back to join them. A 20 mm wide piece of brass (possibly with a thin silver plating on the outside) was then folded over the back to thicken and reinforce it. An iron comb section is so badly corroded that little can be said about it except that it had a width of 30 mm and rather coarse, but closely set teeth.

The 14 hard rubber comb sections are all apparently made from vulcanized rubber by a process which wasn't patented until 1851 (Herskovitz 1978:132). Several comb types are contained in the small sample and several trademarks were noted. A single example of a fine-toothed, double-sided comb was recovered (Plate 36, D). This specimen has a stamp on one face which reads "IR COMB Co. GOODYEAR 1851". It measures 76 mm long, 40 mm wide, 2.5 mm thick, and has an average tooth length of 10 mm. It is of a uniform black color. Seven examples represent sections of single-sided, handleless hard rubber combs. Six of these are dark olive in color (Hue 5Y, 3/2) and the remaining specimen is black. The largest complete specimen is 200 mm long, 43 mm wide, and 7 mm thick and has coarse teeth on one-half its length and fine teeth on the other half. A stamp is present on one face with the following information contained within a 28 mm long oval "SUPERIOR QUALITY, J.R. Co." The smallest complete comb of this type measures 185 mm long, 21 mm wide, 5 mm thick, and it also has both coarse and fine teeth. A stamp on one face reads "EBONY". The one black example of this type is missing all its teeth, but it has a partial stamp "Unbreakable" on one side of the back.

A single example of a fine-toothed, long-handled, single-edged comb was recovered (Plate 36, E). This specimen is made from a dark olive hard rubber. It has an overall length of 186 mm, of which 91 mm is a swell-end handle. It is 21 mm wide at its widest point and 5 mm thick. A small stamp on one handle face reads "I.R. Comb Co.".

One remaining comb section is deserving of attention. This black rubber comb section is single sided and relatively fine toothed. The unique attribute of this example is that the back of the comb has been

molded to produce a curved or U-shaped appearance. The comb teeth protrude from one side of this U but no teeth are present on the other side. The remaining comb sections are quite small fragments of dark olive hard rubber combs of indeterminate type.

Toothbrushes and Dental Hygiene

Nine bone toothbrushes or sections of toothbrushes were recovered from 14BO302 (Table 10). The one complete specimen measures 158 mm long, 12 mm wide at the bristle end, and has a thickness of 3 mm (Plate 36, F). Four parallel rows of holes (the center two rows have 19 holes each and the outer two rows have 18 holes each) of 1 mm diameter have been carefully drilled in the bristle end so that they do not protrude through the backside. A stamped or inscribed message is present on the front of the handle and it reads "EXTRA FINE PARIS". A handle from another similar toothbrush is marked "EXTRA FINE JAPAN". Another, somewhat broader, toothbrush handle is marked "J.T. YOUNG & CO. DRUGGISTS KANSAS CITY, MO.". Three bristle or head sections of toothbrushes are more oval in shape. One of these has 110 holes drilled in a four-row pattern. All extant bristle ends have four, roughly parallel rows. The remaining toothbrush sections are flat to oval handle sections.

Two additional specimens were recovered from Fort Scott which, like the bone toothbrush handles, are associated with dental hygiene. These two specimens, both of which were recovered from Historic Structure 6 (Table 10) are the lids or tops of ceramic containers which once held toothpaste. The two lids are both made of white-colored ironstone and each of them has similar information contained upon its top. The more complete specimen has a diameter of 74 mm and a height of 15 mm (Plate 36, G). The black transfer print on the top contains the following information "ORIENTAL TOOTHPASTE/FOR/CLEANSING BEAUTIFYING/AND PRESERVING THE TEETH & GUMS/By Appointment/PREPARED BY/JEWSBURY & BROWN/ARDWICH GREEN/MANCHESTER ENGLAND". A royal seal, with lion and unicorn depicted, is also situated in the center of the top face also.

Bone Brush Handles

Two bone brush handles, of a type other than the toothbrush handles, were recovered from Fort Scott (Table 10, Plate 36, H, I). The first is a rectangular-shaped specimen which measures 98 mm long, 20 mm wide, and 5 mm thick. It obviously was originally of greater length as one end is broken. Four parallel rows of 2 mm diameter holes are located on the bristle side. The other side of the brush has four, very fine, lengthwise grooves which parallel the rows of holes and a fifth, and shorter groove, is located at one end and set perpendicular to the other four grooves. Bristles, none of which were present, had apparently been doubled over into a U-shape and inserted into each of the holes. Then a thin wire was evidently inserted

lengthwise into the long grooves to hold the bristles in place. The second bone handle section (Plate 36, I) is a very highly polished piece of bone which is evidently a handle from a long-handled brush. This specimen is flattened in cross section and both faces are faceted longitudinally. Each face has three facets, with the central facet being the largest on each side. The specimen has a maximum width of 16.5 mm and a thickness of 7.5 mm.

Iron Scissor Parts

Eight very badly corroded iron or steel scissor sections were recovered at Fort Scott. The distribution of these specimens is shown in Table 10. The largest pair of scissors represented in the collection was probably no longer that 250 mm while the smallest was at least 140 mm long.

Eyeglasses

One complete set of spectacles and a portion of the frame of another pair were recovered from Fort Scott as well as five spectacle lenses. The complete pair, whose frame is made of copper or a copper alloy, has flat, oval glass lenses, each of which measures 31 mm long by 25 mm wide (Plate 37, A). The nose portion of this specimen is a broad, curved arch which measures 24 mm between the lenses. The temple pieces are formed of flat strips of copper which are hinged at the front with a strong pin. Each of the temple pieces is 109 mm long and terminates in another hinged piece of flat copper, measuring 53 mm in length, which projects down to provide a secure fastening behind the ears. This specimen was recovered from Historic Structure 6. The incomplete pair of spectacles is missing both lenses and the temple pieces. This specimen, which appears to be made of brass, has a much narrower nose piece (12 mm wide) and had oval lenses which measured approximately 31 mm by 26 mm. This example was also recovered from Historic Structure 6. Three of the five spectacle lenses which were encountered are of the oval type and range from 39 mm long and 30 mm wide to 33 mm long and 24 mm wide. Two of these examples were recovered in association with Historic Structure 4 and the third specimen was found during the excavation of Historic Structure 9. The two remaining examples are flat, circular lenses which have diameters of 19 mm and 24 mm. One of these latter specimens was found in Historic Structure 5 and the other was found in Historic Structure 7.

Harmonica Parts

The only musical instruments recovered during the excavations at 14BO302 are four internal metal plates from harmonicas. Each specimen was recovered from a different structure: Historic Structure 3, Historic Structure 6, Historic Structure 7, and Historic Structure 10. Three of the specimens are brass and the fourth example is so badly

corroded that a determination of its metal composition could not be made. The four specimens are simple, flat rectangles with perforations for screw fasteners and with vertical rectangular slits for the notes. Only one plate is complete enough to allow for an estimate of the size of the harmonica (Plate 37, B). This example is 101 mm long, 26 mm wide, and is made out of 1 mm thick brass. It has four perforations (each measuring 3 mm in diameter) and these perforations are set close to each of the four corners. Ten rectangular, vertical slits (which descend in length from 14 mm to 7 mm) are located on the flat face of the specimen.

Wallet or Purse Frames

Eight brass frames, of various sizes, from wallets or purses were recovered from Fort Scott. Small coin purses are represented by three frame elements. One of these is a complete frame which consists of two crescent-shaped pieces of brass which are held together at the bottom by rivets and at the top by two spherical projections which press against one another (Plate 37, D). This specimen, which was recovered from Historic Structure 3, measures 60 mm wide. The other two coin purse frame sections were both recovered from Historic Structure 11. Each represents one-half of a frame of the same type as that which was encountered in Historic Structure 3 and it appears that they were once joined together. The estimated width of this second coin purse is 58 mm. Another possible coin purse frame consists of a flat piece of thin brass which is bent over at the top and which has a spherical ball in the top center. The base of this brass piece is expanding and a small perforation (presumably for riveting) is located on each of the formed ears. This is evidently one-half of a purse frame of slightly different type than was noted above. The specimen measures 53 mm wide at its widest part and it was recovered from Historic Structure 11. Two brass strips have been formed into trough or U-shapes and these are evidently frames from larger purses or wallets (example on Plate 37, C). The two specimens measure 139 mm and 175 mm in length and they are both 5 mm wide. They were both recovered from Historic Structure 6. The two remaining frame elements, recovered from Historic Structure 6 and 13, are incomplete but they may represent wall frames.

Tintype Frame

A single small brass tintype frame was recovered from Historic Structure 9. This rectangular specimen measures 82 mm long by 69 mm wide and it has a cutout which employs curvilinear motifs (Plate 37, E).

Watch Parts

No complete watches were recovered from Fort Scott but several parts of pocket watches were found. A stamped silver bezel from a

glass-face watch was recovered from Historic Structure 30 (Plate 38, A). This specimen, which measures 48 mm in diameter, was of the snap-on type. The obverse face is decorated with a series of curvilinear designs. A pocket watch pillar plate was recovered from Historic Structure 5 (Plate 38, B). This specimen, which measures 47 mm in diameter, is quite heavy and was made of a white metal which has suffered some corrosion. Two pocket watch plates were recovered from the site. One was recovered from Historic Structure 9 and the other from Historic Structure 13. Both of these are internal plates and they are of different size, one measuring 52 mm in diameter (Plate 38, C) and the other measuring 38 mm in diameter. A single coiled spring was recovered from the site which is made apparently out of spring steel. This seems too large for a pocket watch and it may be a clock spring. It was recovered from Historic Structure 13. The remaining specimen of a pocket watch is the knurled stem winder from a large-sized pocket watch. This specimen, which measures 24 mm in length, is made of brass.

Ornamental Chains

Three small chains were recovered from Fort Scott which evidently served an ornamental or aesthetic function. Two of these are watch or locket chains and the third is a sword chain. All three of these examples are made of nonferrous metal. The first of the watch or locket chains is a flattened, close-curb, link chain which is made with solid rings (Plate 38, D). The specimen is evidently made out of brass or a brass alloy and the chain measures 285 mm in length. A fastening or ornamental device is located at each end of the chain and the two devices are identical. They consist of small hollow brass objects that are in the shape of the spade on a playing card. This is evidently a locket chain although the method for closing or attaching it is not clear. The second specimen is a chain made of copper and it is again a flattened close-curb chain with soldered links (Plate 38, E). This specimen measures 267 mm in length and a swivel-type fastener is still present at one end of the chain. This is evidently a pocket watch chain. The sword chain is a much more complex chain than either of the previously described ornamental chains (Plate 38, F). This latter specimen is a three-strand chain with alternating round wire links and flat links. Swivel hooks of large size are located on both ends of the specimen. The specimen has an overall length of 326 mm and each one of the flattened links is decorated on the outside with a floral pattern. The entire specimen was gilded and a remnant of this gilding is still present. This is obviously not a military sword chain and it is most likely a decorative item affiliated with a men's society, such as Mason's, Elk's, etc. The sword chain was recovered from Historic Structure 3 while the watch chain was found in association with Historic Structure 9 and the locket chain in association with Historic Structure 6.

Lockets

One complete and five sections of lockets of brass or copper were recovered from Fort Scott. The complete locket, recovered from Historic Structure 11, has a diameter of 44 mm and a thickness of 7 mm (Plate 39, A). The locket bow was still present and it is pierced and has a circular ring through it for suspending the locket from a chain. A small hinge element is still present at the end of the locket opposite the locket bow. The whole specimen is quite corroded and could not be opened for inspection of its insides. Two locket parts were recovered from Historic Structure 9, one from Historic Structure 5, and one from Historic Structure 11. The extant locket fragments include a front plate and four locket bows. Three of the locket bows employ the same type of ring attachment device that was noted on the complete specimen. The fourth bow, which may actually be a handle to an object larger than a locket, is made out of quite heavy brass and is formed in one piece. A small lip at the distal end indicates that it was once riveted onto another piece of metal. A front plate from an oval locket was recovered from Historic Structure 6 (Plate 39, B). This specimen, which has a length of 47 mm and a width of 35 mm, has a concave back, two small tubular extensions off the base for attachment of a holding pin, and an extension off the top end so that it could be suspended from a chain. The front face has been stamped with a decorative pattern around the border that includes geometric and curvilinear shapes. A smaller oval has been stamped from the inside toward the outside face and within this oval is located an attached brass cutout of a female face in profile. This small bust has been attached by drilling two small holes through the front plate and allowing two projections on the bust to protrude through and then to be bent over on the reverse face of the locket front.

Rings

The first of the rings described from Fort Scott is a simple oval. style wedding ring of gold (Plate 39, C). This specimen is of hammered gold, rather than cast. It measures 5 mm in width and has an inside diameter of 16 mm. The only mark on the ring is located on the inside of the band and it consists of a stamped number and letter "14A". This wedding band was recovered in association with Historic Structure 9. A second metal band was recovered in association with Historic Structure 3. This is a brass band that is made of flat brass with the two edges turned slightly up and out. The brass ring has a width of 5 mm and an internal diameter of 19 mm and it is decorated on the obverse face with an alternating diamond and floral stamped pattern. The third ring recovered from Fort Scott is an incomplete specimen. This specimen consists of a brass strip that is slightly convex on the outer surface and which has a knurled pattern across its whole surface. The brass band measures 4 mm in width and has a diameter on the interior of 18 mm. The fourth possible ring part (which equally well may be a part of a bracelet or some other item of

jewelry), consists of a flat piece of brass with a rolled edge, which has a rectangular shape. Contained within the depression created by the rolled edge is a synthetic, red-colored stone. This specimen, which was recovered from Historic Structure 9, has a length of 22 mm and a width of 16 mm.

Broaches

The most elaborate of the two broaches recovered from Fort Scott was found in association with Historic Structure 17 (Plate 39, D). This specimen is made in two parts. The base of the specimen is flat brass that has been pressed into an elaborate diamond shape with numerous nodes and curvilinear motifs in raised pattern on the obverse face. The specimen has an overall length of 52 mm and a width of 45 mm. A large oval of shell is situated in the middle of the broach and is held-on by projections of brass. This oval shell insert measures 32 mm in length by 25 mm in width. The broach had a pin-type holder on the back which is still revealed by portions of the two projecting circular wire keepers that were located at opposite sides on the back of the broach. The second broach is made of brass or copper and consists of the stamped form of a cross (Plate 39, E). This specimen measures 49 mm in length by 38 mm wide and the arms of the cross are of the type that expand out to a three-lobed pattern on the upper arms and top. A metal projection has been folded back over at the base of the specimen to provide a tongue-like keeper and two metal projections have been folded back from each of the two arms for the apparent insertion of a pin.

Medallion

A circular medallion of brass was recovered from Historic Structure 6 (Plate 39, F). This specimen, which have a diameter of 36 mm, has a slightly convex obverse face and a slightly concave reverse face and it is made of quite thin metal. A brass wire has been soldered on the backside in two places on opposite edges of the specimen and a flat, brass tab with a horizontal perforation has been soldered on top of the specimen and extending up above the rim of the circle. A floral pattern is located around the perimeter of the obverse face and the central part, which is marked off by a stamped circle, is decorated with a series of diamonds, each of which contains a floral pattern. A residue of a gold wash or gild is located on the obverse face.

Necklace

The necklace recovered from Fort Scott was recovered in association with Historic Structure 6 (Plate 39, G). This specimen appears to be a very fancy example of costume jewelry. The dominant element of the necklace is a large, cast pewter object which is shaped somewhat like the wings and tail of a bird. This specimen is 66 mm wide and it has a series of faceted glass jewels in its obverse face.

Thirty-two small, circular, clear glass, faceted crystals and 13 rectangular, green glass crystals were once located on this face. Three of the circular, glass objects are missing and seven of the rectangular objects are missing. The necklace was evidently suspended from the neck by a chain of rather complex composition. A portion of the chain (8 links or 124 mm) is still present. This chain was formed of small solid brass cylinders that were flattened at either end and then perforated on both ends. Small links of wire then joined one end of each link to the next link. No estimation of the age of the specimen can be made, but it is noted that the rectangular, faceted glass objects are of the same green color as nineteenth century bottle glass and the clear glass, circular, simulated gems have weathered to a yellowish color.

Ornamental Pin

An ornamental brass stickpin was recovered from Historic Structure 11 (Plate 39, H). This example is a circular disk of open brass in a decorative pattern. Two flat pieces of brass have been cut and opened up and then closed together at the edges to form the circular disk which measures 28 mm in diameter and 4 mm thick. A wire straight pin is located at one end of the specimen and this obviously functioned as a fastening device.

Ornamental Belt Buckles

The first of the two ornamental belt buckles recovered from Fort Scott is made of two flat, brass squares which are held together by wire loops at the corners (Plate 39, I). This specimen, which was recovered from Historic Structure 11, is stamped from the reverse side to create a circular panel with raised, parallel, filled lines extending to the corners. The interior of the circle is cut out partially and has a smaller square surrounded by four circular areas of brass within the circle. Each of the plates which comprises the buckle is made of thin brass which measures 38 mm on a side, and one end of one of the two flat plates has a single bar fastener riveted onto it for attachment to a leather or cloth belt. The second ornamental belt buckle was recovered from Historic Structure 11 (Plate 39, J). This specimen is made of synthetic material, probably plastic, and it is oval in shape with a maximum length of 53 mm, a width of 37 mm, and a thickness of 1 mm. The buckle has two D-shaped void areas that are separated by a single center bar for attachment of a piece of belting. The obverse face has a design of radiating lines that have been pressed into the plastic when it was in a more plastic state. The color of the specimen is white.

Shell Ornaments

The three shell ornaments recovered from Fort Scott are all made of thin and relatively flat pieces of shell of approximately 2 mm

thickness. The first of these, recovered from Historic Structure 9, is a hand-cut shell ornament which has been cut into a leaf shape (Plate 40, A). The workmanship on this specimen is rather crude and it is impossible to determine just what kind of an ornament it was. It has a length of 60 mm, a width of 26 mm, and is 2 mm thick. A small hole has been drilled through the center part of the ornament. The second shell specimen is T-shaped with a broad and wide head element that extends for approximately one-half the length of the specimen (Plate 40, B). This specimen, which was recovered from Historic Structure 6, has an overall length of 33 mm, a width of 16 mm, and is 2 mm in thickness. A small hole, conical in shape, has been drilled through the center part of the shell object at approximately the juncture of the head with the shaft. The third shell ornament was recovered from Historic Structure 4 (Plate 40, C). This artifact, also incomplete, consists of a small, somewhat rectangular piece of shell which is 27 mm in length, 8.5 mm wide, and 2 mm thick. One end of the specimen has been cut to create a bipointed tip and the other end is broken. Two small cylindrical holes have been drilled through the shell. One of these is incomplete and is located at the distal end and the other is located approximately halfway between the base and tip. The holes are approximately 1 mm in diameter.

Flat Brass Octagon

A small flattened piece of brass was recovered from Historic Structure 11 (Plate 40, D). This example has been roughly cut into an octagonal shape and it has gold-colored plating on the obverse face and on top of this is located, in relief, a bird seated on a branch. The bird and branch and leaves are made of copper. This specimen measures 22.5 mm across and is approximately 0.5 mm thick.

Miscellaneous Jewelry

A portion of what may be a part of either a stickpin or broach was recovered from Historic Structure 11. This small example, which measures 28 mm in height by 24 mm wide, consists of a metal back in the approximate shape of the numeral four (Plate 40, E). Small, faceted black glass spheres (26 mm in number) were once situated on the obverse face of this metal backing. Twenty-three of the faceted black glass spheres still survive on the specimen. These spheres are perforated on the backside for insertion onto metal projections from the backing plate. Excavation in Historic Structure 8 uncovered a single example of what may be a cut gem stone (Plate 40, F). This small oval specimen (which measures 27 mm in length by 10 mm wide by 4 mm thick) is flat on the reverse face and has five linear facets on the obverse face and it is perforated with a small hole through the center. The material from which this object is made is a semitranslucent banded stone which appears quite similar to tigereye.

Rubber Hairpin

A single example of a rubber hairpin was recovered from Historic Structure 11 (Plate 40, G). This hairpin is of the forked or pronged variety and it measures 58 mm long. It is made of black vulcanized rubber by a process that was not discovered until at least 1851 (Herskovitz 1978:132).

Bone Objects

Four bone objects were recovered from Fort Scott which have tentatively been identified as jewelry items. The first of these specimens is a small, hollow-based bone finial which is cylindrical in shape (Plate 40, H). This highly polished specimen was obviously turned on a lathe and it has a round knob or ball on the top. The specimen measures 25 mm in length and has a diameter at the base of 6.5 mm. Two holes are drilled through the specimen near the base so that the finial could be attached with a pin to some other object. The specific function of this item is not known, but it could be a decorative finial from an item such as a swagger stick, a light stick carried by military officers as a symbol of authority. This specimen was recovered from Historic Structure 9. The second bone implement which is, at least in part, a decorative item, is a small solid cylinder of bone which has been broken at both ends (Plate 40, I). This specimen has an extant length of 65 mm and its original length is unknown. It has a maximum diameter of 6 mm and it has obviously been turned on a lathe as one end is quite decorative. The specimen was recovered from Historic Structure 6. The function of this item is unknown although Ed Sudderth (of the Midwest Archeological Center, National Park Service) has suggested that it might be a midsection from a crochet hook. The third specimen, identified by Ed Sudderth, is a shaft section from the radius of a large bird (possibly goose or eagle) which has been modified (Plate 40, J). This 118 mm long section of bone was recovered from Historic Structure 9. Sudderth reports that both epiphyses have been cut off with a knife and subsequently ground and that the shaft of the specimen has been scraped. The fourth specimen, also identified by Sudderth, is a talon from a large raptor (Plate 40, K). The articular surface of this specimen has been removed and Sudderth notes that some tool marks are evident on the specimen as well as carnivore tooth marks on one side. This specimen was recovered in association with Historic Structure 11.

Glass Beads

Twenty-nine glass beads of various types (all perforated for suspension on a cord) were recovered from Fort Scott. The distribution of these beads within the site is shown in Table 11. A representative sample of the various bead types is contained on Plate 41. Twenty-one of the recovered beads are spherical in shape. These examples include several different colors (i.e., blue, white, green,

TABLE 11
14BO302, Distribution of glass beads

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Spherical Beads																			
Blue, Opaque, Frosted (8 mm-14 mm diam.)					2	2													
Blue, Opaque, Polished (2 mm-5 mm diam.)		1				1													
White, Opaque, Frosted (12 mm diam.)									1										
White, Opaque, Polished (9 mm diam.)						1			1										
Green, Opaque, Frosted (8 mm diam.)						1													
Green, Opaque, Polished (3 mm & 15 mm diam.)							1		1										
Black, Opaque, Iridescent (10 mm-15 mm diam.)					1	1			2										
Clear to Pale Yellow, Semitranslucent (9 mm-14 mm diam.)			1		1	1	1		1										
Spherical Faceted Beads																			
Black, Opaque, Polished (8 mm diam.)					1														
Blue, Opaque, Iridescent (7 mm by 9 mm)					1														
Blue, Translucent with white core (8 mm diam.)						1													
Annular Bead																			
Black, Opaque, Iridescent (12 mm diam., 5 mm thick)						1													

TABLE 11 (Continued)
14BO302, Distribution of glass beads

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Ovoid Bead with channeled exterior																			
Red, Opaque, Polished (9 mm long, 6 mm wide)		1																	
Hexagonal Tubular Beads																			
White, Opaque (5 mm diam.)						1													
Clear, Translucent (4 mm to 5 mm diam.)			1			1													

black, and clear to pale yellow) and they exhibit either polished, light-reflective surfaces, or they have a frosted appearance (Plate 41, A-F). A few examples are iridescent and this condition is evidently due to their age and exposure to light. The spherical beads range in size from 2 mm to 15 mm in diameter but the majority of the specimens are 8 mm in diameter or larger. While a few of the beads are of a regularity that suggests that they were made by a machine process (notably the two polished, white opaque beads) the majority of the specimens are somewhat irregular and appear to be hand formed.

Three faceted beads of roughly spherical shape were recovered (Plate 41, G-I). These specimens ranged from 7 mm to 8 mm in diameter and both black- and blue-colored beads were included in this category. One of the more interesting of these is a translucent blue-colored bead which has an interior core of white glass. A single annular, or somewhat flattened, opaque black glass bead was recovered which was evidently hand formed (Plate 41, J). One red-colored bead, ovoid in shape and with a channeled exterior surface, was also found (Plate 41, K). This example appears to be machine made and the specimen is judged to be of fairly recent derivation. Three sections of hexagonal, tubular beads were recovered. Two of these are clear and the other is white (example on Plate 41, L). Unfortunately, the ends of all three specimens are broken so no determination of their length could be made. They range from 4 mm to 5 mm in diameter and the longest section that was recovered measured 22 mm.

Thimbles

Six brass thimbles were recovered from Fort Scott (example on Plate 42, A). Two of these were found in association with Historic Structure 11 and each of the following structures yielded one specimen; Historic Structures 4, 5, 6, and 9. The specimens have orifice diameters ranging from 15 mm to 17 mm and they vary from 19 mm to 24 mm in length. While various sizes of thimbles were noted in the sample, the specimens are quite uniform in their appearance. The pushing or needle end of each example is covered with small indentations to prevent the needle from slipping when pushed, and these indentations are located up onto the body of the thimble for a distance of from one-half to two-thirds of the total thimble length.

Rubber Syringes and Tubing

Two hard rubber syringe parts and a section of small diameter rubber tubing were recovered from Fort Scott which are all likely connected with personal hygiene. The syringes were recovered from Historic Structures 3 and 6 and the tubing was found during examination of Historic Structure 2. The large syringe measures 141 mm in length and it has a diameter of 11 mm (Plate 42, B). This specimen is of hard black rubber, has a curved shape, and the tip end is quite

bulbous and contains a discharge cap. The butt end is enlarged and threaded and a screw thread fitting is seated in the threads. This appears to be a vaginal or rectal syringe applicator tip. Similar apparatus are depicted in the 1902 Sears Roebuck catalogue (Crown Publishers 1969:455-456). The second syringe part is again the tip end of a syringe but it also includes a barrel-shaped reservoir which held a small quantity of a liquid or cream (Plate 42, C). This specimen is made of hard black rubber and it has an overall length of 74 mm and a barrel diameter of 15 mm. The butt end is threaded to receive a plunger. This item is a syringe that may have been used for infant application or as an applicator for ear ointments. The small diameter tube recovered at Fort Scott is also made of hard black rubber (Plate 42, D). The tube is approximately 118 mm long and it has an external diameter of 4 mm. A small, hollow metal insert, painted red, is present at one end of the specimen. The function of this item is unknown at this time.

Sad Iron

Portions of three datachable sad iron handles were recovered from 14BO302. One of these was recovered from Historic Structure 5 (Plate 42, E), and the other two were recovered from Historic Structure 6. The three specimens are of the same type and they appear to be of the detachable type of sad iron handle first patented by Mary F. Potts in 1870 (Glissman 1970:80-85). This type of sad iron handle was produced by a number of companies both in the United States and abroad from 1870 up until nearly the present time. Figure 17, redrawn from the original patent, illustrates the complete shape of the Potts Patented Sad Iron Detachable Handle (Glissman 1970:82, Figure 161B).

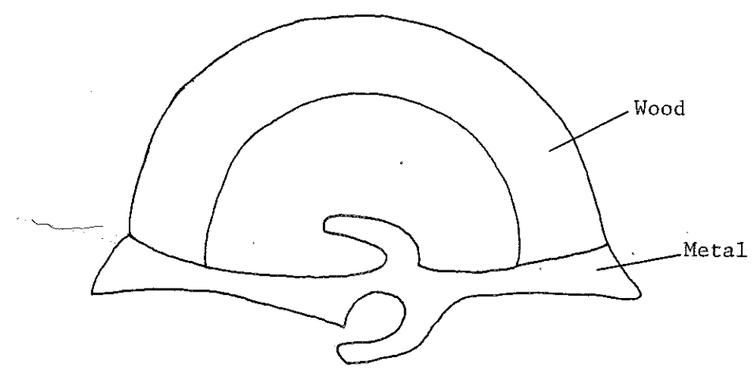

FIGURE 17: Mrs. Potts Patented Sad Iron Detachable Handle.

Trivet

A single, well-preserved, cast iron trivet was recovered in association with Historic Structure 4, one of the officer's quarters

(Plate 42, F). This specimen has a manufacturer's mark (W.H. Howell Co., Geneva, Ill.) on the top. The trivet is an open-work cast iron specimen with a triangular shape. It is not known exactly when this specimen was manufactured, but the W.H. Howell Co. was in operation at least during the period from 1866 to 1920 (Glissman 1970:116).

WRITING IMPLEMENTS

Forty-nine writing implements (or sections of writing implements) as well as three slate board sections were recovered from Fort Scott. These writing implements included metal lead pencils, slate pencils, graphite pencils, chalk, and a metal pen point. The distribution of these specimens within the fort complex is shown in Table 12 and Plate 43 illustrates the variety of recovered writing-related artifacts. Inkwells, which could be classified as writing-related artifacts, are discussed under the section of this report which is concerned with glass containers.

Two probable metal lead pencils were recovered. One of these consists of a 61 mm long section of circular lead (7 mm diameter) which has been shaped to a fairly sharp point at one end (Plate 43, A). Examination of this specimen under a binocular microscope revealed that the tip end is somewhat polished as would occur if the specimen had been used as a pencil. The second specimen, which is 80 mm long and 7 mm in diameter, is also circular in shape. The tip end of this specimen has been rounded off but the artifact has become corroded and microscopic examination was unable to demonstrate polishing of the tip.

Thirty-seven slate pencil sections were recovered. These specimens ranged from 5 mm to 6 mm in diameter and the longest recovered section measured 92 mm (Plate 43, B). One short specimen had been grooved all around the circumference near the butt end, apparently so that a cord could be wrapped around the pencil (Plate 43, C). While the slate pencils were most often circular in cross section, examples were noted which had one, two, three, and even four flattened sides.

Four rather puzzling items recovered from Fort Scott may have served a secondary function as writing implements (example on Plate 43, D). These four artifacts appear to be sections of round carbon rods such as are found in modern batteries. The specimens have an average diameter of 12 mm and they range in length from 50 mm to 60 mm. All four of the objects have pointed tips on one end and the pointing appears to be intentional. That is, there is a suggestion of honing or sharpening of the tips of the specimens. A simple streak test was performed on a piece of white paper with one of the specimens and this demonstrated that it would function very well as a writing implement.

TABLE 12
14BO302, Distribution of Writing Implements

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Lead (Metal) Pencils					1			1											
Slate Pencils					4	9	2	5	8	1	5				1		2		
Carbon Rods with sharpened tips					2								1			1			
Chalk								2											
Metal Pen Point								1											
Lead (Graphite) Pencils																			
Square pencil lead									1										
Section of wood-lined graphite pencil with metal ferrule at butt										1									
Metal Mechanical pencil						1													
Slate Board Sections												1							
(2.6 mm thick)														1					
(3.4 mm thick)														1					
(3.9 mm thick)																			

Two small pieces of chalk were recovered from Historic Structure 8 in association with some paper which had been preserved in the still standing structure. One chalk specimen is white and the other is yellow in color. The section of white chalk was 11 mm in diameter and was circular. It measured 40 mm in length. The yellow chalk, which was 36 mm long and had a diameter of 10 mm, is slightly flattened in various areas, suggesting casual trimming of the specimen by a bored student (Plate 43, E).

Three sections from graphite pencils were recovered. One of these examples is the butt section of a wood-covered, circular, graphite lead pencil which still has a metal eraser ferrule present at the butt end. This specimen is of modern type. A graphite lead section (45 mm long) was recovered from the site which has a square cross section (1.8 mm on a side) (Plate 43, F). The third section of a graphite pencil is a tip and midsection of a metal, mechanical pencil which was designed to hold a graphite lead of slightly less than 1 mm diameter (Plate 43, G).

A single metal pen point (of the detachable variety) was recovered (Plate 43, H). This specimen, which was designed to be used with a holder, is missing the metal tongue which fits into the holder.

Three small sections of broken slate boards were also recovered from the site (example on Plate 43, I). Thickness of the specimens ranged from 2.6 mm to 3.9 mm.

HANDWRITTEN OR PRINTED PAPER

Paper materials, because of their obviously very fragile nature, were rarely encountered during the excavations conducted at Fort Scott. When discovered, those examples which survived were usually reduced to an indecipherable pulp. A notable exception to this occurred in Historic Structure 8, the Hospital, where the continuous presence of the structure had prevented damaging moisture from hastening the process of decay. Paper products encountered during selective excavation of portions of the interior foundation of the Hospital included newsprint, pages from books, handwritten letters and pages, receipt forms, printed advertising circulars, and the playing cards which have been discussed previously. All of these specimens were apparently composed of fairly acid-free paper (unlike modern newspapers) as the surviving specimens show little evidence of acid degradation.

The very unusual occurrence of paper materials preserved for more than one hundred years deserves further explanation. All of the paper goods, including the playing cards that were discussed previously in this report, were found in direct association with one another. Additionally, two pieces of chalk and a metal pen point, discussed in the section on writing implements, were recovered with the paper

goods. These materials were all discovered during the rehabilitation of Historic Structure 8, the Hospital. They were found within a narrow recess between the original internal wainscott and the modern external sheet metal cover on the second floor at the west end or side of the structure and they were situated between two of the vertical studs. The majority of the recovered items date to the period immediately prior to, during, and post-Civil War. Their occurrence between the walls of HS8, and their association, suggests intentional placement rather than accidental deposition, but the reason for their being there cannot be known.

Several fragments of handwritten letters, envelopes and handwriting exercises were uncovered during the excavation of the Hospital complex. One of the more interesting of these is a child's classroom composition, written rather imperfectly in ink:

Composition no. 9
Lizzie Wilson
Squirrels
Squirrels are very pretty Little
Things I think there are three or
four kinds of squirrels the nibble
ground squirrel then they are others
The little squirrels are sometimes
Caught and put into cages they
get out very often and go b-
ack to thier mates they Subsist on
nuts the squirrels are butiful little
things the gray and black squirrel
live in the forest and make a nest of
leaves and sticks it is amusing
to see the nibble squirrel spring
----------k to branch or run
----------dart behind
----------little

A school was established in the Hospital building in 1858 and this composition may date from that period or from the school which operated in the Hospital during the period immediately after the Civil War (Thompson 1968:44-45). Lizzie (or Lizze) Wilson evidently figures in at least one, and possibly two, additional pieces of writing found in the Hospital area. A small fragment of paper has writing on two sides as follows:

Miss Lizze Wilson
and Elle Cambell Fort Scott

Dear Lizze
I must tell you
when the teacher came

up to Les and ask Les
what was the matter
she tallem him and
he walked away
and didn't say
nothing from Tamtt(? u or y)
Willis (?)

Another small square paper fragment also has writing on two sides:

Mr. [I or J] hen Williams

Fort Scott K.S.
Sir I hope that
you are well
--- did not treat
me right from Lizzie

While it cannot be established that the Lizzie referred to in each of the three missives is the same person, the finding of the scraps in the same general area of the Hospital strengthens this assumption.

Several other paper fragments contain references to additional denizens of the Fort Scott area. An envelope was found which has a fragment of a postage stamp in the upper right corner and a circular hand stamp to the left of it which bears the impression "MIFFL--TOWN/ Aug 27". The envelope is addressed to John S. Miller, Esq., Fort Scott, Bourbon county, Kansas. Interestingly, the 1865-1866 city directory for Fort Scott lists a contractor named John S. Miller who had a residence on Williams St. (Emmert 1865:35). Another small paper scrap was addressed to Mr. Willame Cambell, Fort Scott. Still another bore the cryptic message "beil Wimsets/is married to Kate Wilson/step brother ---- ------/did not tell".

Two large sheets of paper, measuring 198 mm by 250 mm, are filled on both sides with writing exercises done in ink. On both examples, the first line of each side is a complete sentence which was apparently written by a teacher as an example for a student. Underneath this line, and most often filling the rest of the pages, the student has laboriously copied the first (and nicely penned) line in an uneven script. The more complete of the writing exercise pages has, on one side, the phrase "Beware of evil communications for they corrupt good manners" and this is repeated for a total of 28 lines (Plate 44). On the opposite side, and comprising 27 lines, is the phrase "Orderly Sergents are sometimes very disorderly Lelah". The second writing exercise has two messages on the first side. A portion of the top series of lines is missing but the extant portion reads "...is an heir of heaven who finds his bosom gloved with love". This message is repeated 14 times as is the second exercise line, "O for a lodge in some vast wilderness some boundless". The reverse side of this sheet

has just four repeated lines at the top "Remember the Sabbath day to keep it holy..." and the rest of the sheet is covered diagonally with enlarged capital "Q's".

The single advertiser's handbill or card recovered from the Hospital complex is made of very thick paper which measures 80 mm high by 126 mm wide (Plate 46, A). It is marked in blue print on the obverse face with 11 lines of printing and several different styles of print are employed; "LAWRENCE/Foundry & Machine Works,/LAWRENCE, KANSAS./KIMBALL BROTHERS/MANUFACTURE AND REPAIR/STEAM ENGINES,/SAW AND GRIST MILLS,/Lathes, Horse Powers, Sugar Mills, Threshing Machines, &c./CASTINGS AND MACHINERY OF ALL KINDS FURNISHED TO ORDER,/BRASS CASTINGS FURNISHED AT SHORT NOTICE/Republican Job and Card Press:". A check of the available city directories for Lawrence, Kansas revealed that the Kimball Brothers Foundry was in operation from at least 1866 until 1887 (Boughton and McAllaster 1866:46; Atkinson 1871:199; Johnson and McKinney 1879:139; Lawrence Publishing Company 1883:18; and Foley 1886:164; 1887:168). The 1860 Lawrence city directory contains no listing for the Kimball Brothers Foundry and the 1890 directory lists the firm as the Kimball Iron Works, with Samuel Kimball as proprietor (Sutherland 1860; Benson Brothers 1890:199). Presumably, the 1890 name change signifies that the partnership of the Kimball brothers had dissolved by that year.

A manufacturer's label was recovered from the Hospital area which bears both printed and handwritten information (Plate 46, B). This label is a thick, rectangular piece of paper (60 mm wide by 83 mm long) which is perforated at one end and which has a blue and white twisted string of natural fiber tied through the hole. The card has, on its obverse face, the printed words "M.&B. MANUFACTURING CO./MONSON./ALL WOOL FILLING./Case_____/No.____/_____Yds." The handwritten numbers "133" and "23 1/" are filled in behind No. and in front of Yds. These numbers are in black ink. The reverse face of the specimen contains both inked and penciled notations. The inked notation is "no/100" and the penciled notations are "US", "660" and "#7". It is tempting to suggest that this label was once attached to a wool-filled military item of some sort. The penciled "US" on the back and the numbers might refer to a military inventory. Unfortunately, this cannot be proved at this time and the specimen itself is not presently datable.

Portions of four blank business check forms were recovered from the Hospital area (Plate 46, C). Two of these are complete and two consist of the right half of the checks. All are printed on a single sheet of good quality blue-colored paper and the printing which appears on them is in intense black ink. Ornamental printing borders the checks and is integrated into other printing on the obverse faces. At the upper left-hand corner of each complete check is printed the word "No.____" for self-numbering of the checks. The upper right hand corner states "Kalamazoo, _____ 185 ____." Immediately below this,

and in bold print, is the company or business name "Messrs. Ransom & Dodge,". Beneath this is "Pay to _____or bearer" and, beneath this "_____Dollars". The bottom line contains a space to enter the dollar amount in numbers and a blank space for the name of the check signer. These are apparently checks issued by a firm which were to be redeemed by that firm. Research has so far not provided information about the firm that is referred to on the checks, although Epaphroditus Ransom was appointed as the receiver of the Osage land district money at Fort Scott, the term of office to run from March of 1857 to January of 1860 (Greene 1904:9). Ransom was an influential and apparently wealthy inhabitant of Fort Scott and he took part in several of the controversies surrounding the issue of slavery in southeast Kansas in the years just prior to the Civil War. Ransom arrived in Fort Scott in January of 1857 and he remained there until his death in November of 1859 (Michigan Historical Commission 1924:219-220). Ransom was a lawyer and was formerly the governor of Michigan (Denver 1886:364). He had settled in Michigan in 1834 in the town of Bronson (which was subsequently renamed Kalamazoo) and he held public offices and was a partner in several law firms until he moved to Kansas (Michigan Historical Commission 1924:219-220). It seems clear that the blank checks which were recovered from Historic Structure 8 relate directly to Epaphroditus Ransom and to some presently unknown business partner named Dodge and that the checks may securely be dated within the narrow span of time from January of 1857 to late 1859.

At least three different books are represented in the collection of papers recovered from the Hospital complex by fragments of six pages. In five cases, the book from which these pages derived can be identified. Four of the pages are evidently from the revised edition of an elementary spelling book which was based on The American Spelling Book of Noah Webster. The revised edition was first published in 1857. A third book page is a sheet (evidently the last page) from a copy of McGuffey's First Reader, although the particular edition of this popular reader represented by the Fort Scott example could not be determined. The McGuffey readers underwent numerous revisions during the period from their first publication in 1836 until their final demise in popularity in the twentieth century (Minnich 1936:39-40). The fourth, and unidentified, book page fragment is the bottom portion of a sheet which discusses the works of an English poet named Cowper. Several other very small fragments of book pages were recovered but they were in a very bad state of preservation and could not be identified during the present analysis. These fragments had the appearance of having once comprised nesting material for some animal.

Four recognizable fragments of newsprint, and several other probable fragments of the same were recovered in the Hospital area. One of these fragments contains a date of December 5, 1859. The newspaper from which this derived has not yet been identified but the very small fragment apparently is concerned with political offices in

Missouri. A second specimen is a long column (280 mm) which was obviously clipped from a newspaper. This specimen, from an as yet unidentified paper, contains a reprint of a short article which was first published in the Davenport Democrat. This article, which is dated April 28, 1859, has the title "Discouraging Intelligence--Miners Returning Home--Fort Kearny Filled with Beggars, Lynching of Letter Writers." The reverse side of this page appears to be a reprint of a portion of a romance. The third newspaper section is a portion of four columns of newsprint on both sides of the paper. One side contains advertisements for such substances as Hostetter's Stomach Bitters and Bininger's Old London Gin as well as book advertisements. A date of July 16, 1860 is located at the head of an article on this page but, unfortunately, the article is obliterated. The reverse side has several partial articles on it and a poem (----E Tides) by William Cullen Bryant. The fourth, and last, of the relatively complete newspaper fragments is a large (265 mm by 160 mm) intentionally clipped piece of newspaper which has, on its front face, a cartoon depicting the anthropomorphized figures of an ox and a frog (Plate 45). The caption located beneath this reads "THE FROG AND THE OX" and a story, with a moral, is located below the caption:

> As a respectable Ox, who, by right of his position in society, was enjoying a morning promenade, and inhaling the fresh breezes attendant upon the rising sun, he met a pert, tawdry-coated little Frog, who at once felt envious of his noble appearance. "That old fellow cuts something of a swell," exclaimed the Frog, "but if I don't make a bigger one, call me a fool." With that he puffed himself up once, twice, and again, until his companions laughed at his puny efforts. He still went on swelling, however, till in the end he burst himself.
>
> Moral--The humble citizen who strives by mere inflation to make an outward appearance as great as his more substantial neighbor, must inevitably go to pieces.

Now this is a moral that still has some currency! The reverse side of this page contains several interrupted columns of newsprint and includes such diverse topics as "The Game of Courtship; Or how to make love to a girl without her knowing it", "The Mysteries of Marriage", "New Cards for Fortune-Telling" and "Rarey's Secret Revealed. Taming, or Breaking the Horse".

The paper goods recovered from the Hospital complex at Fort Scott are a unique and informative find. Most of them appear to date from the period after the initial military abandonment of the fort and just prior to the Civil War and they reflect, for the most part, the intervening civilian occupancy of this particular structure. For instance, Thompson notes that the Hospital building was used for a variety of purposes during the years from 1855 to 1860 (1968:44-45).

These included utilization as a public meeting hall, a doctor's office, a law office, a school, and even a temporary guardhouse for the local militia in January of 1859 (Thompson 1968:44-45). As has been noted, several of these activities (particularly the school function) may be reflected in the inventory of paper goods.

GLASS CONTAINERS

The inventory of catalogued specimens from Old Fort Scott includes a very large number of specimens of glass. This virtually indestructible, manmade substance was encountered in every investigated structure and in every excavation unit and in every encountered stratigraphic unit. Thousands of items of the nineteenth and twentieth century glassmakers' arts are included in this inventory. Most of these items are broken sherds from bottles, drinking glasses, bowls, ornaments, trays, windows, and lighting and electrical fixtures. The size of the collection and its very heterogenous nature (ranging from early nineteenth century forms to mid-twentieth century) precluded a complete analysis of all of the catalogued glass specimens. Instead, the author has chosen an approach which will provide some appreciation for the range of variation of glass items at Old Fort Scott and which will, at the same time, provide descriptive and analytic information about those items (primarily the nineteenth century items) which can profitably add to our knowledge about the range of cultural activities taking place at the site. Accordingly, all complete glass specimens, whether bottle, drinking glass, stopper or lid, are herein described. Those broken items which are thought to be particularly significant (e.g., panels with lettering, closure examples, early pontil-marked bases) are also described.

The technology of glass is complex and interesting and, because of rapid changes in the field of glassmaking during the nineteenth and twentieth centuries, it is particularly pertinent for understanding of the Fort Scott material inventory. The technological developments in the field of glassmaking and the processes employed in the glassmaking industry have been discussed in some detail by a number of authors (Kendrick 1968; Weiss 1971; Toulouse 1977; Switzer 1974; Jones 1971; Ferraro and Ferraro 1966; Wilson 1961; and Newman 1977; etc.). In the following section which deals with the glassware at Fort Scott, it is not our intent to try to recreate or describe the complexity of the nineteenth and twentieth century glassware industry. Nevertheless, it is necessary to explain at least a few of the techniques and some of the terminology that we have employed herein. Bottles, or bottle fragments, were the most frequently encountered glass items recovered at Fort Scott. A bottle is considered to be a vessel for holding a liquid and it is not primarily a drinking vessel. Bottles come in a variety of shapes and sizes and employ a variety of methods for sealing off the liquid contents. Figure 18 (page 165) provides a key to bottle nomenclature utilized in this report.

The bottle inventory for Fort Scott is quite large and varied (Table 13). One of the earliest bottle-making techniques documented in the Fort Scott inventory consists of free-blown bottles, possibly produced early in the nineteenth century. While these were not found in abundance at Fort Scott, the few examples that are present are particularly interesting because they may be representative of some of the earliest wares utilized at the fort. The much more common bottle manufacturing technique employed on the Fort Scott bottles was that of mold-blown or blown-in-mold bottles. An understanding of the formation of both the base and mouth elements of bottles can be of great help in dating bottles. For instance, as Jones (1971) has noted, many nineteenth century and earlier bottles have bases which are marked with a remnant of an empontilling tool. The empontilling tool was a tool that was attached to the base of the bottle after it was either free blown or blown in a mold, so that the closure or bottle finish could be completed. At least four different pontil-mark types are present on glass bottles from the nineteenth century and these are indicative of four different techniques of holding the bottle. Later innovations in the glassmaking industry, such as the snap case (a holding device which encircles the body of the vessel and which leaves no noticeable marks upon the bottle) eventually replaced the empontilling tool as a holding device.

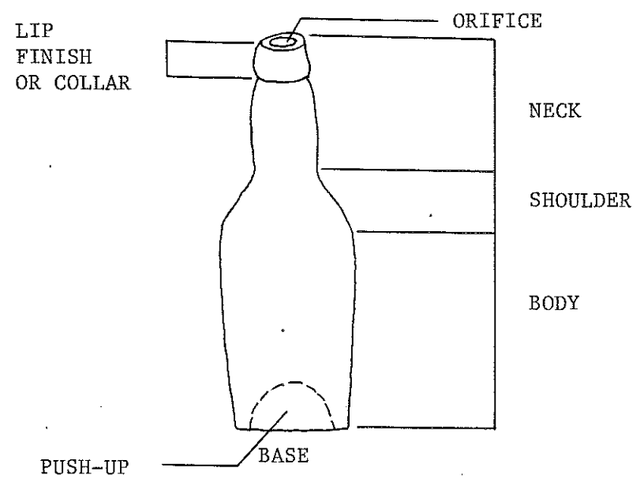

FIGURE 18: Key to Bottle Nomenclature, adapted from Switzer (1974:8, Figure 1).

Bottle finishes or closure elements are equally significant in dating of bottles. The early mouth-blown bottles and many of the mold-blown bottles have bottle finishes which are hand formed and which exhibit considerable irregularity. Later mold-blown bottles have closures or bottle finishes on which a lipping tool was used and these exhibit considerably more regularity. With the advent of

TABLE 13

14BO302, Distribution of Glass Containers and Miscellaneous Glassware

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Nonalcoholic Beverage Bottles			1			7	2												
Alcoholic Beverage Bottles			3		1	13		3		1	8		1						
Patent Medicine Bottles			1		2	16	8		1		4		2				1	1	
Fruit Jars				1		7													
Fruit Jar Seals	1	4	1	1	7	3	3		5										
Pickling or Preservative Bottles		2				1	1												
Peppersauce Bottles	2																		
Worcestershire Sauce Bottles		2				1	1			1	1								
Chemical and Prescription Bottles		1			1	4	2				1								
Ink Bottles																			
Household, Hygiene, and Veterinary Bottles																			
Toiletry and Perfume Bottles		1	1	1		5	2				1								
Miscellaneous Bottles						4	2		1										
Pontil-Marked																			
Square		1	1	1		1		1	8									1	
Rectangular		1				5	1	2			12								
Cylindrical		1			1	10	2	1	3	3									
Oval					1	17	8	1	2	6	3							1	
Ten or Twelve-Sided						3				1	8								
Glass Stoppers						3													
Glass Tubes	9				1	9	8	2	3			1	1						
Glass Rods	1					2	2					1							
Pressed, Cut, and Etched Glass												2							
Tumblers			1			16				1									
Goblets			5			3						1							
Bud Vase		1																	
Pitcher													1						
Serving and Ornamental Dishes						10					2								
Glass Covers				1		2	1		1										
Eye Bath								1											
Salt Shaker (Three Face)						1													
Milk Glass			3			9	1				1								
Cullet				4						3									

semiautomatic and automatic bottle-making machines in the late nineteenth and early twentieth centuries, the lip or bottle finish actually became the first part of a bottle that was completed during the manufacturing process, rather than the last, and bottles made during this period exhibit mold seams that typically run up to the top of the lip.

Bottle closure types can be another indicator of approximate age of specimens. The earlier specimens in the Fort Scott inventory were apparently closed or stoppered with a variety of techniques, cork stoppers being the most prolific. Other stopper types utilized included glass stoppers and lids of various types. Widemouth bottles have been stoppered or closed by screw-on caps since at least the middle part of the nineteenth century, but such screw closures do not show up as a common technique for small-mouth bottles until the twentieth century.

Base marks and trademarks are represented in the Fort Scott inventory by many specimens which have raised letters and numbers either on the base or on the body of the vessel. Whenever possible, these have been traced to determine the maker or user of the particular bottle or the particular glassware item.

One thing that can be noted about the glassware inventory from Fort Scott is that, by and large, the examples in the collection are utilitarian wares and very few fancy or decorative items are contained in the collection. Unfortunately, the utilitarian glasswares are some of the hardest wares to date with any accuracy. Often one must rely on generalized information about the manufacturing technology which is exhibited upon the particular bottle or other glassware item. The majority of the glassware items from Fort Scott are mass-produced items that were widely distributed throughout North America and other areas of the world during the latter part of the nineteenth century and during the early part of the twentieth century.

The categories of glassware that follow are, by and large, functional categories (e.g., Alcoholic Beverage Bottles, Ink Bottles, Toiletry and Perfume Bottles). Some glassware items were not easily classified by function and these have been classified by shape (e.g., Square Bottles, Modern Screw Thread Bottles). Pressed, cut, and etched glassware items were considered as a single category on the basis of their manufacturing technique but, within this category, functional subcategories were noted (e.g., Tumblers, Goblets).

Nonalcoholic Beverage Bottles

Soda Bottles

A number of bottles were recovered from Fort Scott which evidently contained nonalcoholic soda water beverages. The distribution of these specimens is shown in Table 13. One series of five cylindrical

bottles of pale green color is particularly interesting because these are products of, or contained products of, a local Fort Scott manufacturing concern. The bottles, only one of which is complete, share a general similarity but differ from one another in minor details. They all appear to be products of the late nineteenth century (perhaps after 1880) and all were apparently produced in two-piece molds with the collar applied and/or tooled subsequent to removal from the mold. The complete bottle, which appears to be of the same size and shape as the incomplete specimens, measures 120 mm in height and has a maximum diameter of 63 mm (Plate 47, A). The neck is a smoothly tapered cylinder which terminates in a two-ring collar which is of the crown stopper type. The crown stopper, which is essentially the same type used on modern pop bottles, was invented in 1892, so this bottle presumably does not predate that year (Kendrick 1968:142). Interestingly, what appears to be a residue of a cork stopper is contained within the bottle. The base of this specimen is slightly concave and contains the raised letter "B". Just above the base, on the body of the vessel, are two horizontal sets of small, slightly raised numerals "10" and "1223". Halfway up the body are three horizontal lines of raised letters which are contained within a circular area "C.H. BACHMANN/FT. SCOTT/KANS.". The circular area, which measures approximately 54 mm in diameter, appears to be the impression of a slug plate. Slug plates were thin metal sheets which were embossed with customer's names, trademarks, etc. (Kendrick 1968:96). The plates fit into a prepared panel in the bottle mold and they were interchangeable. Thus, the same basic bottle mold could be utilized for a variety of customers. Slug plates were commonly used on soda bottles in the 1880s and 1890s (Kendrick 1968:96). As noted, the remaining four incomplete bottles are of similar type. Two of these latter specimens have the raised letter "B" on the bases and the other two have unmarked bases. The major distinction between these five bottles lies in the slug plate and lettering element. It is obvious that each bottle was marked with a different slug plate. Even when the message is identical (as it is on two specimens) the letters themselves are different. Thus, two of the broken bottles have the three-part legend "C.M. BACHMANN/FT. SCOTT/KANS.". Another specimen is marked "FORT SCOTT/BOTTLING WORKS/BACHMANN BROS". The last specimen is marked incompletely as follows "CHAS H---/FT. SCOTT/KAS.". A perusal of the extant city directories for Fort Scott indicates that the Fort Scott Bottling Works, located at 224 S. Walker and operated by the Bachmann brothers, was in operation by at least 1896 (Hoye Directory Co. 1896:152). The Bachmann brothers continued in operation until at least 1905 when the following listing occurred in the city directory for that year "Bachmann Bros. (Franz and Charles H.), Mnfg Confectioners, Ice Cream and Oyster Parlor and Bottlers of Carbonated Beverages, 106-108 E. Wall" (R.L. Polk and Co. 1905:33). The first city directory to contain a listing for the Bachmann brothers is that of 1885 and at that time they had not yet entered into business together (Jones 1885). At that time, C.H. Bachmann was a fruit and cigar dealer and F. Bachmann was a clerk at Klingbeil's Restaurant and Confectionery (Jones 1885:25). By 1888 the Bachmann brothers had established an ice cream parlor and confectionery shop at 5 South Main

street in Fort Scott (Russell and Russell 1888:290-292). Since the Fort Scott Bottling Works does not appear until the 1896 date, it seems likely that the Bachmann brothers developed the bottling of their own carbonated beverages sometime after they opened their shop.

Welch's Grape Juice

Three small, clear, Welch's Grape Juice bottles were recovered from Historic Structure 6 (example on Plate 47, B, distribution in Table 13). These bottles are 129 mm tall by 52 mm in diameter. All three bottles have the crown stopper, two-ring collar which was invented in 1892 (Kendrick 1968:142). The bottles were made in two-piece molds and each of them has a slightly concave base. Two of these bases have the raised numerals "1190" on them and the third base is marked "1189". All three specimens have a horizontal, rectangular panel which is outlined with a small rim of glass. Within the panel are two horizontal lines of raised letters "WELCHS/GRAPE JUICE". The panel may be a reverse image of a slug plate. These specimens presumably date after 1892 (when the crown stopper was invented) and prior to 1920 (by which time the automatic bottle-making machine had replaced the two-piece mold process for most commercial bottle making).

Mineral Water

Two examples of complete or nearly complete mineral water bottles were recovered from Fort Scott. Their distribution is shown in Table 13. The first specimen is a cylindrical-shaped bottle of pale green or aqua color. The glass has weathered considerably and the bottle is presently opaque (Plate 47, C). It has a height of 178 mm and a maximum diameter of 66 mm. The body tapers gracefully to a cylindrical neck and the neck terminates in a thick and broad, rounded collar. The interior of the neck, in the collar area, tapers inward toward the base, suggesting that a tapered cork was used as a closure. The base is concave and unmarked. Two mold seams are located opposite each other on the body and shoulder, but are missing from the neck and collar. The bottle was produced in a two-piece mold and the collar was evidently formed with a lipping tool, as it is quite regular. Three lines of raised, horizontal letters occur midway up the body "J J TODD/FORT SCOTT/KAN". A fourth line of horizontal raised letters occurs on the body just above the base "A. & D.H.C." The lower line of letters probably refers to the bottle maker. Toulouse (1971:37-38) notes that the A. & D.H. Chambers glass company, Pittsburg, Pa., was in existence from 1843 until at least 1886 and that the "A. & D.H.C." symbol was utilized on flasks from circa 1865, and was later used for beers. The reference to J.J. Todd, Fort Scott, is certainly to the bottle user. Interestingly, the 1869-1870 city directory for Fort Scott lists a James Todd who had a mineral water business somewhere in Fort Scott during those years (Culver 1869:64). Two extant city directories, for 1865 and 1871, brackett the 1869-1870 directory and

neither of these directories has a listing for Todd (Emmert 1865 and South-Western Publishing Company 1871). Later directories include listings for various Todds, but none of these other individuals were involved in any business of bottling of beverages.

The second complete mineral water bottle is cylindrical in shape and is made of a translucent green glass (Plate 47, D). The bottle was formed in a two-piece mold and the collar was finished with a lipping tool. This specimen has rounded, but steep shoulders, a short, cylindrical neck, and a broad collar which extends 24 mm from the lip down onto the neck. The bottle measures 232 mm in height and has a diameter of 75 mm. A shallow, circular concavity is located on the base and it contains a circular series of raised letter around its perimeter "DR SBH & Co PR". The number "46" is centered in the concavity. While this base mark presumably refers to a bottle manufacturer, we were unable to ascertain the name of this manufacturer.

In addition to early sodas, mineral waters, and fruit juice bottles, several examples of more recent, machine-made bottles were recovered which originally contained either carbonated or noncarbonated beverages. Included are such familiar products as Coca-Cola, Pepsi-Cola, and Nehi Beverage. Two of these bottles apparently contained local Kansas products. One of these has horizontal raised lettering on the side which indicates that it was a product (or rather, contained the product) of the Arma, Kansas Ice Cream and Bottling Works. Another bottle has raised lettering on the base "DECKER/GIRARD/KANSAS". The size of the various modern pop bottles ranged from 6 to 8.5 fluid ounces.

Alcoholic Beverage Bottles

Numerous examples of bottles were recovered at Fort Scott which once evidently held alcoholic beverages. The distribution of these specimens within the fort complex is shown in Table 13. Included in this category are wine, champagne, beer, and whiskey containers of various shapes and various sizes. In addition, many of the so-called "bitters" bottles and other patent medicine bottles once contained liquids that were high in alcoholic content. For our purposes, these latter bottles (patent medicines, bitters, etc.) will be discussed in a separate section of this report since their purported use was to be for purposes other than the imbibing of alcohol.

Beer Bottles

Five complete or nearly complete bottles were identified from Fort Scott which evidently held beer. In addition to the five relatively complete beer bottles, numerous bottle bases, bodies, and necks of probable beer bottles were recovered from Fort Scott. Three of the five nearly complete bottles appear to be of quart size and two are of pint size. Four of the bottles are of the amber type and one of these

has an opalescent exterior surface. The fifth bottle is a pale green or aqua in color (Plate 48, A). Presumably all of the beer bottles recovered from Fort Scott date no earlier than 1873. As Herskovitz has noted, prior to 1873 beer was distributed in barrels and kegs and it was only in that year that the use of pasteurization made the bottling of beer a possibility (1978:7). It is therefore not surprising to discover that the beer bottles recovered at Fort Scott are of fairly recent origin in terms of their manufacturing techniques. In fact, four of the five bottles identified as beer are examples of bottles turned in two-piece molds, with the bottle finish performed by a lipping tool (examples shown on Plate 48, A, B). The fifth example is of a bottle manufactured with a semiautomatic or automatic bottle machine making process and dates presumably later than the other four bottles. Two of the five bottles have a type of bottle finish that Herskovitz has identified as the typical beer finish (1978:5, Figure 3, D). This finish consists of a broad collar which bulges out noticeably and which was presumably designed so that a cork stopper could be securely held by attaching a wire to the neck of the bottle below the bottle finish. The two remaining identified beer bottles exhibit the crown stopper closure type which was invented in 1892 (Kendrick 1968:142). Four of the five beer bottles recovered have concave base elements with base marks present. Two of the base marks contain the raised letters "R & Co.". One of these bottles, the smaller, also has the raised numerals "46" on it and the other and larger bottle has the raised numberals "39" on the base. According to Toulouse, this base mark has been associated with Roth and Company, San Francisco, California, which was in operation at least during the period from 1879 to 1888 (1971:438-439). Another of the base marks on a beer bottle from Fort Scott consists of a circular depression which contains two lines of letters "IGCo/A". This presumably refers to the Illinois Glass Company, Alton, Illinois, which was in operation and making beer bottles in the period from 1880 to 1900 (Toulouse 1971:264). The other base marked beer bottle has three lines of letters on the slightly concave base "WF&S/F/MIL". This may well be a beer bottle produced by the William Francen and Son Glass Works of Milwaukee, Wisconsin (Toulouse 1971:536-537). Toulouse notes that this company was in operation and producing beer bottles during the period from 1900 to 1929 (1971:536-537).

Ale Bottle

The single example of a bottle which has been identified as an early ale in type, is made of a very dark greenish amber glass which, in reflected light, appears black (Plate 48, C). This is a very squat bottle with an extremely heavy base. The cylindrical bottle has an estimated height of about 230 mm and a diameter at the base of 93 mm. The neck is tapering and ends in an applied collar of the beer type. This bottle was evidently made in a two-piece mold although mold seams are not evident on the surviving fragments of the bottle. The bottle was apparently held on a large sand pontil while the finish was

applied to the neck. The base is deeply concave and contains the pebbled surface typical of the sand pontil. This sand pontil mark measures 65 mm in diameter. Raised letters occur on the shoulder of the vessel in at least three lines but so much of the bottle shoulder is missing that no determination could be made as to the legend on the bottle.

Brandy and/or Whiskey Bottles

Both of the bottles recovered from Fort Scott which have been identified as either brandy or whiskey bottles are made of green glass and both have a bottle finish that has been identified by Herskovitz (1978:5) as a brandy finish (Plate 48, D, E). Basically, this finish involves a double ring collar in which the upper ring is a broad band of applied glass and the lower ring, which is often beveled, is a narrower ring. One of these two bottles, of approximately one pint capacity, was made in a two-piece mold and has a rather crude lip which looks like it was applied rather than formed by a lipping tool. This opalescent specimen also has a concave base that contains a blowpipe pontil mark which has a small, circular, raised ring of broken glass. The second example, while it has the same bottle finish as the first example, is a one quart capacity bottle that was apparently held with a snap case tool during the finishing process, as no pontil is present on the base. No mold seams are evident anywhere on the bottle. Judging by its regularity, it almost certainly was formed in a mold, either a two-piece or three-piece mold. It is possible that this bottle was turned in a mold. This is suggested by the high gloss or finish on the bottle.

Sample Whiskey Bottles

Two small cylindrical bottles of clear glass were recovered from Fort Scott which are evidently sample whiskey bottles. Both of these bottles were made in two-piece molds with applied lips which are quite irregular. One of the bottle finishes consists of a thickened collar that extends from the lip down onto the neck and the other bottle finish consists of a bead that is located several millimeters down from the lip. One of these bottles measures 121 mm in height by 34 mm in diameter and the other measures 124 mm in height by 35 mm. Both bottles evidently utilized cork stoppers. The bases of both bottles are slightly concave and one of these bases contains the letter or number "O". One of the two bottles has four horizontal raised lines of lettering upon the shoulder "TAYLOR AND WILLIAMS/INC/WHISKEY/LOUISVILLE, KY" (Plate 49, A). The lips of both specimens were apparently heated to even the jagged corners.

Liquor Flasks

A variety of liquor flasks, ranging from approximately one-half pint to one pint capacity, were recovered from Fort Scott. Two of the

most interesting flask types recovered are a single example of a "Pike's Peak" flask and portions of several Eagle or Double-Eagle flasks. Other flask types recovered include (and based on shape) Union Oval flasks, Shoofly flasks, Jo Jo flasks, Plain Oval flasks, and Picnic flasks. Flask types were identified and named following Herskovitz (1978:4, Figure 2) example and supplemented by several other publications dealing with flasks (Illinois Glass Company n.d.; Marsh 1962; and Van Rensselar 1971). The flasks in the Fort Scott collection are quite interesting because the examples span a time range from at least 1850 (and perhaps earlier) up well into the twentieth century.

Pike's Peak Flask: One of the more unique complete bottles recovered from Fort Scott is a commemorative whiskey flask of one-half pint capacity (Plate 49, B). This small flask is basically of the Union Oval type and it is pale green or aqua colored. This specimen was made in a two-piece mold and it has a single-ring collar which is located slightly below the lip. This collar is flattened both on the top and on the bottom, similar to the finish on many champagne bottles. The lip itself is somewhat irregular and has apparently been cut and then ground. A small circular depression is located on the base of the bottle and the model seam extends all across the base and through this depression. Thus, there is no pontil mark on the bottle. The flask measures 159 mm in height, has a maximum width at the shoulders of 76 mm, and is 43 mm in thickness. Both the obverse and reverse sides of this bottle have a small oval located just up from the base. This oval is defined by an oval raised ring of glass. The obverse face has the raised figure of a miner walking on top of the oval on the flask. The miner is facing to the left and he has a tote bag over his left shoulder and a cane in his right hand. Located above the miner's head are raised letters in a semicircle "FOR PIKE'S PEAK". The reverse side of the bottle has a raised eagle upon it. The eagle has spread wings, is clutching three arrows in his talons, has his head to the left as viewed from above, and has a banner in his beak which extends up and to the right. Interestingly, while the two oval panels on either face are formed of applied rings of glass, the eagle and miner figure, as well as the words "FOR PIKE'S PEAK" were all formed in the mold, as the interior of the bottle contains a negative impression of these motifs. The Pike's Peak commemorative flasks are apparently affiliated with the 1858 discovery of gold in the region of Pike's Peak (Marsh 1962:209). Marsh notes that thousands of commemorative flasks of this type were manufactured at the peak of the rush in 1859 and presumably for several years thereafter (1962:209).

Double-Eagle Flask: A single example of a nearly complete Double-Eagle flask was recovered from Fort Scott (Plate 49, C). This specimen appears to be quite similar in terms of its mode of manufacture to the Pike's Peak flask described previously. The specimen is a pale green or aqua in color and it was made in a two-piece mold with a

single-ring, champagne-type collar, which is somewhat more irregular than that on the Pike's Peak flask. The lip appears to have been cut and then ground. The mold seam extends across the base in a somewhat horseshoe-shaped pattern. Like the Pike's Peak flask, this one pint flask is of the Union Oval type and it measures 195 mm in height, has a maximum width of 106 mm, and a thickness of 55 mm. Raised rings of glass form large ovals on each of the two faces near the base and one of these ovals has raised lettering within it which spells out "PITTSBURGH". Identical molded eagles with wings outspread and heads to the left are located on both the obverse and reverse faces above the oval rings. Like the Pike's Peak eagle, these eagles clutch arrows in their talons and have banners which extend from the beak in a sweeping pattern to the right. While Marsh (1962:86) has noted that the American eagle motif was utilized on some flasks prior to 1850, most such flasks date from the period after 1850. The two-piece mold technique and lack of any kind of a pontil mark on this particular flask would certainly suggest that it was made after 1850. The crudeness of the collar, and particularly of the lip, would suggest a dating before 1870. Fragments of at least four more possible Eagle or Double-Eagle flasks were recovered from Fort Scott but they are in such a fragmentary condition that the manufacturing techniques and motifs cannot be clearly discerned. However, all are of a pale green or aqua-colored glass and they all appear to be quite similar to either the Pike's Peak or Double-Eagle flasks described herein.

Picnic Scroll Flask: A single example of an opaque, green-colored decorative flask was recovered from Fort Scott which has an improved pontil mark and which therefore presumably dates circa 1840 to 1870 (Plate 49, D). This broken specimen is of the Picnic flask type in which the greatest width is midway up the body. The neck of this specimen is cylindrical and no collar is present. Instead, the lip has simply been sheared or cut and then reheated in the fire to round the edges. Both obverse and reverse faces of the flask have elaborate molded designs of circular and geometric raised lines. The scroll flask is incomplete and no measurements could be obtained. Nevertheless, it was of at least one pint capacity.

Union Oval Flasks: One complete half-pint Union Oval flask (Plate 50, A) and two incomplete specimens were recovered from Fort Scott which were apparently all produced by the Louisville, Kentucky Glass Works. These specimens are made of pale green or aqua-colored glass and one of them has numerous bubbles within the glass. The complete specimen measures 151 mm in height, has a maximum width of 75 mm, and a thickness of 40 mm. These specimens were made in two-piece molds and the mold seam extends from the bottom of the single-ring-applied collar to the base of the specimen. On the base there is a slight circular concavity or depression in the center and the mold seam goes around the edge of this circular depression. The depression is evidently not a pontil scar, as it contains none of the characteristics of any of the known pontil types. The lip on the complete

specimen is fire polished and apparently it was cut and somewhat irregularly treated. The collar is of the champagne type and consists of a single, somewhat irregularly applied bead of glass that encircles the neck approximately 5 mm below the lip. The obverse side of each bottle is marked with raised letters that form a circle and it spells out "LOUISVILLE, KY/GLASS WORKS". Toulouse (1971:332) notes that the Louisville Kentucky Glass Works, Louisville, Kentucky, was in operation at least from the years 1873 to 1890.

Shoofly Flask: The single example of a Shoofly flask from Fort Scott is of clear glass which still contains a tar-like residue (Plate 50, B). This specimen is of one pint capacity and the bottle measures 195 mm tall, has a maximum width of 98 mm, and a thickness of 39 mm. This specimen was made in a two-piece mold and the base is flat and unmarked. It has a brandy type finish on the neck in which the broad collar is underlain by a smaller, circular ring of glass that was formed as part of the mold. A very definite juncture of glass occurs approximately 5 mm down from the lip, where a bead of glass was evidently added to the bottle to heighten the collar. While this bottle contains no maker's mark or user's mark, it is of a flask type that was common during the latter half of the nineteenth century.

Jo Jo Flask: The single Jo Jo flask recovered from Fort Scott is of slightly less than one-half pint capacity and it is made of clear glass (Plate 50, C). The specimen measures 150 mm tall, has a maximum width of 76 mm, and a thickness of 31 mm. The bottle finish appears to be of the patent/extract type as described by Herskovitz (1978:5, Figure 3, F). That is, the collar consists of a double-bead ring in which the upper bead is an extension of the lip and is somewhat larger than the smaller and lower bead which lies directly under it. This specimen was obviously made in a two-piece mold and no pontil mark is located on the base. Again, this flask type was a common type utilized during the latter half of the nineteenth century.

Plain Oval Flasks: Five Plain Oval flasks were recovered from Fort Scott which are distinguished from the Shoofly, Jo Jo, Union, and Chicago types because the flasks present an almost rectangular shape when viewed from the obverse and reverse faces (example shown on Plate 50, D). Furthermore, a distinct lip is present on the base and this is a characteristic that was not noted on the other flask types. The five examples from Fort Scott were all made in two-piece molds with lips and collars being formed with a lipping tool, judged by the regularity of the lips. Three of the bottle finishes are of the brandy type, in which a broad collar is underlain by a narrow ring of glass, the narrow ring being part of the original mold. A fourth specimen is an example of the double-bead ring in which the upper bead is somewhat larger than the lower one. The fifth specimen is missing the collar and lip. These bottles range in size from half pint to full pint. Three of the bottles are amber colored and two are clear glass. Only one bottle has any markings on it and this consists of

the raised letters in two lines "PINT/FULL MEASURE". All of these flasks are presumed to be of late nineteenth century (post-1880) or early twentieth century production and they presumably all held alcoholic beverages.

Modified Union Oval: A single example of a clear glass bottle of a modification of the Union Oval type was recovered from Fort Scott (Plate 50, E). This specimen measures 205 mm in height, is 89 mm wide at the shoulders, tapers to a width at the base of 77 mm, and has a thickness of 39 mm. This bottle is somewhat different than the normal Union Oval type in that the juncture of the shoulder of the vessel is somewhat more steeply angled. This is a one pint capacity bottle and it was made in a two-piece mold. The collar consists of a single, annular ring which is flat on both top and bottom and which is located approximately 5 mm down from the lip. The lip itself has been expanded to create a funnel shape. The base of the specimen is marked in two lines of raised letters "DESIGN PATENTED/PAT AUG 9, 1898".

Wine Bottle, Sand Pontil

A single example of a green-colored, translucent wine bottle was recovered from Fort Scott which bears a sand pontil mark on the concave base. This specimen is circular and has a tapering shoulder which joins evenly with the conical neck. The bottle finish is a single, rather broad, applied bead. The height of this specimen is estimated to be 210 mm and the diameter, near the base, is 56 mm. No mold seams are present on the bottle and it does not appear to have been turned in a mold (a process which will often partially or completely obliterate mold seams). Thus, this may be a free-blown bottle. The sand pontil mark on the base is circular and has a diameter of 23 mm. The distinctive characteristic of this pontil mark which allows for its identification as a sand pontil mark is the presence of a circular pebbled surface (caused by sand grains) and a few of the remnant sand grains. Jones (1971:69) notes that:

> The sand glass-tipped pontil, hereafter called a "sand" pontil, consists of a gather of glass on the pontil which has been shaped to conform to the basal profile and then dipped in sand. The sand prevents the glass on the pontil from adhering too closely to the bottle.

The sand pontil method of holding the bottle while the bottle finish was applied was apparently a technique utilized during both the nineteenth and twentieth centuries.

Champagne or Wine Bottle

The four bottle fragments considered in this category all contain a base characteristic that has often been attributed to wine and/or champagne bottles. This characteristic has been called a push-up by

Jones (1971:63) and it is marked by extremely deep, concave bases. The push-up technique was apparently employed both on free-blown bottles and bottles blown in molds and it has an antiquity going back at least into the eighteenth century (Kendrick 1968:131). These deeply concave bases apparently became very exaggerated in the late eighteenth and nineteenth centuries, particularly on wine bottles (Kendrick 1968:131). Three of the base examples from Fort Scott are made of a dark green glass and all have very prominent push-ups. A careful inspection of the exterior surface of the push-up failed to reveal any evidence of pontil marks, so it is presumed that these bottles were either formed in molds or with some other type of tool. No estimate of the volume of these bottles can be made although the three base diameters are 96 mm, 93 mm, and 76 mm. A fourth base example is of amber glass that has much opalescence. This specimen was clearly made in a two-piece mold as a mold seam bisects the base. A large (39 mm diameter), improved pontil mark is present within the molded push-up. While vessel size cannot be estimated, the bottle did have a base diameter of approximately 75 mm.

Patent Medicines

As has been noted by Jochims (1977), medicine and medical practitioners abounded in Kansas during the second half of the nineteenth century. Such varied approaches to medicine and curing as homeopathy, botanical medicine, and eclecticism all achieved some popularity in Kansas during this period (Jochims 1977). The latter half of the nineteenth century also saw the florescence of patent medicine nostrums (by the thousands) which purported extravagant curative claims. Actually, the first patent medicine sales apparently began in the 1840s with Indian herb remedies (Jochims 1977:157). By the time of the Civil War, botanic folklore cures of various types were widespread and by 1900 there were a million patents on the market for various packaged cures (Jochims 1977:154-155). Thousands of other patent medicines were not even patented, but instead were simply marketed under registered trademarks and label designs for bottles and packages. This booming industry was active until the 1920s, when the Pure Food and Drug Act, which had been passed in 1906, finally became effective (Devner 1968:5).

It is not surprising that patent medicines of diverse types are represented in the bottle inventory from Fort Scott. The distribution of these examples is shown in Table 13. No paper labels of any type survived on the bottles from Fort Scott, but it is likely that many of the bottles recovered from the fort which date to the period from 1850 to 1920 are of the patent medicine type. Elaborate paper labels were a favored advertising medium for patent medicines. Cork stoppers were apparently used on all of the patent medicine bottles recovered from Fort Scott.

Dr. S. Pitcher's Castoria

This two ounce bottle is rectangular in shape and has an aqua or pale green color (Plate 51, A). It has a constricted, cylindrical neck and smooth, rounded, tooled collar which has two rings. It was made in a two-piece mold and the base is marked with raised letters and numbers "S.86.". The body has four sunken panels and the narrow side panels have vertical raised letters on them. One side reads "DR S PITCHER'S" and the other "CASTORIA". This was evidently a product of Dr. Samuel Pitcher of Boston, Mass., and it may have been produced in the period from 1868 to 1888 (Devner 1968:76).

Citrate of Magnesia

The specimen is cylindrical in shape and is made of pale green or aqua-colored glass that is aged and opaque (Plate 51, B). It is 188 mm in height and has a maximum diameter of 70 mm. It has a rounded shoulder and a cylindrical neck which terminates in a tooled collar which is rounded in cross section with the top flattened. A small double-beveled ring of glass is located immediately below the collar. The inside of the neck is slightly tapered. The base is slightly concave and unmarked and the bottle was made in a two-piece mold. The collar and ring appear to be hand formed. Two vertical lines of raised letters are located on the body "CITRATE OF/MAGNESIA". As Devner (1968:22) has noted, citrate of magnesia was handled by many companies under various trademarks and labels.

Bitters Bottles

Two examples of bitters bottles were recovered from Old Fort Scott. The more complete of these is a square-shaped, amber-colored bottle which has beveled corners. The mouth has a long tapered collar and the base has a circular concave area in the center. This bottle was of one-quart capacity and it was evidently produced in a two-part mold. All four sides are flat and one of these flat sides contains the following four vertical lines of raised letters "Dr.-F. Sherman-/ Compound Prickley As-/Bitters". Watson (1965:180) illustrates and discusses the wares of the Prickley Ash Bitters Co. This concoction was apparently produced by the Meyer Bros. Drug Co. of St. Louis and apparently had a high (22 percent) alcoholic content. The previously described specimen was found in an incomplete state and this precluded measurement. The base and a portion of the body of another square-shaped, amber-colored bitters bottle was also recovered from Fort Scott. This latter specimen is similar in basic shape to the Prickley Ash Bitters bottle discussed above. It is of one quart capacity, is square with beveled corners, and has a circular concave area on the base. An "X" is contained in the center of the circular concavity and a maker's mark "W. Mc.C. & Co." is also found in the concavity. Toulouse (1971:351) notes that this was one of several variant maker's marks employed by the numerous subsidiaries and partnerships of Wm. McCully during the period from 1841 to 1886. This example was made in a two-piece mold and was apparently finished by the snap case method. Portions of two of the flat side panels are present and one of these contains the following raised letters in two lines "...STET-TER'S/BITTERS". This clearly indicates that this bottle once contained the familiar "Dr. J. Hostetters Stomach Bitters" and, accordingly, had a high alcoholic content. Devner (1968:46) notes that Hostetters Stomach Bitters were produced as early as 1853, but Watson (1965:136-137) indicates that amber-colored bottles for this product are later than green-colored specimens.

Kornemann & Co. (Bitters?)

An interesting, amber-colored bottle was recovered from Fort Scott which has 12 sides or panels (Plate 51, C). The vertical panels terminate at the shoulder and the shoulder itself is smooth and rounded. The neck is cylindrical and the collar is missing from the specimen. Even with the collar missing, the specimen is 220 mm tall and it has a diameter of 72 mm. The base is unmarked and has a deep and very regular circular depression. The bottle was apparently made in a two-piece mold, although mold seams are not evident. One panel has vertical raised letters on it "KORNEMANN & Co.". No reference to Kornemann & Co. has been located, but Watson (1965 and 1968) illustrates and discusses a number of twelve-sided bitters bottles that are of quite similar type.

Dr. J.W. Bull's Cough Syrup

This rectangular-shaped bottle is clear with a very slight green color (Plate 51, D). The neck is a constricted cylinder with a slanted collar neck finish. A cork is still present in the neck. The specimen was made in a two-piece mold and the neck and collar subsequently formed or tooled. The base is flat with a raised "4" on it. The two narrow side panels are recessed as is one of the broad front panels. The fourth panel is flat. The three recessed panels each have a single line of vertical raised letters "Dr. J.W. BULL'S/COUGH SYRUP/BALTIMORE".

Piso's Consumption Cure

This rectangular-shaped bottle is of a very pale green color. It has a constricted, cylindrical neck and a smooth, rounded, tooled collar which has a single ring. It was made in a two-piece mold and the base is marked with two "2s" that are slightly raised. The body has four sunken panels, three of which have horizontal raised letters on them. The two narrow side panels are marked "PISO'S CURE" and "HAZELTINE & CO" and the broader panel is marked "FOR CONSUMPTION". E.T. Hazeltine, of Warren, Pa., apparently marketed this consumption cure from 1872 to 1899 (Devner 1968:76).

Dr. Kilmer's Swamp Root Kidney Cure

A small sample bottle of this type was recovered (Plate 52, A). This cylindrical-shaped bottle is of a pale green or aqua color. It has a constricted, cylindrical neck and a smooth, rounded, tooled collar which has a single ring that is flattened on the top. It was made in a two-piece mold and the base is marked with the number "15" in raised letters. The body of the bottle is marked with five vertical rows of raised letters "SAMPLE BOTTLE/DR. KILMER'S/SWAMP-ROOT/KIDNEY CURE/BINGHAMTON, N.Y.". This nostrum was apparently marketed during the 1880s and was still available in 1918 (Devner 1968:53).

Dr. Ball's

This rectangular-shaped bottle is of clear glass and it is missing a portion of the neck and collar. Each face has a sunken rectangular panel and the base also has a sunken panel. The inside of the bottle is quite irregular while the outside is very well finished. The neck is of the circular constricted type and a narrow circular ring encircles the neck approximately halfway up the neck. Two mold seams, on opposite sides of the bottle, are visible, and traverse the bottle from the top of the broken neck to at least halfway down the body. Certain irregularities occur on the base which suggest that it was improperly held in a snap case during finishing. However, the presence of mold seams running up the neck, and in fact crossing the one extant neck ring, would argue for a late manufacturing date (after 1900) for this bottle. Obversely, the irregularity of the vessel interior suggests a pre-1900 date. One of the flat side panels has a single line of vertical raised letters on it "Dr Ball's", and this is in script. Devner (1968:11) notes that Dr. Ball's Vegetable Stomachic Bitters, Northboro, Mass., was produced during the period from 1820 to 1850. It is very unlikely that the Fort Scott example dates from that early period.

Fragrant Sozodont

A single broken example (only the base and part of the body are present) of a rectangular-shaped, clear glass sozodont bottle was found. This specimen had four rectangular, sunken panels and three of these contained one or more raised, vertical lines of letters. The two narrow panels are marked "FRAGRANT SOZODONT" and "---RK'S". Two partial lines of letters "--ETH" and "---ATH" are visible on one of the broader panels. Devner (1968:87) notes that Van Bushkirk's Fragrant Sozodont Dentifrice, manufactured in London and New York, was available during the period from 1865 until at least 1918.

Bromo Seltzer

Four small, translucent, dark blue-colored bottles were recovered from Fort Scott which presumably all contained Bromo Seltzer or some similar medicinal compound. All of the bottles have a liquid capacity of approximately four ounces. Three of the bottles are cylindrical in shape with slightly concave bases and with constricted cylindrical necks, and they terminate in short, single-ring collars. Two of the cylindrical specimens were evidently made in two-piece blown or pressed molds (example on Plate 52, B), while the third example (which presumably dates from 1903 or later) has mold seams that terminate at the top of the lip. This latter specimen is an example of a post-nineteenth century machine-made bottle of essentially modern type. Both this specimen and one of the other cylindrical examples have identifying marks on the body. The two-piece mold example is marked with four horizontal lines of raised letters as follows: "BROMO-SELTZER/EMERSON/DRUG CO/BALTIMORE MD". The machine-made specimen is also marked with four horizontal lines of raised letters and the message is the same except that the last line does not contain "MD". The two-piece mold-marked example has a raised numeral "2" on the base and the unlabeled cylindrical bottle is marked with "A14" on the base. The letter may refer to the bottle manufacturer and the numbers presumably refer to mold serial numbers (Toulouse 1971:10). The fourth example of a probable Bromo Seltzer bottle is a square bottle with slightly beveled corners and with a constricted cylindrical neck and single-ring collar. This specimen has a flat base with a raised letter "A" in the center. Seam lines are present on the body but not on the neck or base, so this bottle was presumably made in a two-piece mold, either blown or pressed. Devner (1968:17) notes that the Emerson Drug Co. of Baltimore, Md., produced Bromo Seltzer during the period from the 1870s until 1893. However, the company was evidently in operation until sometime after the turn of the century, as is attested by the presence of the machine-made bottle that could not have been produced prior to 1903.

Corn Wart Skin

Three very small square bottles of clear glass were recovered which contained corn wart skin (one example shown on Plate 52, C). The bottles have constricted, circular necks and smooth, rounded, tooled, single-ring collars. They were all made in two-piece molds and the bases are unmarked. All four panels are flat and one panel contains two vertical lines of raised letters "CORN" and "WART SKIN". One bottle contains a blackened residue of an unidentified substance.

Pinex

This is a clear, rectangular-shaped bottle with four slightly recessed panels. The bottle has a constricted, circular neck and a smooth, double-ring collar. The bottle was made by an automatic bottle-making machine, as is demonstrated by the presence of two continuous mold seams on opposite corners of the bottle. Thus, the bottle presumably dates no earlier than 1903. Pinex Cough Syrup has been available since sometime shortly before 1906 (Devner 1968:76). The two narrow side panels each have a single vertical line of raised letters "PINEX."

F. Brown's Ess. of Jamaica Ginger

This is an oval-shaped bottled of translucent pale green color. It was made in a two-piece mold, has a constricted circular neck, and a smooth, tooled, rounded collar which is flattened on the top. The base is slightly concave and is unmarked. One-half of the body has four vertical lines of raised letters which read "F. BROWN'S/ESS OF/JAMAICA GINGER/PHILADA". Devner (1968:17) notes that Fred Brown's Ess. of Jamaica Ginger was bottled in Philadelphia, Pa. in the period from the 1880s to 1900.

Listerine

This is a cylindrical bottle of clear glass. It is of modern type and is marked with three horizontal lines of raised letters on the body "LISTERINE/LAMBERT/PHARMACAL COMPANY".

Burnett/Boston

This example is of colorless, slightly opaque glass, and it is rectangular in shape. The base is flat and unmarked and the two broad panels are flat. The two narrower edge panels are recessed or sunken and each of these has a vertical line of raised letters "BURNETT" and "BOSTON". The neck is constricted and cylindrical and the collar is a single, smoothed, and tooled ring which has been flattened on the top. The specimen was made in a two-piece mold. It is not known what substance was contained in the bottle, but Joseph Burnett of Boston, Mass. produced a number of patent medicines between 1865 and 1914 (Devner 1968:18).

Simmons Liver Regulator

A portion of a panel of a rectangular-shaped bottle of pale green-colored glass was recovered. This specimen is very incomplete but the surviving panel element has three horizontal recesses and, within each recess, is a line of raised letters. From top to bottom they read "SIMMONS/LIVER/REGULATOR". This nostrum was apparently marketed during the period from the 1880s until 1900, although it may have had a longer history (Devner 1968:86).

Chesebrough Mfg. Co., Vaseline

The specimen is made of clear glass and it is cylindrical in shape with a slightly constricted cylindrical neck and a single-ring collar which is flattened both on top and bottom (Plate 52, D). The base is slightly concave and unmarked. Two opposing mold seams are present on the bottle and they extend from the base up to the collar, but they do not traverse the collar. Thus, this specimen was evidently produced in a two-piece mold with the collar added on. Two lines of raised letters can be read on the body of the bottle. The upper of

these lines is curved and can be read when the bottle is upright. It states "CHESEBROUGH MFG. Co.". The lower line, situated just above the base, is horizontal and reads "VASELINE". The Chesebrough Mfg. Co., New York, apparently marketed a number of vaseline compounds during the period from 1870 to 1912 (Devner 1968:96).

Cha--- Castoria

A single example of a pale green-colored, rectangular-shaped bottle was recovered from Fort Scott which evidently contains castoria, but for which the manufacturer's name could not be ascertained. Only the base and a portion of the body of this bottle is present. The base of the bottle is concave and contains a raised diamond which may have a winged bird motif within it. The four side panels are recessed and the two narrow edge panels each have a single vertical raised line of letters. The more complete of these panels reads "CASTORIA" and the incomplete specimen reads (in script) "Cha---".

A number of other marked panels from probable patent medicines were recovered which are so fragmentary that it was not possible to accurately determine the manufacturer or distributor. Seven partial panels from aqua or pale green-colored, rectangular patent medicines read as follows:

1. "COD LI---"
2. "CASTOR---"
3. "DR S PIT---"
4. "BROWNMEDANDM--"
5. "CARNRICK"
6. "---UND---"
7. "SARS---"

All of these occur as vertical, raised letters in recessed panels. Five similar specimens were noted on clear glass panels from rectangular bottles:

1. "---FIG SYRUP Co"
   "---ANCISCO, CA."
2. "---UITOLA"
3. "---NOT CUM"
4. "---UNDERFUL"
   "REMEDY"
   "---CACO"
5. Obverse side
   "---LR & BAKER
   "---M. Co."

   Reverse Side
   "---ED"
   "---OIL"

Fruit Jars

Fruit or canning jars are technically not considered to be bottles, but they are included with the bottle section of this report because they served virtually the same function as many other containers of glass which were used to hold foodstuffs. While very few complete fruit jars were recovered from Fort Scott (presumably because of their fragility), broken bases, bodies, and necks of fruit jars were abundantly represented in the inventory and various closure devices (porcelain lids, metal screw bands, wire clips, etc.) are even more abundantly represented. The distribution of these specimens is shown in Table 13. Fruit jars (reusable glass food storage containers which are most often hermetically sealed) are most commonly associated with home canning of locally produced food products (Toulouse 1977:97). While the origin of home canning in America can be traced back to at least 1812, it was during the period after 1850 that home canning enjoyed its most popularity (Toulouse 1977:97; Kendrick 1968:157). This popularity stemmed from the invention or discovery of hermetic or airtight sealing of containers, a process which allowed for long-term and sanitary preservation of food substances that were not amenable to other preservation techniques such as pickling, drying, salting, smoking, etc. While this discovery was apparently made late in the eighteenth or early in the nineteenth centuries by a French chef, Nicolas Appert, its widespread use did not occur until the glassware industry had perfected techniques for efficiently and cheaply sealing jars and bottles (Toulouse 1977:97-102). One of these early seals, that of John L. Mason, patented in 1858, has become so well known that fruit jars of many designs and types are today, erroneously, referred to as "Mason Jars". Mason jars are represented in the Fort Scott inventory but so are several other fruit jar types.

In terms of chronology, fruit jars are particularly difficult to precisely date (especially those produced during the latter half of the nineteenth century and the first part of the twentieth century). This confusion has resulted from the staggering number of fruit jar types that were developed during this period and from the very rapid, but sporadically adopted, technological changes that occurred within the fruit jar industry. Toulouse's glossary of fruit jar names lists over 1,100 names of fruit jars and variations within the same name (1977). Toulouse also discusses the difficulty in trying to precisely date a fruit jar in terms of its construction (1977:103). For instance, even after the year 1904, when the Owen's Machine had been introduced and when, presumably, the technology for producing machine-made bottles was available to every glasshouse, many smaller companies continued to use hand-forming techniques. In some instances, patent dates and/or user or maker marks on fruit jars can be used to date individual specimens with some reliability. In the present report, we have attempted to describe the individual bottle technology, to provide rough dates as to probable time of manufacture, and then to use patent and user/maker information to refine the chronology.

Fruit Jars, Wax Stoppered

Two examples of large, thin-walled, pale green jars were recovered from Fort Scott which have been classified as fruit jars even though they may not have been hermetically sealed. One of these specimens is nearly complete (Plate 53, A) and the other one is represented by a base, part of the body and the neck and bottle finish. Both examples are cylindrical and have rounded shoulders with wide cylindrical necks and expanding collars which form a noticeable ridge on the inside of the bottle necks. Both specimens were made in two-piece molds with the bottle finish being of the applied type. The bases of both specimens are deeply concave and have a raised, five-pointed star located directly in the center. The nearly complete specimen, which appears to be of the same size as the broken specimen, measures 243 mm in height and has a diameter of 113 mm. The inside of the neck of the vessel measures 60 mm in diameter. The presence of mold seams, a concave base without pontil mark, and a carefully applied collar or bottle finish, would indicate that this bottle dates from approximately 1860 to 1900. A star is a common mark on several different kinds of glass pieces (Toulouse 1971:486-487). Toulouse (1977:76) notes that the Star Glass Company, New Albany, Indiana, produced groove-ring, wax-sealed fruit jars in the period from circa 1860 to 1870. While the bottles are not illustrated, Toulouse indicates that they are handmade, round, pressed, laid-on-ring bottles in dark green (1977:76). This rather generalized description fits the aforementioned two bottles from Fort Scott fairly closely, although these two specimens were of a pale green or aqua color rather than of a dark green.

Mason's Patent, November 30th, 1858

Two complete fruit jars were recovered from Fort Scott which are both marked on the body with three lines of raised letters "MASON'S/ PATENT/Nov. 30th/1858". These two bottles share some general similarities but also exhibit some differences. One is a one quart capacity fruit jar (Plate 53, B) and the other is a one pint fruit jar (Plate 53, C). As Toulouse has noted, the presence of the words "Mason's Patent, November 30th, 1858", is not necessarily very informative as to the age of a jar or even as to the manufacturer (1977). In 1858, John L. Mason did patent a successful procedure for hermetically sealing fruit jars which employed a fairly efficient technique for sealing the shoulder of a fruit jar. This method involved a screw thread bottle finish that allowed a metal cap to seal against the steeply angled shoulder of a fruit jar. After Mason's patent had expired, many companies utilized the same trademark or minor variations of the same trademark.

The first, and possibly the older, of the two complete Mason jars from Fort Scott is made of a pale green glass. This specimen measures 179 mm in height and it has a maximum diameter of 95 mm. While it is basically cylindrical in shape, it tapers upwards to a diameter of

only 85 mm, slightly below the steeply demarcated shoulder. The short but broad neck of the specimen contains a single continuous thread or bead of glass that starts just below the lip and extends to just above the shoulder. This specimen was made in a two-piece mold, as is evidenced by the two mold seams that run continuously from the base to the top of the lip. The lip of the specimen appears to be ground, although this may be simply a factor of postdepositional erosion. The base of the specimen is slightly concave and contains the raised letters and numbers "H115". As indicated above, the bottle contains four horizontal lines of raised letters which read "MASON'S/PATENT/Nov 30th/1858". A trademark is located between the words "Mason's" and "Patent", approximately two-thirds of the way up the body of the jar. The word "Mason's" is arched above the trademark rather than being strictly horizontal. The trademark is a raised and elongated letter "C" with a small "o" contained in the opening at the two ends of the "C". This is overlain by the letters "F" and "J". The lettering and monogram on this specimen appear to be almost identical to a fruit jar label described by Toulouse (1977:38) and attributed to the Hero Glass Works of Philadelphia, Pennsylvania. The one difference that is noted is that the bottle described by Toulouse has a complex equal-armed cross located above the arched "Mason's". In discussing that bottle, Toulouse notes that it was manufactured during the period from circa 1882 to 1884, and that it was of the Mason shoulder-seal type (1977:38). He further notes that it had a handmade, round, ground lip and these are characteristics that are shared by the bottle in the Fort Scott collection. While the Fort Scott example does not contain the hero cross, the presence of a large raised "H" on the bottom of this fruit jar may again indicate that it was manufactured by the Hero Glass Works. This type of fruit jar was commonly sealed or closed with a zinc cap which had screw threads in it which engaged the glass thread on the bottle. The zinc cap typically contained a glass insert or lid which was interposed between the metal screw thread lid and the contents of the bottle. The first glass inserts of this type were patented by Louis Boyd in 1869 and were widely used thereafter (Toulouse 1971:345). Numerous examples of "Boyd's Genuine Porcelain Liner" lids of this type were recovered from Fort Scott and several of these still had the zinc cap on them. Comparison of these specimens with the aforementioned bottle indicates that any one of these lids could have been used as a closure device on this particular bottle. The 1882 to 1884 date for this bottle, as interpreted from Toulouse's description of the Hero Glass Works, accords well with the general level of technology exhibited on the bottle or jar.

The second complete fruit jar found at Fort Scott is a one pint capacity jar which is also of the shoulder seal variety. This bottle is of a translucent and somewhat darker green-colored glass and, like the previously described specimen, the top line "MASON'S" is arched above the three remaining lines "PATENT/NOV. 30th/1858". This bottle is 125 mm high and it has a diameter of 80 mm. The body of the vessel is an untapered cylinder and the neck has a single continuous screw thread that starts just below the lip and extends to just above the

shoulder. The lip on this specimen has not been ground down and it is rather evenly formed and looks to be somewhat later in terms of date of manufacture than the previously described specimen. The base is unmarked and is slightly concave. This bottle does not contain enough information either of a constructional nature or as to user/maker to allow for a precise dating, although it obviously dates after 1858 and presumably to the latter part of the nineteenth century or even to the early part of the twentieth century.

Miscellaneous Fruit Jars

At least one other type of fruit jar was represented in the Fort Scott inventory by shoulder and neck sections. These examples, of both pale green and clear glass, are machine-made jars that use a large bead (located between the screw thread and the shoulder) as a place to seal the bottle instead of on the shoulder, as in the earlier Mason seal. Toulouse (1977:106) notes that this technique for sealing fruit jars came into use sometime around circa 1915. At least two different fruit jar makers are indicated by body sherd sections from Fort Scott. One of these is a large section of a glass body that contains the raised letters, in three lines "ATLAS/STRONG SHOULDER/MASON". Toulouse (1977:4) indicates that the Atlas Strong Shoulder Mason fruit jar was produced circa 1915 by the Hazel Atlas Glass Company of Wheeling, West Virginia. Ball mason jars are also represented in the Fort Scott inventory although the fragments are so badly broken up that it is impossible to precisely date these specimens. The Fort Scott examples have the name Ball in script letters and Toulouse (1971:66-68) indicates that this style was adapted sometime after 1892 and was used for many years thereafter.

Fruit Jar Seals

A vast variety of sealing methods were employed for fruit jars during the latter half of the nineteenth century and the early part of the twentieth century. Several different varieties of fruit jar seals were observed in the inventory of glass materials recovered from Fort Scott. The largest number of fruit jar seals recovered are of a single basic type (example on Plate 54, A). This is represented by white or milk glass liners (often called porcelain liners) which are flat disks of glass which fit inside a zinc cap and which were utilized as seals on shoulder--sealing fruit jars. This shoulder seal device was the invention of Louis R. Boyd and was patented in 1869 (Toulouse 1977:91-92). Eighty-three portions of porcelain or milk glass liners of this type were recovered from Fort Scott and many of these still had portions of the zinc cap attached to them. Many of these specimens had a row of raised lettering around the perimeter of the glass disks that clearly indicated that they were derived from the Boyd patent. A typical inscription reads "BOYDS GENUINE PORCELAIN LINED".

Three other fruit jar caps or portions of jar caps recovered from Fort Scott are of quite a different types than the porcelain-lined specimens described above. One of these is a circular, green glass disk of 74 mm diameter which has an overhanging lip and which is centrally perforated (Plate 54, B). The central perforation also includes an upthrust of glass which has screw threads on it on the topside. The reverse side of this specimen has two patent dates on it which are in raised letters and which are intended to be read from the obverse side "PATD NOV 25th 1884/MAR 30 85". This cap apparently was intended for use with the Woodbury fruit jars that were produced during the years of 1885 and 1886 (Toulouse 1977:110). The 1884 patent refers to U.S. Patent Number 308,571 which was issued to a man named Otterson for use with the Woodbury jar (Toulouse 1977:110). The 1885 date refers to U.S. Patent Number 313,229 which was issued to Otterson and Voorhies for use with the Woodbury jar (Toulouse 1977:110). Woodbury jars apparently used a gasket as a sealing device and the perforation in the center of the glass cap was for use in venting during the boiling operation of canning. A metal yoke held the cap on the jar by attaching to lugs on the neck of the jar (Toulouse 1977:87).

A second translucent, green glass fruit jar lid recovered from Fort Scott measures 73 mm in diameter (Plate 54, C). This specimen has an indented central circular panel and a flanged lip to fit over a protruding lip on a ground glass fruit jar. Seven different patent dates are recorded on the top of the lid: December 17, 1861; November 4, 1862; December 6, 1864; June 9, 1868; December 22, 1868; August 23, 1870; and February 7, 1871. The patent chronology established by Toulouse (1977:108-111) provides some information about at least a few of these patents. The earliest patent date, December 17, 1861, is listed as U.S. Patent Number 33,938 and it was issued to a man named Gilbert and was intended for use on the Eagle fruit jar. This patent covered a glass lid with a spring yoke and a neck bead. The latest patent date, February 7, 1871, is listed as U.S. Patent Number 111,607 and it was issued to a man named Bissel and was intended for use on the Gem fruit jar. Toulouse (1977:31) indicates that this patent provided for a method of grinding the lip flush with the sealing surface so that a glass lid could be made more shallow. While not much information is known about the intervening patent dates, they were apparently mostly patents that covered lid designs and they were intended for use on a variety of fruit jars including types manufactured by the Gem, Hero, and Pearl companies. Toulouse indicates that this glass lid was intended to be used with a metal, screw-band, top-seal, and that it was used on a handmade, round, ground-lip, fruit jar (1977:31).

A third fruit jar lid is made of clear glass and it measures 75 mm in diameter (Plate 54, D). This disk-shaped object has a flanged lip and on the top of the glass lid there are two raised dots in the center. The specimen is marked in raised letters on the obverse face

"J. HUNGERFORD SMITH CO ROCHESTER N.Y.". While we have been unable to trace the name that is on top of the lid, the lid itself appears to be of the Lightning fruit jar type. The Lightning fruit jar was sealed by a lever wire and a bale which passed over the glass lid and was centered by the two raised dots. Metal pieces were inset into reinforced areas on the neck of fruit jars of this type and they served as a fulcrum for the lever wire (Toulouse 1977:126). This type of fruit jar lid was invented by Henry W. Putnam of Bennington, Vermont, and it was patented by Putnam on April 25, 1882 under U.S. Patent Number 256,857 (Toulouse 1977:126).

Another clear glass lid is of somewhat similar type as the three examples described above, although it was probably not intended for use on a fruit jar, but rather was intended for use on a preserve jar. This specimen, which measures 53 mm in diameter, has raised letters on the underside or reverse side which can be read from the obverse face "PAT SEPT 20th 1898". Toulouse (1977:111) lists U.S. Patent Number 610,897 as being issued on September 20, 1898, and he notes that the patent was issued to a man named Dunkley for use on Dunkley preservative jars. This patent covered a spring-band-clip glass lid which was utilized with a spring steel band to securely fasten the lid to the jar. The Dunkley preservative jar was a machine-made jar (Toulouse 1977:24). Another possible preservative jar lid recovered from Fort Scott is also a circular disk and it is of clear glass. This specimen, which measures 58 mm in diameter, is flat on the obverse face and has a deep sinuous depression that goes from one side of the glass to the other. The reverse face is marked in raised letters "PATD JANY 11th, 1898". The interior or reverse face of the specimen consists of two circular step-like areas of raised glass which provides for a fairly thick central portion and which allows for a much thinner edge.

Pickling or Preservative Bottles

A single example of what appears to be a free-blown or block-mold pickling bottle was recovered from Fort Scott (Plate 55, A). This specimen is a cylindrical bottle which has a long, tapered, cylindrical neck, which is broader at the rim than it is where the neck joins the shoulder of the vessel. The bottle is pale green or aqua in color and it is 237 mm in length. The diameter at the shoulder is 58 mm and the diameter at the base is 54 mm. The irregularity of the body of the vessel and the total absence of mold seams, suggest that this is either a free-blown bottle or was made in a block mold. The neck is of the sheared variety without a collar. The top of the rim of the neck has been ground. What appears to be a remnant of a large pontil mark is present on the base, although this has been almost completely ground off. The vessel is slightly larger in diameter at the top of the shoulder than it is on the body and this suggests that it was formed in a dip or block mold. The block mold is a one-piece mold in which the bottle was blown up to the shoulder with the remaining parts being formed by hand. This was a common technique during the

eighteenth and early nineteenth centuries (Kendrick 1968:105). Typologically, this would appear to be one of the earliest bottles from Old Fort Scott.

A large square pickling or preservative bottle was recovered from Fort Scott which is of a pale green or aqua color. This specimen has a square body, which measures 80 mm on a side, and the broken specimen has an estimated original height of 283 mm. The corners of the square bottle are beveled and the shoulder is rounded and gently terminated at a relatively broad neck opening, which has an internal diameter of 38 mm. Four small slightly recessed panels are located on the shoulder just below a large molded ring, which occurs at the juncture of the shoulder and the neck. The collar on the specimen is a relatively broad ring right at the lip of the vessel, and this collar is flattened on the top. The base of the specimen has a circular depression in it. This bottle was obviously made in a two-piece mold with the collar being hand formed rather than tooled. In terms of its revealed manufacturing techniques, the bottle can tentatively be dated to the period from perhaps 1850 to 1860 or even slightly later. Its fragmentary nature precluded illustration in this report.

A single example of a rectangular pickle bottle with a relatively wide mouth was recovered from Fort Scott (Plate 55, B). This specimen is made of clear glass and it was made by a two-piece mold process with the single-ring collar evidently formed with a lipping tool. Another bead is located at the juncture of the neck and the shoulder, and this lower bead encircles the neck of the vessel. The shoulder of the bottle is marked by a series of vertical flutes that run around all four sides of the bottle. The base is unmarked and is slightly concave. The bottle presumably employed a cork stopper. This bottle measures 178 mm in height by 58 mm wide by 45 mm thick, and the orifice is 33 mm in diameter. Several similar specimens are illustrated in Blumenstein (1966:147).

One cylindrical pickling bottle was recovered from Fort Scott. This specimen is a cylindrical (round in cross section) bottle which has a slightly constricted neck and a wide mouth. The bottle is pale green or aqua in color and it was made in a two-piece mold with the lip subsequently hand formed. The collar is of the narrow, single-ring type, and it starts at the top of the lip and is flattened on both the top and bottom sides. The base of the bottle is slightly concave and it contains a single raised letter "K". The bottle is 128 mm in height and it has a base diameter of 53 mm. The inside diameter of the orifice is 30 mm.

Peppersauce Bottles

Two ornate peppersauce bottles, both exhibiting distinct circular pontil marks on their bases with a reddish deposit, were recovered from Fort Scott. Jones (1971:71) notes that this reddish deposit

evidently resulted from the use of a bare iron pontil and that this technique was employed in the American glassware industry from about 1845 to 1870. This is also known as the improved pontil mark. The more complete of the two Fort Scott peppersauce bottles is an aqua or pale green in color, and it is of the cathedral or gothic type (Plate 55, C). This specimen is similar to the Class V, Type 10 peppersauce bottles that were recovered from the steamboat Bertrand (Switzer 1974:55-58). The Bertrand examples were evidently of slightly later manufacturing date, as they lacked evidence of pontil scars and were thus presumably finished with the snap case technique. The Fort Scott specimen is 125 mm high and it has a square body with an elongated neck. The four sides of the bottle each have a boat, or cathedral-shaped panel inset which is framed by a rim of glass. Four additional rimmed panels are located above the lower panels and these upper panels are crisscrossed with raised lines to create diamond shapes. The neck is a long cylinder which terminates in a smooth, rounded, tooled collar which has two rings. The upper ring is rounded and the lower ring is beveled. Two mold seams are visible along opposite edges of the bottle, indicating that the bottle was formed in a two-piece mold and that the pontil was attached to the base to facilitate the finishing of the collar. The type of closure most likely used with this specimen was a straight or tapered cork. Raised lettering appears vertically on three of the panels "WESTERN/SPICE/MILLS". Switzer (1974:58) notes that all of the bottles of this type recovered from the steamboat Bertrand, which sunk on April 1, 1865, were filled with catsup.

A second cathedral-paneled peppersauce bottle recovered from Fort Scott is of a slightly different type (Plate 55, D). This specimen is of a slightly darker green color than the first, and it is missing part of the neck and the collar. While the construction technique employed in its manufacture seems identical to that of the first specimen (blown in a two-piece mold, empontilled for collaring), this latter example is hexagonal in shape. Each of the six sides is composed of three panels which are oriented vertically, with the largest appearing at the bottom. The lower panel is of a simple molded boat shape. The central panel is a small five-sided window with a central depressed three-lobed motif. The third and highest panel consists of an impressed floral design. The neck of this vessel is cylindrical and, as noted, a portion of the neck and the bottle finish are missing. The bottle contains no identifying features as to maker or contents but similar bottles recovered from the steamboat Bertrand contained "Superior Red Bird" and "Superior Bird" peppersauce (Switzer 1974:59). Interestingly, the peppersauce bottles of this type recovered from the steamboat Bertrand were again evidently of a slightly different, and presumably later, manufacturing type. Those specimens were blown in two-piece molds, but they lacked pontil marks (Switzer 1974:98). Presumably they were manufactured by the snap case method, whereby the body of the bottle was held by a device during the finishing of the collar. The snap case method was not invented until

1860, and the earlier pontil method was still utilized by some manufacturers even after the introduction of the snap case (Ferraro and Ferraro 1966:20).

Worcestershire Sauce Bottles

Two complete worcestershire bottles, body fragments of several more, and five glass stoppers (with the cork liners missing) were recovered from Fort Scott. The most numerous worcestershire sauce bottles recovered were products of the Lea & Perrins firm. The complete Lea & Perrins bottle is of pale green glass and the specimen is cylindrical in shape and has a cylindrical neck (Plate 55, E). It is 218 mm tall and has a triple-ring collar with a slightly flattened lip. The base is concave and has two lines of raised letters and/or numbers on it "J70D/S". The specimen was made in a two-piece mold and it bears a horizontal line of raised letters on the rounded shoulder which reads "WORCESTERSHIRE SAUCE". A vertical line of raised letters on the body reads "LEA & PERRINS". Herskovitz (1978:23), in discussing bottles from Fort Bowie, notes that the "J.D.S." base mark stands for John Duncan and Sons, who were agents for the Lea & Perrins firm. This particular base mark is reported to date post-1877. In addition to several small bottle fragments which bear a part of the "Lea & Perrins" name, five glass stoppers were recovered which have the Lea & Perrins name present on the top. These stoppers are of the peg type and none of the cork tubes that once encircled them are present.

A second complete worcestershire sauce bottle was recovered from Fort Scott which is of clear glass (Plate 55, F). It was manufactured by the two-piece mold, snap case technique. The bottle is a cylinder with a cylindrical neck and a triple-ring collar, which has a flattened lip. It is 178 mm in height and it has a maximum diameter of 53 mm. The rounded shoulder of this specimen has raised letters which read "WORCESTERSHIRE SAUCE" and raised vertical letters on the side read "COURTENAY & CO.". The slightly concave base has the raised letters "A & P" on it. This may represent either the bottle maker or user. Since the bottle is made of totally clear glass, it was presumably manufactured after 1870 (Kendrick 1968:32; and Ferraro and Ferraro 1966:3). The inside of the collar is tapered but not frosted. A distinct inner ridge of glass is present on both this bottle and on the previously discussed Lea & Perrins bottle. In both examples this ridge occurs approximately 12 mm down from the lip of the bottle.

Chemical and Prescription Bottles

A number of bottles and bottle types were recovered from Fort Scott which evidently once held prescription drugs and/or chemicals which were dispensed by druggists. Included in this category are bottles which contain the druggist's name, graduated medicine bottles of various sizes and a large demijohn which may have been a storage

bottle in a pharmacy. The distribution of these specimens is shown in Table 13.

Demijohn

A large, dark green-colored demijohn was recovered which was apparently made in a two-piece turn mold (Plate 56). This specimen is cylindrical and has sloping shoulders which join with a tapered, cylindrical neck. The collar has an applied top and it is a broad, tapered collar, which is flattened on the top and on the underside. Horizontal striations on the vessel body have nearly obliterated the two opposing mold seams. The closure on this specimen was apparently of the cork stopper type. The base of this example is deeply concave and, in the center, it contains a 64 mm diameter improved pontil scar which contains a residue of iron oxide. Toulouse (1968:141-142) suggests that this technique of empontilling was used from 1845 to 1870. Jones (1971:71) has noted that the technique may have been used both earlier and later than those dates. Two-piece turn molds apparently were known as early as the 1860s, but were most used in the period from 1880 to 1900 (Kendrick 1966:43). This large bottle may have served as a pharmaceutical storage bottle in a drug store or pharmacy (Colcleaser 1968:72). The example from Fort Scott is quite large, with a height of 426 mm and a maximum diameter of 200 mm.

Graduated Medicine Bottles

Eleven graduated medicine or pharmaceutical bottles were recovered from Fort Scott which evidently utilized cork stoppers. The majority of these bottles are rectangular in shape with somewhat rounded corners or sometimes beveled corners (example on Plate 57, A). One example is square with beveled corners. Typically, they have rounded shoulders and cylindrical necks which terminate in a single, or sometimes a double-ring collar, which is often flattened on the top. The closure type for all these examples is obviously that of cork stoppers, and all of the bottles are clear glass. Their distinguishing characteristic is that graduations occur, either as liquid ounces or cubic centimeters, as short, horizontal, raised lines which progress up the body of the vessel. At specific intervals, horizontal numerals and letters indicate the amount of liquid in the vessel. Two of the examples were made in automatic or semiautomatic bottle making machines, two are of indeterminate origin, and seven were made in two-piece molds with the collar finished later. The largest specimen is 169 mm in height and measures 42 mm by 63 mm on the sides. The smallest specimen is 93 mm tall and has sides which measure 23 mm by 35 mm. The bases on these specimens are typically slightly concave, and base marks occur on seven examples. Three base marks, all on different sized bottles, consist of the following letters "USONA". Since no glass company with this legend was noted in Toulouse (1971), the author concludes that this is probably a user's mark rather than the bottle maker's mark. A second base mark consists of a raised

diamond and beneath it the legend "LYRIC". The diamond mark probably refers to the Diamond Glass Company during the period after 1924, and the legend beneath the diamond may refer to the user. Another base mark consists of three lines of raised letters "WT CO/E/USA". The two remaining base marks consist of patent dates. One is marked with two raised lines of letters and numerals "PATD SEPT/24th 07" and the other one is marked again in two lines "PATD/FEB 6'66". The author presumes that these patent dates refer to the product that was marketed in the bottle rather than to the bottles themselves, and they indicate that one of the product's patent dates was issued on September 24, 1907 and the other patent date was issued on February 6, 1866. It is quite unlikely that the February 6, 1866 patent date is of the vintage of the bottle since the bottle, which is the square example with beveled corners, seems to be of a much later manufacturing type. While it was not possible during the course of this study to identify the contents of these particular bottles, it seems evident that they contained various medicines (e.g., cough syrup, etc.) or such things as personal hygiene items or possibly chemicals of various types.

Marked Prescription Bottles

Three complete prescription bottles, and panels from two additional bottles, contain raised lettering which provides information as to the bottle user. Three of these users were druggists in Fort Scott, a fourth was a Pittsburg, Kansas druggist, and the fifth bottle was used by the Oakland Chemical Company. The distribution of these specimens within the Fort Scott complex is indicated in Table 13.

Clarence E. Hall Prescription Druggist: One small pharmaceutical bottle recovered from Fort Scott is evidently a bottle manufactured for a local Fort Scott druggist (Plate 57, B). The clear bottle is rectangular in shape with rounded corners and a rounded shoulder. The neck is cylindrical and terminates in a slightly out-of-round-applied ring which is flattened on the top. The bottle was made in a two-piece mold and it obviously had a cork closure. The base is slightly concave and has a raised diamond centered in it. Within the diamond is a letter, either a "y" or an "r". One of the flat side panels has three vertical lines of raised letters on it "CLARENCE E. HALL/PRESCRIPTION/DRUGGIST". The specimen is 89 mm tall, 38 mm wide, and 22 mm thick. Clarence E. Hall had a druggist business in Fort Scott from at least 1885 until 1892 (Jones 1885:156; Leader Directory Company 1891:258).

T.W. Atkins, Druggist, Fort Scott: Two flat, clear panel sections from rectangular bottles were recovered from Fort Scott which are associated with T.W. Atkins, a druggist who had an established business in Fort Scott from at least 1905 until 1909 (Polk & Co. 1905:235; Polk & Co. 1909:276). Both panel sections contain three vertical lines of raised letters on them "T.W. ATKINS/DRUGGIST/FORT SCOTT".

D. Hogeboom, Druggist, Pittsburg, Kansas: A small, clear prescription bottle was recovered from Fort Scott which has a legend on it indicating that it was manufactured for a druggist in nearby Pittsburg, Kansas (Plate 57, C). This small bottle (70 mm tall, 30 mm wide, and 18 mm thick) is a rectangular bottle with beveled edges, rounded shoulder, and with a cylindrical neck which has a single-ring (tooled) lip finish. The specimen was made in a two-piece mold and it has a slightly concave base. One of the broad, flat side panels has three vertical lines of raised lettering "D. HOGEBOOM/DRUGGIST/PITTSBURG, KAN". A symbol (apparently an "I" within a "Q") is located immediately above the lettering. While dates have not yet been established for this particular druggist business, the bottle clearly was manufactured late in the nineteenth or early in the twentieth centuries.

The Oakland Chemical Company: An interesting example of an amber-colored chemical bottle was recovered which contains information on it about the user, The Oakland Chemical Company (Plate 57, D). This cylindrical bottle has a rounded shoulder, cylindrical neck, and single-ring tooled lip. The slightly concave base has the raised number "14" on it. The bottle was made in a two-piece mold and the body has a circular pattern of raised letters "THE OAKLAND CHEMICAL COMPANY* *". Within the circle of letters is a symbol (a "C" with an "O" overlaying it) and to the left of this symbol is located "H2" and, to the right, "02". The "02" likely refers to a date, possibly 1902. This specimen is 122 mm in height and has a diameter of 51 mm.

Ink Bottles

Five small bottles were recovered from Fort Scott which almost certainly contained ink. Their distribution is shown in Table 13. One of the bottles still contains a residue of ink. Two examples are conical, two are cylindrical, and the remaining specimen is square. The two conical specimens are of roughly the same size with approximate heights of 65 mm and diameters (at the base) of 63 mm. Both specimens have a thickened ring of glass at the point where the cylindrical neck meets the conical body, and both also have a narrow, rounded, single-ring collar which has been flattened slightly on top. One specimen is of pale green or aqua-colored glass (Plate 58, A) and the other is of clear glass. They were both made in two-piece molds and the bases are slightly concave. The base of the clear glass specimen has a raised "9" in the center and the raised words "DIAMOND INK CO." around the periphery.

The single square ink bottle is made of clear glass, stands 52 mm tall, and has a side length of 54 mm (Plate 58, B). It has a cylindrical neck which terminates in a collar composed of two narrow rings. A mold seam runs from the base to the top of the lower of the two rings on the collar but it does not cross the second ring. This specimen was presumably made in an automatic or semiautomatic

bottle-making process and would date from after the turn of the century. The base of this specimen has a circular concavity with what appears to be a small, raised ampersand in the center. The raised letters "CARTERS/MADE IN USA" are located towards the outside of the concavity.

The first of the two cylindrical ink bottles is made from a transparent, very pale green-colored glass. It has a height of 64 mm and a maximum diameter of 51 mm. The neck is a constricted cylinder which terminates in a two-ring collar. The top ring is the larger and it is rounded, while the lower ring is beveled on both sides. The base of the specimen has a raised numeral "2" in the slightly concave center. Two mold seams extend from the base up to the top of the shoulder. Two additional mold seams, offset from the others, extend from the base of the neck up to the top of the collar, but they end 1 mm below the top of the lip. Another seam line encircles the collar horizontally at the place where the upper vertical mold seams terminate. The outside of the vessel exhibits slight irregularities, and particularly on the shoulder and the inside (toward the thickened base) it is quite irregular. A simple cork stopper would seem the most suitable closure for the vessel. This appears to be a bottle made by the automatic bottle machine process, although the general irregularity of the vessel would argue for a mold process. Tentatively, the specimen would date from 1880 to 1920. The second cylindrical ink bottle is of clear glass and it has two opposite mold seams that run from the base of the vessel to the top of the collar. The specimen is 70 mm high and 51 mm in diameter and it has a rounded shoulder, cylindrical neck, and a single-ring, rounded collar. The slightly concave base has the raised letter "D" in the center and the user's name "SHEAFFERS SKRIP/A" around the periphery of the base. The neck of the specimen has horizontal raised letters and numerals "2 OZ" indicating the quantity of ink that was stored in it. This specimen was certainly produced in an automatic bottle-making machine and would thus date after the turn of the century (i.e., post-1903).

Household, Hygiene and Veterinary Bottles

Eight bottles were recovered from Fort Scott which are of heterogenous type but which probably contained liquids that were used in cleaning, cooking, for personal hygiene or for veterinary medicine. The distribution of these bottles is shown in Table 13. Since these bottles each contain some information upon them which suggests a use, or at least a user, they are discussed separately below.

Husbands Laundry Blue

A complete, plain, oval bottle of pale green color was recovered from Fort Scott which evidently contained a laundry product (Plate 58, C). This small bottle (113 mm tall, 46 mm wide, and 24 mm thick) has a flat base, rounded shoulders and a narrow cylindrical neck. The

bottle finish is a single-ring, broad collar which is slightly flattened on top. The bottle was formed in a two-piece mold and the lip or collar was hand finished. One of the broad panels is marked with four lines of raised letters "HUSBANDS/ LAUNDRY/BLUE/DOUBLE STRENGTH". The bottle base has a circular depression in the center but this is part of the molding process and is not a pontil mark. The bottle presumably dates in the period from circa 1850 to 1870. The bottle was obviously cork stoppered.

C. Damschinsky Liquid Hair Dye, New York

The bottle is rectangular in shape and is of a pale green color (Plate 58, D). It has a constricted, cylindrical neck and a smooth, rounded, tooled, single-ring collar which is flattened on the top. It was made in a two-piece mold and the base is unmarked. A single sunken panel, with lettering, is found on one of the broader sides. Three vertical lines of raised letters occur within this panel "C. DAMSCHINSKY/LIQUID HAIR DYE/NEW YORK". Devner (1968:26) suggests that products of Carl Damschinsky were available at least during the years from 1899 to 1925.

Whisker Dye

A single broken example (consisting of the base and most of the body) of an amber-colored whisker-dye bottle was recovered. This specimen is rectangular in shape, has a flat and unmarked base, and has four sunken side panels. Single vertical lines of raised letters occur on the two narrow panels "WHISKER DYE" and "--KINGHAM". The bottle was made in a two-piece mold. Devner (1968:18) lists Buckingham Whisker Dye and assigns it dates from the 1870s to 1900 and it seems likely that this bottle is of that affiliation.

Aristo

A small bottle of Union Oval type was recovered from Fort Scott which has both a base mark and a side panel mark (Plate 59, A). The bottle is oval in shape and has one flat panel. The shoulders are rounded and the neck is cylindrical and terminates in a single-ring collar which is flattened on the top. The bottle was made with a two-piece mold process and the lip was presumably finished either by hand or with a lipping tool. A portion of a small cork residue is still present in the neck of this bottle. The bottle is a pale green or aqua in color. The base is slightly concave and contains two rows or lines of raised letters "W & CO/U.S.A.". The side panel, which is flattened, contains both letters and a trademark. A U-shaped series of letters at the top reads "ARISTO". Underlying this is a picture of a bird with outspread wings and with head to the left, and it appears to be standing on a chain. Immediately below the bird are the horizontal letters "TRADEMARK". A U-shaped series of letters at the bottom below the trademark reads "AMERICAN ARISTO TYPE CO.".

Larkin Company, Buffalo

Two rectangular bottles from Fort Scott have horizontal raised lettering on the sides which indicate that they were manufactured for the Larkin Company of Buffalo. Both specimens were made in two-piece molds (although they are of different type) and both had applied collars which were presumably made with a lipping tool. A single-ring collar is still present on one of the examples and it is flattened on top (Plate 59, B). The second example is missing the single ring (Plate 59, C). One of the two examples has, in addition to the name of the company, a very ornamental company logo which consists of a curvilinear letter "L" with a capital "C" and a small "o" interposed on top of the "L". These are all raised letters. The base of this specimen is marked with a star-like pattern of indented lines, or lines in relief, and it has the number "16" in raised letters on the base. The other, and possibly earlier bottle (Plate 59, B) has a concave base which has the number "15" in the center. No information was located to determine what the Larkin Company manufactured or when they manufactured it, although both bottles presumably date to the latter part of the nineteenth century and probably contained household-related liquid. Both of these bottles were of clear glass.

Dr. Price's Delicious Flavoring Extracts

This small extract bottle is rectangular in shape and has three sunken or recessed panels on the sides (Plate 59, D). One of the broad panels is a flat panel. This specimen has rounded shoulders and a narrow cylindrical neck that terminates in a tooled or applied lip which has a single-bead collar and which is flattened on the top and underside. The base of this specimen is flat and has a single raised numeral "1" on it. The broad, sunken side panel is marked with three lines of raised letters "DR. PRICE'S/DELICIOUS/FLAVORING EXTRACTS".

Spohn's Distemper Cure

A single partial example of a rectangular bottle with a single recessed panel was recovered from Fort Scott. This pale green glass bottle fragment has a series of three incomplete lines of raised letters that run vertically on the recessed panel "SPOHN'S DISTEMPER CURE/SPOHN MEDICAL COMPANY/..INDIANA, USA". No information was located as to the manufacturing date of this bottle.

Toiletry and Perfume Bottles

Ten small bottles were recovered from Fort Scott which presumably contained either perfumes or toiletries for personal use. The distribution of these bottles is shown in Table 13. Nine of these bottles were made with an automatic or semiautomatic bottle-making machine and they obviously postdate 1903. In fact, seven of these machine-made bottles have continuous-thread screw caps which were not

put into general use until the 1920s (Lief n.d.:26-29). The earliest bottle represented in the collection of perfumes and toiletry bottles is a small, cylindrical bottle which has a constricted neck and a single-ring, tooled collar (Plate 60, A). This small specimen is 31 mm in height and has a diameter of 15 mm. It obviously had a cork stopper as a closure device. This example was made in a two-piece mold with the lip and collar being very carefully finished. The bottle is clear and the base is flat. The narrow neck of the specimen and its small size suggest that it was utilized as a small perfume bottle. It presumably dates from circa 1850 to circa 1920. Two other cork stoppered bottles were recovered from the site that contained perfume or toiletries. These are small, rectangular-shaped bottles with cylindrical necks and single-ring collars. They were formed in automatic or semiautomatic bottle-making machines and the bases are marked "CUTEX". They measure 43 mm in height by 23 mm wide by 15 mm thick and one of the specimens (Plate 60, B) contains a cork stopper and a light brown residue in the bottle. The remaining bottles, which presumably date after 1920, are of various types but they were all made in automatic bottle-making machines and they all have continuous-thread closures. One of these is still stoppered with a wood or simulated wood cap which has a cork and metal foil liner, and this bottle has a residue of perfume in it (Plate 60, C). Bottle types represented in this sample in terms of shape include rectangular, cylindrical, oval, four-sided tapered (Plate 60, D), and barrel-shaped (Plate 60, E).

Miscellaneous Bottles

A number of complete or nearly complete bottles were recovered at Fort Scott which do not at this time fit well into any of the previously described categories. They have therefore been grouped as miscellaneous bottles and subcategorized either by method of manufacture (i.e., empontilled, modern screw thread) or by overall shape (i.e., square, rectangular, cylindrical, oval, multisided). The distribution of the miscellaneous bottles described in the following section is shown in Table 13.

Pontil Marked Bottles

As noted previously, the earliest bottles in the Fort Scott collection are examples of either free-blown or mold-blown bottles which contain, upon their bases, the mark of an empontilling tool. While later snap case bottles and bottles made in automatic or semiautomatic bottle-making machines far outnumber the pontil marked bottles, the wares made with the empontilling tool are the earlier types and, therefore, are of particular importance because at least some of them may be related to the early military occupations of Fort Scott. Accordingly, individual descriptions of some of the unique bottles are provided below.

Butler Cin, Square Bottle: This very small, pale green bottle is square in shape with beveled corners (Plate 61, A). It measures 59 mm in height and 32 mm on each side. The shoulder is rounded and the neck is a cylinder with no collar, although the lip has been finished by applying a small bead of glass to the very top of the lip. The pontil mark consists of a distinct ring-shaped residue of glass. This indicates that the blowpipe itself was used as the empontilling tool (Jones 1971:71). Jones notes that this technique was in use in the United States during the nineteenth century, although no terminal date has been established (1971:71). This bottle has been subjected to considerable weathering and the entire external surface is opalescent. One of the flat panels contains two lines of raised letters "BUTLER/ CIN". This bottle certainly was closed with a simple cork stopper and this stopper was probably of the tapered variety. While mold seams, if present, are obscured, it is likely that this bottle was made in a two-piece mold. It is possible that this bottle is an example of an early patent medicine, although we have so far been unable to trace the origin of the name.

Rectangular Bottle: A small, pale green rectangular bottle was recovered from Fort Scott which was apparently manufactured in the same manner as the Butler Cin square bottle described above (Plate 61, B). This pale green bottle is 70 mm tall, 40 mm wide, and 27 mm thick and it is weathered to an opalescent state. The four corners are beveled and a mold seam is present from the base of the collar, down one beveled corner, crossing the base at a diagonal, and proceeding up the opposite corner to the base of the collar. The mold seam is interrupted only slightly where a small ring of glass (from the blowpipe empontilling tool) occurs in the center of the base. The collar consists merely of an outturning of the top of the lip to create a flared lip.

Cylindrical, Long-Necked Bottle: A single example of a very delicate bottle of pale green or aqua color was recovered from Fort Scott which is cylindrical in shape, has a long, narrow neck, and has a blowpipe pontil on the base. This bottle has an overall height of 138 mm and the long, slender neck comprises 58 mm of this height. The cylindrical body has a diameter of 47 mm. The shoulder is rounded and the neck terminates in a single-ring collar which begins at the top of the lip and extends down for a distance of 9 mm. This collar is quite irregularly formed, indicating that it was not formed with a lipping tool. The base has a deep kick-up or push-up which contains a small ring of jagged glass that is the pontil mark. The bottle is formed of very thin glass (1 mm thickness) and no mold seams were visible on the base, body, or neck. Thus, it is possible (and the slightly irregular shape of the bottle supports this thesis) that this is a free-blown bottle.

In addition to the blowpipe pontil bottles described above, which are mostly complete, eight bottle bases from Fort Scott contain glass

ring residues that indicate they were finished by the same technique of attaching a blowpipe to the base as an empontilling tool for finishing the lip and/or collar. Bottle shapes represented in this small sample of bases include cylindrical, rectangular, oval, square, and small- and medium-sized bottles are included.

Multisided Bottles

Two small, eight-sided or eight-paneled bottles and one ten-paneled bottle were recovered from Fort Scott (examples on plate 61, C, D). All three of these specimens were made of clear glass and all three were made in two-piece molds with a single applied ring located at the lip. Another ring is located at the juncture of the shoulder with the cylindrical neck on the two eight-sided bottles. The eight-sided bottles measure 80 mm in height and have a diameter of 23 mm and the ten-sided bottle is 68 mm tall and has a diameter of 24 mm. All three of these bottles were obviously cork stoppered and it is possible that they were utilized as perfume bottles. Alternatively, they could have contained liquid cooking extracts. The bases of the two eight-sided specimens are slightly concave and one of them has small raised numbers "240" in the center of the base. The ten-sided specimen is flat based.

Square Bottles

Twenty-three small to medium-sized bottles share a general uniformity and can be considered as one type (example on Plate 62, A). All of these bottles have square bodies with beveled edges and flat panels. This style is also known as the "French Square" (Illinois Glass Company n.d.:26). The necks are typically cylindrical and terminate in a single-ring collar which is most often flattened on the top and sometimes on the underneath side. Twenty-two of the bottles are of clear glass and one is of a transparent, pale green or aqua color. Twenty-two of the bottles were made in two-piece molds with tooled collars and the remaining bottle was a machine-made example which exhibited mold seams that ran from the base to the top of the lip. The smallest bottle in the sample was 48 mm high and 16 mm on its side, while the largest measured 140 mm in height and 48 mm on its side. The bases were either flat or slightly concave and a few had circular concave depressions in the base. Three of the two-piece mold bottles had base marks. One of these base marks consisted of the raised letters "IGCO". Toulouse (1971:264) indicates that this is a base stamp that was often utilized by the Illinois Glass Company, Alton, Illinois, in the period from circa 1880 to 1900. A second base marked specimen had a capital letter "C" within a circular concave depression. The third base marked specimen had "McC" contained within a circular basal depression. This may refer to the William McCully and Company Glassworks of Pittsburg, Pennsylvania, which was in operation from 1841 to circa 1886 (Toulouse 1971:351). The single bottle manufactured by an automatic bottle-making machine also has a

base stamp. This base stamp consists of a circle that had been cut through by a raised diamond, and in the center of the circle is located an "O". An "8" is located just above the symbol. The Owens Illinois Glass Company of Toledo, Ohio used a similar symbol in the period from 1929 to 1966 (Toulouse 1971:403). All of the bottles in this general category evidently had tapered cork stoppers. A residue of a tar-like substance was noted in two of the bottles. The bottles contain no other information relating to the contents which were once in them. However, they are of a size, shape, and enclosure style which would have been suitable for various types of patent medicines, medicinals, and perhaps household items and cleaners.

Rectangular Bottles

Twenty-one complete, or nearly complete, rectangular bottles were recovered from Fort Scott which lack any clear identification as to their contents (example on Plate 62, B). Twenty of these examples were made in two-piece molds with the collar finished later and one was made in an automatic bottle-making machine. These bottles were typically rectangular in shape with angled or slightly rounded shoulders and with cylindrical necks that terminated at the top in a single-ring collar that was often flattened on the top side and sometimes on the underside. Six specimens also had a ring of glass located halfway between the top of the collar and the shoulder. The bases of all 21 specimens were either flat or slightly concave. One of the two larger side panels was often recessed. Nine specimens had flat panels on all sides and three examples had at least one slightly convex panel. The largest bottle in this category is 174 mm in height and has sides of 66 mm and 40 mm. The smallest measures 55 mm in height and is 26 mm by 17 mm on the sides. Ten of the specimens have base marks, which typically consist of raised letters or numbers. Two specimens are marked with a capital "M" indicating that they were probably manufactured by the Maryland Glass Corporation, Baltimore, Maryland, possibly before 1916 (Toulouse 1971:339). One other specimen had a capital "M" that was surrounded by a raised circle of glass and this may be a later (post-1916) base mark for the Maryland Glass Corporation. A small diamond occurs on the base of one of the bottles indicating that it was manufactured by the Diamond Glass Corporation in the period following 1926. At least three different bottles contained base marks that indicate a probable bottle user rather than a bottle maker. One of these is marked "USONA". This specimen also has the legend "3IV" located horizontally on the shoulder. Another specimen has the legend "PD&CO", suggesting that it was manufactured for the Parke, Davis and Company, Detroit, Michigan (Toulouse 1971:417). Toulouse (1971:417) indicates that this manufacturer has been in operation since 1875. Another specimen has a base mark which consists of three raised lines of letters "COLGATE & CO/S/NEW YORK". Another specimen is marked with a simple capital letter "N". The two remaining base marked specimens have numbers on them "2" and "6/0/6". One specimen still retains a portion of the cork stopper that was the

typical closure for this category of bottle and three examples have a residue contained within them. One of these is a dark blue residue, another is a brown tar-like residue, and the third consists of a white powder.

Cylindrical Bottles

Miscellaneous cylindrical bottles of three different types were recovered at Fort Scott. Included in this category are widemouthed bottles, narrow-necked bottles, and a number of small and interesting vials. The general distribution of the cylindrical bottle types within the fort complex is shown in Table 13.

Widemouth, Cylindrical Bottles: Thirteen complete, or nearly complete, small- to medium-sized round bottles with wide mouths were recovered from Fort Scott (example on Plate 62, C). The smallest of these bottles is 70 mm tall and 33 mm in diameter and the largest is 113 mm high by 50 mm in diameter. Two different manufacturing techniques were employed in the bottle sample. Five of the bottles were produced in two-piece molds with the collar finished by a lipping tool. The remaining eight specimens were all produced in automatic bottle-making machines. As noted, the bodies of these specimens are cylindrical. The shoulders are typically rounded and taper to a cylindrical neck which terminates, typically, in a single-ring collar which is most often flattened on the top. Two of the five two-piece mold bottles are a pale green or aqua in color and the other three are clear glass. Seven of the machine-made bottles are of clear glass and the eighth specimen is amber in color. All of the bottles are translucent. The bases of all specimens are slightly concave. Two of the two-piece mold bottles have identical base stamps and these are the only base stamps that occur on the two-piece mold bottles. In both cases, the base stamp consists of raised letters in two lines as follows "N.Y.Q & C.W.LD." Six of the machine-made bottles have base stamps. Two of these are marked with the raised numeral "2" and one is marked with the raised numeral "8". The amber-colored machine-made bottle has two rows of raised numbers and letters on the bottom which read "M.C.W./4OZ". Another base marked specimen has the raised and somewhat stylized letter "H", with a smaller "A" included within the "H". An "8" is also located on the bottle base. Toulouse (1971:239) indicates that this base mark was utilized by the Hazel-Atlas Glass Company of Wheeling, West Virginia in the period from 1920 to 1964. The last base mark noted on one of these bottles consists of a simple, raised diamond with a "5" off to the side. Toulouse (1971:550) indicates that this base mark was utilized by the Diamond Glass Company of Royersford, Pennsylvania since 1924. Three of the bottles in this category still have portions of the original cork stoppers contained in the bodies of the vessels. Two specimens have raised letters on the neck "3 oz" and "2 oz" which indicate the volume of liquid which once filled the bottles. While the specific function of these particular bottles cannot at this time be ascertained, it is

obvious that they are of a size and style that would have been adapted for any of a variety of liquid substances, such as chemicals, medicines, and a variety of household substances.

Narrow-Necked, Cylindrical Bottles: The ten recovered narrow-necked, cylindrical bottles represent two different manufacturing types and four different colorations. Eight of the bottles were made in a two-piece mold (example shown on Plate 62, D) and the remaining two specimens were produced in an automatic bottle-making machine. These bottles are characterized as being cylindrical with rounded shoulders and they have straight, cylindrical necks that terminate, typically, in a single-ring collar which is usually flattened on both top and bottom. One example, the largest example in the category and a machine-made example, is of a blue color and is translucent. Six translucent amber-colored bottles, including five two-piece mold examples and one machine-made example, were recovered. One example of a clear bottle and two bottles of pale green or aqua color were included in the category. The largest bottle is a machine-made, blue bottle which is 185 mm in height and which has a maximum diameter of 76 mm. The smallest specimen in the category is a specimen made in a two-piece mold and it measures 64 mm in height and has a maximum diameter of 27 mm. The bases of these specimens are typically slightly concave and only the two machine-made examples have base marks. The large machine-made, blue bottle has a raised numeral "1" on the base and the smaller, brown machine-made bottle has a diamond in raised lines which includes within the diamond the numerals "106". As noted earlier, the diamond base mark was one utilized by the Diamond Glass Company of Royersford, Pennsylvania since 1924 (Toulouse 1971:550). It was in circa 1924 that the Diamond Glass Company replaced hand blowing of glass bottles entirely by the automatic or semiautomatic machines (Toulouse 1971:550). A single example of a medium-sized amber-colored bottle, of two-piece mold construction, has horizontal raised letters on the shoulder "WALNUTTO". This was most likely a flavoring extract. The contents of the other bottles cannot be determined at this time but it is evident that all of the bottles were closured with cork stoppers, probably tapered cork stoppers. They would have thus been suitable for a variety of uses including storage of chemicals, medicinals, etc.

Small Cylindrical Vials: Eighteen small, cylindrical, narrow-necked vials were recovered from Fort Scott and these are quite interesting because of the diversity of manufacturing techniques which were employed in their formation. In appearance, these bottles are all small, elongated cylinders with constricted necks which terminate at the top either in flared rims or in single-ring collars. Twelve of the vials are clear, five are a pale green or aqua in color, and one is amber colored. The largest specimen is 95 mm in length by 18 mm in diameter and the smallest specimen is 41 mm in length by 13 mm in diameter. Only two specimens were manufactured in automatic or semiautomatic bottle-making machines. These presumably date after the

turn of the century. Nine specimens were evidently made in two-piece molds with the rim or collar finished afterwards (example shown on Plate 63, A). Interestingly, three of these examples have a very evident fire polish on the top of the flared rims. The remaining seven specimens may be examples of bottles formed from glass tubing in what Kendrick (1968:163-164) has called the lampworker technique (example shown on Plate 63, B). In this technique, both the base and the rim of the bottle are formed by hand by two separate techniques, with the base being formed first. Thirteen of the small vials exhibit single-ring collars where the ring collar has either been formed in the bottle-making machine or where it consists of an added-on ring of glass that was put on subsequent to the initial forming of the body of the vessel. Four of the specimens lack this added-on ring and in these examples the neck of the vessel at the rim has simply been flared out to allow for cork insertion. The eighteenth specimen was so fragmentary that no data could be obtained as to its rim form. A catalogue of the Illinois Glass Company illustrates vials similar to several of the Fort Scott examples under the general designation of Homeopathic Vials (n.d.:300-302).

Oval Bottles

Two different styles of oval, miscellaneous bottles were noted in the Fort Scott collection. The first type is characterized by having elongated necks while the second type has shorter necks and bottle shapes that are slightly more rectangular (i.e., shoulders are more steeply angled).

Long Neck Oval: Long-necked, oval bottles of a green or pale green color were commonly encountered in the Fort Scott inventory (example shown on Plate 63, C). While only six complete, or relatively complete, bottles of this type are discussed herein, it should be noted that many base, body, and necked fragments of additional oval-shaped, green, long-necked bottles are contained within the Fort Scott inventory. While these bottles are oval in horizontal section, the profile from either face is that of a flat or straight base, straight sides which terminate in a rounded shoulder, and a constricted and long, cylindrical neck which terminated in a single-ring, applied collar that is located right at the lip of the vessel. The largest of the complete specimens measures 175 mm in height and has a width of 71 mm and a thickness of 35 mm, and the smallest measures 113 mm in height, has a width of 45 mm, and a thickness of 24 mm. All six of these specimens were made in two-piece molds and the collars on five of the specimens are so irregular that it appears that they were hand formed with an applied bead of glass rather than being formed with a lipping tool. The sixth specimen evidently was formed with a lipping tool as it is quite regular. The collars range from very narrow to very broad rings that extend down from the lip of the vessel. Cork closures were apparently used on all of these specimens. Only two of the specimens have base marks. One of the base marks consists of

"IGCo". Toulouse (1971:264) has noted that this mark was a mark employed by the Illinois Glass Company of Alton, Illinois in the period from circa 1880 to 1900. A second base mark noted in the sample consisted of a raised circle with an anchor enclosed within it. The anchor has a rope attached to it and the anchor and rope are in raised glass. The only companies mentioned by Toulouse (1971) as utilizing an anchor motif would seem to date too late to be associated with this particular bottle and so we conclude that the maker of this specimen is unknown at this time. A trademark occurs on one of the bottles. This bottle has two lines of vertical lettering on one face which read "JAS. HEWSON & Co/KANSAS CITY" (Plate 63, D).

Short Neck, Oval Bottles: These oval-shaped bottles have flat or straight bases, parallel sides, rounded shoulders that terminate in a cylindrical neck, and a narrow, single-ring collar for a cork stopper. Two of the bottle finishes appear to be applied rings and the other two may have been formed with a lipping tool. The largest of these bottles measures 167 mm in height, has a width of 68 mm, and a thickness of 40 mm, and the smallest measures 56 mm in height, is 25 mm wide, and 16 mm thick. These bottles typically have one flattened panel which presumably was utilized as a base for a paper advertisement. Only of the bottles has a base mark and this consists of "McC". This suggests that the bottle was manufactured by William McCully and Company, Pittsburg, Pennsylvania, in the period from 1832 to 1886 and the bottle specimen would seem to date from the latter part of this period (Toulouse 1971:351).

Modern, Screw-Thread Bottles

Fourteen complete or nearly complete bottles were recovered from Fort Scott which are all of modern appearance and which presumably date circa 1920 or more recently. The unifying factor noted on all of these bottles is the presence of continuous, screw threads and mold seams which run from the base up to the lip of the vessels. The vessels contain no evidence as to what materials were contained within them, but they are of various shapes; including round, square, rectangular, and oval. These are small to medium-sized bottles and would have been suitable for holding a variety of substances including paint, foodstuffs, medicines, etc.

Cobalt Blue Condiment Bottles

Two small, translucent, cobalt blue bottles were recovered from Fort Scott which apparently once contained condiments of some sort (example shown on Plate 63, E). Both examples are rectangular in shape with rounded corners and with slightly tapering bases and somewhat sloping shoulders. Both are modern bottles made in automatic bottling machines. Both have continuous screw-thread closures and both still have the tin caps present which were used to seal them. Both examples are 93 mm in height and 48 mm on a side. Base marks

occur on both specimens as three lines of raised letters and/or numbers "C/UDCO/5". Toulouse (1971:509) notes that the mark "UDCO" is most often associated with the United Drug Company and that it was a trademark of the user and not of the bottle marker. Other United Drug Company bottles often have a letter "M" on them, representing the Maryland Glass Company, which was one of the companies that manufactured bottles for the United Drug Company. It seems possible that the present example of a "C" stands for another, and as yet unknown, maker.

Glass Stoppers

There are two basic types of glass stoppers represented by the 34 complete or nearly complete glass stoppers found at Fort Scott. Included are peg stoppers and ground-shaft stoppers. These specimens are treated as a unit because a specific function cannot be determined for each stopper in terms of what type of bottle it stoppered or the contents of that bottle. The one exception to this is the presence of six peg stoppers which are clearly affiliated with the Lea & Perrins sauce bottles. These have been discussed in that section of this report dealing with sauce bottles but they are also included here because they are of the same type as many of the other peg stoppers. Twenty-eight of the glass stoppers recovered from Fort Scott are of the peg stopper type (examples shown on Plate 64, A, B). Peg stoppers have a straight to slightly tapering, unground shaft that was originally covered with cork tubing. This type of stopper was used for a variety of purposes including certain chemical uses and was also used as stoppers for sauces and other foodstuffs that had a long shelf life in the home. The peg stoppers consist of a circular disk with an elongated shaft protruding out the reverse face. The extant specimens from Fort Scott range from 24 mm to 27 mm in diameter for the head and they range from 26 mm to 32 mm in length. Fourteen of the specimens are clear glass, eight are green or aqua colored, five are brown or amber colored, and one is blue colored.

Six ground-shaft, glass stoppers were recovered from Fort Scott (examples shown on Plate 64, C-F). These specimens have heads or thumb pieces of either a ball shape or a rectangular, flattened shape. The ground stoppers are distinct from the peg stoppers because they have a tapered shaft which is ground to fit exactly into the ground opening of a bottle. The largest specimen in the collection has an overall length of 45 mm and has an estimated maximum bottle orifice diameter of 19 mm. The smallest ground-shaft stopper is 29 mm long and has an estimated maximum bottle orifice diameter of 9 mm. Ground-shaft stoppers were adapted to a variety of uses. Some of the smaller ones may have been used on perfume and toiletry bottles while some of the larger ones may have stoppered sauces, medicines, and various chemicals.

Bottle Closures

As has been noted throughout the section dealing with the glass bottles from Fort Scott, a large number of different closure types are revealed in the sample. Perhaps the most common of these types are bottles that were intended to be closed with cork stoppers of either straight or tapered form. The majority of the bottles that have been identified as nineteenth century in origin, particularly narrow-necked bottles, are of this closure type. The early cork-stoppered bottles were available in several different types and sometimes employed such devices as wires that went around the collar of the bottle and over the top of the cork to hold it in place. These were used, in particular, for carbonated beverages of various types before the Crown Top fastener and other fastening devices were utilized. One of the more popular of these, the Putnam Lightning Stopper (which was originally patented in 1882 by Henry W. Putnam) was used on such narrow-necked bottles as beer bottles and, with various modifications, was adapted to use with fruit jars (Toulouse 1977:126). Several examples of lightning stoppers or modifications of lightning stoppers were noted in the Fort Scott residue and many of these were of late date, dating from the early years of the twentieth century. Other popular fastening devices represented in the Fort Scott inventory include a large number and variety of screw-top bottle and jar lids. Many variations have already been discussed in terms of fruit jars, but narrow-necked bottles are also represented by a number of screw-top fasteners. While screw-top fasteners had an origin going back well into the nineteenth century, they did not come into popular use until techniques for forming uniform continuous threads were developed in the glassmaking industry (Lief n.d.:27). The screw-top fasteners noted in the Fort Scott inventory, which are presumably of fairly recent origin, are of various types and include early zinc examples as well as later tin and iron examples, and a number of synthetics were also used as screw fasteners. Other fastening devices recovered from Fort Scott include a variety of glass lids which have been discussed in conjunction with specific functional bottle types, as well as fastening devices which, while not present at the site, are reflected in the nature of the bottle itself. Included in this latter category are the crown stopper closure, a closure method developed in the late nineteenth century, which was commonly used on soda bottles as well as beer bottles and which is still employed in the bottling industry. Glass stoppers of various types, which were intended to be inserted into the bottle, were also included in the Fort Scott inventory.

Glass Tubes

Three different types of glass tubes were recovered from Fort Scott. The inventory includes open tubes, a portion of a test tube, and a portion of an eyedropper.

Glass Eyedropper

A single example of a broken glass eyedropper was recovered from Fort Scott (Plate 64, G). This specimen is of clear glass and consists of a small, hollow tube which has a bead of glass applied approximately halfway down. The tube measures 10 mm in diameter at the basal end and maintains this dimension until the applied ring of glass is reached. It then tapers to an undetermined diameter, as the tip end of this specimen is missing. This eyedropper specimen would have been suitable for a variety of potential uses, such as an eyedropper for inkwells or medicines of various types.

Test Tube

A small tube of glass, closed at one end, was recovered from Fort Scott which is evidently a small test tube (Plate 64, H). This specimen is made of clear glass and it measures 11 mm in diameter. It has a present length of 60 mm but it may have been somewhat longer originally. A residue of a cork stopper and a tar-like residue are still contained in the base of the specimen.

Open Glass Tubes

Four broken glass tube sections were recovered from Fort Scott. The largest of these is a section of clear glass tubing, broken at both ends. This specimen measures 225 mm in length and it has a diameter of 15 mm. The second tube section is represented by a 200 mm long section of green-colored glass. This is a rather thick-walled specimen which has an outside diameter of 15 mm and an internal diameter of 10 mm (Plate 64, I). Two small, clear glass tubes were also recovered. These examples, which are each broken at both ends, measure 8 mm and 11 mm in diameter.

Glass Rods

Two sections of green-colored glass rods were recovered from Fort Scott. Both of these have broken ends, so it is impossible to determine their function or their original size. The larger specimen is made of twisted, green glass and the twist elements form a noticeable series of ridges on the external surface (Plate 64, J). This specimen measures 250 mm in length and it tapers from a diameter of 12 mm at the butt end to a diameter of 8 mm at the tip end. The second specimen is a slightly curved piece of ridged, green glass which has an overall length of 100 mm and a diameter of 5 mm.

Pressed, Cut, and Etched Glass

A large number of glassware items, a few complete but most broken, were recovered from Fort Scott which cannot be classified as bottles or bottle fragments. These latter items include such specialized functional items as goblets, tumblers, glass trays, stemmed

glasses, pitchers, ornamental glass objects, etc. The majority of these items were produced by glass-working techniques that have been labeled as pressed, cut, and etched techniques. The pressed-mold technique involves a process of shaping a glass object by placing a blob of molten glass in a mold, usually metal, that forms the outside shape of the piece, and by then pressing this blob of glass with a metal plunger to form the inside shape (Newman 1977:250). The resulting glassware piece, which is termed mold-pressed, has an interior shape which can be independent of the exterior shape, in contrast to blown glass or mold-blown glass, where the interior corresponds roughly to the outer form. Newman (1977:250) notes that pressing of glassware was introduced to the United States in 1827 and that the process came into general use in the 1830s and was used for a majority of American glassware items by the late 1850s. This seems to have been the primary method utilized in the production of the tumblers, goblets, glass plates, etc., that are represented in the Fort Scott material inventory.

Another technique of glass production which is reflected in the Fort Scott inventory by at least a few specimens was that of the block or dip mold. Block molds were employed as one-piece molds for producing bottles, tumblers, etc. which either required no neck constriction or for which necks and bottle finishes were added later. Cut glass includes glassware that is decorated with facets, grooves, and depressions that are produced by cutting the surface with a rotating wheel of iron or stone (Newman 1977:85). Cutting of glass is primarily a decorative technique rather than a forming process. Etched glass is produced by treating a glass surface with hydrofluoric acid to corrode and remove the surface of the glass. Newman (1977:109) notes that this treatment was not in general use until the mid-nineteenth century, although it was discovered in 1771. In discussing the categories of pressed, cut, and etched glass, it should be noted that some bottle-making processes, particularly that of widemouth jars, also involves the pressing of glass into a mold by a plunger. In our present discussion, the pressed, cut, and etched glass categories are utilized to describe primarily decorative glassware items and items of the table. The distribution of these specimens is shown in Table 13.

Tumblers

Eighteen complete or nearly complete tumblers were chosen as being representative of the tumblers in the Fort Scott collection. A tumbler is defined as a drinking glass which does not have a stem, foot, or handle, and which has a flat base on which it rests. The tumblers in the Fort Scott collection are of circular section and are either cylindrical, barrel shaped, or have sides that taper slightly inward toward the base. While most of the tumblers in the collection are of clear glass, one is of a slightly pale green color and it is opalescent. Another specimen is translucent and rose colored.

Five clear, plain tumblers were recovered from Fort Scott that are all barrel shaped. Base diameters of these specimens range from 50 mm to 68 mm and heights range from 83 mm to 100 mm. Two of these examples have the negative impression of a horseshoe imprinted or molded in the thickened and slightly concave bases. Three clear glass tumblers were recovered from Fort Scott which have vertical fluting on the body near the base. This fluting is a result of molding process. These three specimens are all of the tapered type, where the base is of smaller diameter than the mouth. The bases range in diameter from 52 mm to 68 mm and the one complete specimen is 96 mm in height. One of these specimens has a raised letter "H" centered on the base. The bases are slightly concave.

Two clear glass tumblers were recovered which have sides that taper inward to the base and which have vertical flutes present on the body and extending halfway to two-thirds of the way up the body (example on Plate 65, A). These two specimens have base diameters of 55 mm and 61 mm and heights of 88 mm and 95 mm. One of these examples has a circular depression in the base which contains a molded rosette impression. Two clear glass tumblers (very thin walled) were recovered from Fort Scott that are also of the tapering type and which are etched on the body with a horizontal panel of oak leaves and branches which encircle the tumblers about two-thirds of the way up from the base (example on Plate 65, B). These are identical specimens and they have a base diameter of 64 mm and are 96 mm in height.

Four thick-walled, clear tumblers were recovered from Fort Scott which are essentially straight-walled cylinders. These four examples all have elaborate molded designs on both the outside of the body and on the base elements (example on Plate 65, C). These molded designs include nodes, floral designs, and geometric designs. One of these examples may be cut and ground glass, although this is not certain. It is likely that all of these are mold-pressed examples. The bases of these specimens range from 60 mm to 70 mm in diameter and the one complete example has a height of 95 mm.

One complete tumbler was recovered from Fort Scott which is of a slightly greenish yellow color (Plate 65, D). This specimen is semitranslucent and has a considerable amount of opalescence on the outside. This example is of the tapering variety in which the base is of smaller diameter than the mouth. The base measures 60 mm in diameter and the tumbler is 99 mm in height. This specimen was apparently produced by some sort of a reverse mold, as the body contains three rosette floral impressions on the inside walls of the glass. A single example of a rose-colored tumbler was recovered from Fort Scott which has fluted sides. This example has a base diameter of 47 mm.

Goblets

Goblets are drinking glasses with large bowls which rest on a stemmed foot. The goblets from Fort Scott typically have quite thick

walls and, in general, are heavy, durable drinking containers. All of these specimens are clear glass and the bowls of the specimens are of either a globular or conoidal shape. The stems are thick cylinders of glass which have a broad, disk basal or foot element. The most commonly encountered goblets in the Fort Scott collection, represented herein by four complete or nearly complete examples, are plain, clear goblets which have a globular shape, a thick stem, and a very heavy glass disk base (example on Plate 66, A). These goblets were evidently made in two-piece molds, as mold seams are visible from the top of the lip to the edge of the disk base. These specimens are of a very uniform type and, in fact, nearly all of the specimens of this type were recovered from Historic Structure 3. The plain goblets measure 132 mm in height and have an exterior orifice diameter of 79 mm. The maximum bowl diameter, which is achieved approximately two-thirds of the way down from the lip, is 84 mm, and the bowl element is 83 mm high. The very thick stems of these specimens measure 24 mm in diameter and the disk bases are 80 mm in diameter. While it is impossible to tell with certainty, it appears that the lips of these plain goblets may have been finished with some sort of lipping tool.

Four other clear goblets recovered from Fort Scott are of the same basic type as the plain goblets discussed above except that they have molded patterns of five-sided pseudofacets on the lower half of the bowl exteriors (example shown on Plate 66, B). Three of these are globular goblets of the same approximate dimensions as the plain goblets, and the fourth example has a smaller and more conoidal-shaped bowl. This latter example is missing the base and most of the stem. The stems in the three complete examples are more gracile (measuring only 15 mm in diameter) and they are faceted with a continuation of the same facets that extend up on the bowl. Mold seams are quite evident on the bases and stems of all three of the complete specimens. The mold seams do not extend up onto the bowl of the vessel and this suggests that the faceting could have occurred by a grinding process which would presumably have obliterated mold seams from this area. The three globular goblets are similar to the Lyston Honeycomb goblets illustrated in Goblets (Millard 1938: Plate 10). Millard notes that these were produced during the 1880s.

Another goblet was recovered from Fort Scott which is missing the foot and which has a globular shape (Plate 66, C). This specimen was evidently made in a press mold of some type and it has zoned decorations on it. The lower one-half of the bowl of the vessel is decorated with a stippled effect which is clearly set off from the upper half by a horizontal line that runs around the circumference of the vessel. Within this stippled portion are located nine raised ovals of slightly frosted glass. The stem of the specimen is faceted and the faceting extends up onto the very lowest part of the globular body. A portion of the bowl of another specimen of identical style

and type was also recovered from Fort Scott. This type is identical to the "Moose Eye in Sand" type illustrated in Goblets and attributed to the 1880s (Millard 1938: Plate 131).

The excavations at Fort Scott recovered another nearly complete glass container which is goblet-like in shape, but which has a scalloped upper edge or lip (Plate 66, D). This specimen has a cylindrical body which is decorated with a pattern of flutes, ridges, and diamond-shaped areas of molded glass on the outside. The specimen has a thickened stem and a broad disk base. The specimen measures 130 mm in height and the body of the vessel is approximately 70 mm in diameter. The lip everts slightly to a total diameter of 80 mm. The base measures 78 mm in diameter.

Bud Vase

A single, partial example of a very delicately made bud vase, which has been decorated on the body by etching, was represented in the Fort Scott inventory (Plate 67, A). Both the foot and the lip of this specimen are missing. The extant portion of the body is broader near the stem than it is at the top, and the body is decorated just up from the stem with a small series of horizontal dashes that are etched in the glass. The upper portion of the body is decorated with a series of crossed lines and teardrop-shaped depressions or etchings that depend from these cross lines. A series of horizontal unbroken lines and a series of horizontal, oval dots are located above the crossed line element. The body has a maximum diameter of 33 mm. In appearance, this small vase is quite similar to modern delicately made bud vases. The glass from which the body is made is very thin walled, measuring just 1 mm in thickness.

Pitcher Fragment

A portion of the upper body and lip of a pressed glass or mold-made pitcher was recovered from Fort Scott (Plate 67, B). This specimen is made from thick glass (7 mm in diameter) and it is clear. While the example is very incomplete, this evidently was a pitcher that was larger in diameter at the base than it was at the top. It has a broad but somewhat constricted neck and a flaring lip. The one really unique aspect of this bottle is that there is a tongue-like extrusion of glass that protrudes from the inner side of the lip of the vessel to create a pour spout. This occupies approximately one-half of a circle formed by the orifice of the pitcher.

Serving and Ornamental Dishes

Several oval-shaped, shallow dishes of clear glass were recovered from Fort Scott which were evidently serving dishes or ornamental dishes for holding foods. In addition to the oval specimens, one rectangular dish, one round dish, and one green-colored, hexagonal

dish were recovered. Seven of the oval dishes (none is complete) are all of the same type and have the same decoration upon them (example shown on Plate 67, C). These vessels had an original length of 212 mm, a width of 148 mm, and height of 49 mm. The base includes an oval area (116 mm by 50 mm) which is defined by a raised ring of glass. A pattern (in relief) of 16 teardrop-shaped depressions, all oriented out from the center, is located in the base. The sides are gently rounded and the edge is obliquely and shallowly scalloped all around the lip. The outside or reverse face of the bowl is decorated with faceted circles, raised diamonds, and flutes in zones. These specimens all appear to be of pressed-mold construction. Another oval dish, represented by approximately one-half of the original specimen, is also made of clear glass and it is of the same shape as the aforementioned examples (Plate 67, D). The molded pattern on this specimen is confined to the reverse face and is much more elaborate than that on the previously described specimens. The lip of this specimen is formed into a molded curvilinear shape. Pressed patterns observed on the reverse face include trefoil designs and curvilinear designs in relief. A single example of a plain, oval dish was recovered from the site which has an estimated original length of 195 mm, a width of 125 mm, and a height of 33 mm. This example is actually somewhat egg-shaped rather than being a true oval. The base on the example is defined by an egg-shaped ring of glass which measures 110 mm in length and 65 mm in maximum width.

The single example of a circular dish recovered from the site has a slightly concave, circular base which measures 80 mm in diameter and which contains a series of teardrop-shaped rays oriented out from the center to the edge of the base. The sides of this specimen are straight and the dish has an orifice diameter of 104 mm and a height of 30 mm. This specimen is of clear glass. The rectangular, clear glass dish recovered from Fort Scott is quite similar to a modern butter dish. This specimen has an estimated length of 137 mm, a width of 78 mm at the base, and has a height of 32 mm. The base of the specimen is decorated on the reverse side with a pressed-mold design which consists of a series of teardrop-shaped rays that are oriented out from the center of the specimen and which are of various lengths. They terminate just before the edge of the base. The lip of the specimen is two part with one element oriented vertically and one oriented horizontally to form a receiving area for a top. This specimen is marked in raised letters on the obverse inside face of the base with the following letters "BOTTOM". Another fragment of a circular or oval dish was recovered from Fort Scott which is made of clear glass and which has the same kind of lip as was noted for the butter dish. This specimen is somewhat unique because the reverse or outside face has three ground rings which apparently completely encircle the bowl about 20 mm down from the lip.

The hexagonal-shaped, green-colored glass dish recovered from Fort Scott is particularly interesting (Plate 67, E). This specimen

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is nearly complete and it is made of translucent or semitranslucent green glass. This shallow dish has curved sides and a short but sturdy circular foot. The foot is 11 mm in height and has a diameter of 69 mm and it is slightly concave on the base. The hexagonal shape of this specimen has apparently been achieved by a bending inward of a portion of the lip of the vessel to create a hexagonal shape. Thus, the specimen originally was circular in shape and had an estimated original diameter of 200 mm at the mouth. The obverse face of the specimen is marked with a series of slightly raised circles which have within them small depressions which have an orange peel texture. A slight amount of gilding or gold-colored paint was noted on the inside or obverse face of the specimen. While this specimen was evidently originally formed in a pressed mold, it is obvious that further alterations were performed while the glass was still in a semiplastic state.

Glass Covers and Lids

Two clear glass covers were recovered from Fort Scott which are made of ornamental pressed glass and which both have pseudofaceted finials. One of these is a globular specimen with measures 95 mm in diameter and is 81 mm in height (Plate 68, A). The decoration on this specimen is confined to the obverse face and is in relief. It consists of zoned decorations which are outlined by curvilinear and straight lines and which include both diamond patterns and circles. The second specimen also has a pseudofaceted knob or finial on the top for lifting the cover off, but in shape it is more conoidal (Plate 68, B). This specimen is so incomplete that most measurements could not be taken, although it had an estimated length of 130 mm and an estimated diameter at the orifice of at least 40 mm. Eight flat panels are located on the obverse face and each of these apparently had a pattern in relief which included star-shaped patterns as well as branch patterns with leaves. The more globular of the two covers may have been employed as a cover on a sugar dish, while the more conoidal one would seem better adapted to a liquid condiment of some sort, such as a vinegar bottle. Two other convex, hollow jar lids were recovered from the site that were probably lids for preservatives or similar foods. Both specimens have a bulbous finial for holding, and both have lips that are tapered to fit down into bottle orifices. Both are made of clear glass and the larger specimen has an orifice diameter of 54 mm and an overall height of 51 mm. The smaller example has an orifice diameter of 40 mm and an overall height of 55 mm. The smaller of the two specimens has a user's mark on it "EDDY & EDDY MFG CO". Both jar lids appear to be of fairly late date, circa 1900 or later.

Eye Bath

A single example of what may be a stemmed eye bath was recovered from Fort Scott. This specimen is made from a translucent, blue glass which has been identified as a cobalt blue glass. An eye bath was a

small cup-like utensil which had a rim that was made to conform to the shape of the eye, and which usually had a stemmed foot. The specimen from Fort Scott is so incomplete that a final determination as to its function could not be made, but in general, it conforms to the eye-glass shape. The top is obviously a portion of a globular vessel which may have been a reservoir for an eyewash, and a portion of a circular stem extends down from the base of this reservoir. The specimen is of a size consistent with other known examples of eye baths.

Miscellaneous Pressed and Cut Glass

The Fort Scott inventory contains numerous examples of other pressed glass specimens and fewer examples of cut glass. These specimens are incomplete and no determination as to vessel type can be made. However, decorative motifs employed range from geometric patterns to zoomorphic designs (which include such things as butterflies) and other naturalistic designs including leaves, flowers, stems, etc. While the majority of these are of clear glass, examples of colored glass are also noted in the collection. These include opaque, light blue, and green specimens, as well as translucent or semitranslucent specimens of reddish color, yellowish color, and rose color. In at least one case, glass of two different colors has been joined together to form a vessel of uncertain function. This specimen includes a portion of a loop handle and a possible base element of a translucent, pinkish colored glass which has attached to it a translucent, blue glass element. Several of these specimens appear to be examples of "Depression Glass", a mass-produced glassware that is attributed to the period after 1925.

Molded Salt Shaker

One example of a small salt shaker was recovered from Fort Scott which is of the screw-thread variety with the top of the salt shaker missing (Plate 68, C). This example is of clear glass which has a slightly frosted appearance and it was obviously made in a two-piece mold. The specimen is 67 mm in height and has a base or foot diameter of 42 mm. The outside face of the cylindrical body of this specimen is decorated with three molded female faces. This salt shaker has been identified as a "Three Sisters" or "Three Face" salt shaker and it was apparently manufactured between 1879 and 1885 (Marsh 1962:242). Marsh (1962:244) illustrates an identical salt shaker and he indicates that it had a metal, screw-thread cap that was perforated. In discussing this salt shaker, Marsh notes that the "Three Sisters" or "Three Face" pattern was manufactured during the period from approximately 1879 to 1885 (or later) as a commemorative object for the Three Sisters Island at Niagara Falls (1962:331-332). Numerous other decorative glassware objects were also made that utilized the "Three Sisters" or "Three Face" pattern (Marsh 1962:331-332).

Milk Glass

Several small, widemouthed jars were recovered from Fort Scott that are made out of milk glass or opaque white glass. All have cylindrical or square bodies and they typically have a reinforced ring of glass around the base. Four jar specimens were made in automatic or semiautomatic bottle-making machines and four other specimens may have been formed in a single-mold process. Six of the recovered specimens apparently employed screw cap closures, as they have continuous screw threads on the neck. The remaining jars in the collection have a vertical neck and right angled shoulder to allow for the seating of a simple glass cap. One example has a disk-shaped lid with a lip on it that is designed to fit down over the lip of the vessel and seat on the shoulder. Both the lid and the jar are present in this case (Plate 69, A). The other lids in the sample are of the same basic type, although one has a small finial on the top (Plate 69, B).

The largest of the milk glass containers is a small jar which has a diameter of 94 mm and a height of 45 mm and the smallest jar in the collection has a maximum diameter of 43 mm and a height of 25 mm. These jars are of a type that would have been used to contain salves and powders of various sorts. In fact, one of the specimens still has powder contained within it. This powder is a buff-colored and talc-like substance. Two of the small jars have base marks upon them. One of these has four raised lines of lettering "MENTHOLATUM/REG/TRADE/MARK". The second specimen has three lines of raised lettering on the base "MUM/MFG CO/PHILA PA". Mum was a popular underarm deodorant marketed during the present century. A third specimen has raised lettering on the body "WINTERGREEN" (Plate 69, C). While a precise dating for these specimens has not yet been obtained, the jars are of a type still in use, and they presumably could have been made any time during the very late part of the nineteenth century or up till the present time during the twentieth century.

A single example of a possible milk glass stopper was also recovered from Fort Scott (Plate 69, D). This specimen has a very ornate, crown-type finial element and it seems likely that this once stoppered a perfume or toiletry bottle.

One of the more unique milk glass items recovered from Fort Scott is a small, rectangular bottle made of opaque white glass or milk glass which was recovered from Historic Structure 3 (Plate 69, E). This small, rectangular container measures 37 mm in length, is 23 mm wide, and is 20 mm high. The four corners of the specimen are slightly beveled. The base is flat and has a line of raised lettering on it "JM & Co". A residue of gold particles is contained within the small bottle or tray. This appears to be an example of a dental glass tray. It is obviously mold made and the dating of the specimen is uncertain.

Cullet

The Fort Scott material inventory includes numerous specimens of unidentifiable glass that have obviously been in or near a fire, as well as other objects of glass that look like a possible manufacturing residue from a glassmaking process. For instance, Historic Structure 6 yielded a number of examples of chunky fragments of green-colored, translucent glass that are far too large to be a part of any functional glass object, and yet they do not appear to have been unintentionally burned during firing. The largest of these chunks measures 120 mm by 100 mm by 78 mm and it is of somewhat irregular shape. This specimen weighs 1,062 gms. In color this specimen seems identical to various early bottle glasswares and it may be slag glass intended for a manufacturing process. A search of the available city directories for Fort Scott from 1865 to 1909 revealed that a single manufacturer of glass items was located in Fort Scott during this period. The directory for 1888 lists a possible window glass manufactory that was known as the Fort Scott Glass Works and that was located somewhere in the northwest part of the city (Russell and Russell 1888:296). No specific address was listed for this business but it is interesting that both Old Fort Scott and the Fort Scott Glass Works were located in the northwest part of the city. While it is not known for certain that glass items were manufactured at this glass works, it is interesting that a residue of what could be cullet (broken raw glass) such as is used in glass manufacturing was discovered in two locations at Fort Scott. Historic Structure 10 yielded a number of melted glass items that were evidently originally either bottles or windows. These very pale green or aqua-colored specimens are quite irregular in shape and are much smaller than the large glass nodules that were recovered from Historic Structure 6. These could be a naturally occurring residue from a structural fire but they also could be cullet. Items identified as cullet in the glassmaking industry are broken pieces or fragments of glass objects which were melted together (often with fresh ingredients) to make a batch of glass. Cullet could include waste glass from the glassmaking process as well as old glass from bottles, windows, etc. (Kendrick 1968:25).

CERAMIC CONTAINERS

Ceramic Overview

Ceramics can be described as artifacts formed from a clay paste and altered in composition by exposure to intense and controlled heat. This clay paste is made from any of many fine-grained natural, earthy, argillaceous materials occurring because nature has decomposed hard stone into softer silts or clays. The clay's plasticity occurs when it is mixed with water. Because of this plasticity, the paste can be shaped into any desired form without cracking or crumbling. Ceramic artifacts are formed at room temperature and are set under heat. The quality of a ceramic piece is judged by its hardness, porosity, and strength; in other words, how well the vessel will stand up to use.

Permeability is the property which permits the flow of liquids or gases through the ceramic itself, while porosity, which influences permeability, is the volume of pores as a percentage of the total volume. The permeability of a clay is related to the paste raw material and any intentional or unintentional inclusions (temper). The best clay minerals are from those forming extremely small crystalline particles. This includes kaolin, montmorillonite, and illite, or a mixture of these. Some source of usable clay is available almost everywhere, although the quality may be low. Centers of ceramic manufacture tended to arise near the source of quality clay materials.

Temper is sometimes added to the paste, particularly to lesser grades of clay, and can be fine-grained sand or even pulverized pottery, called grog. These inclusions serve to reduce shrinkage of the vessel body during firing. This shrinkage is caused by the water, added to make the clay pliable, escaping as gas during the firing process. Sand added as temper can also help glazes adhere to the paste body. Various types of paste base minerals as well as the intentional inclusions of grog or other temper produced finished vessels of differing porosity and permeability.

Vessel color, that is the color of the clay itself, is influenced by the paste and its inclusions, as well as the conditions of firing. Most of the ceramics considered here are covered with a glaze, or glassy material which coats the vessel to make it impervious to liquid and smooth to the touch, but which sometimes obscures the clay color. The ceramic categories, however, are divided according to the clay or body color and texture apart from the addition of a glaze.

Ceramic Classes

There are three different classes of ceramics: earthenware, stoneware, and porcelain. A fourth class, that of ironstone, is technically an earthenware, but has enough unique attributes and is important enough to be described here as a separate group.

Earthenware: Earthenware is opaque, has a dull sound when struck lightly, is thick, with a porous body, and requires a glaze to allow it to be used as a container for liquids, and it has a dark and granular, or rough fracture. The majority of earthenwares have a cream or white body, while other earthenware clays produce bodies of various colors but with the same properties of the white earthenware. Terra Cotta, for example, is a red biscuit earthenware which varies in color from a soft pink to a rich purplish red, the changes occurring due to different firing techniques (Mankowitz and Haggar 1957:219).

Because it is easily manufactured in mass quantities, white earthenware is often utilized for tableware. Cream-colored ware is a "...coarse body, cream or pale buff in tint, usually with a hard alkaline glaze." (Ramsay 1939:152), and served for many years as the standard kitchen or utility ware. Josiah Wedgwood of England

perfected a type of creamware which he called "Queensware" after he "...had obtained for it the royal patronage..." (Mankowitz and Haggar 1957:186). The development of creamware, specifically Queensware, coincided with the Industrial Revolution, and became important because it put dinnerware in a price range affordable to many. It was also widely imitated during the apex of its popularity from 1790 to 1840 (Moore 1973:67). Queensware was a predecessor to the later ironstone. Earthenware evolved from creamwares to pearlware to ironstone, and assumed a more purely white color with each stage. First introduced in 1740, creamware became a standard by 1760 and was widely exported (Godden 1975:140).

Yellowware is a transition from the first forms of "pottery" to the earthenwares, but it classified as an earthenware (Ramsay 1939:148). It is coarser than whiteware and is generally reproduced in molds instead of being hand formed. The addition of a clear lead or alkaline glaze intensifies the body color to accentuate it, which can run from buff to a deep yellow (Ramsay 1939:148).

Those forms of earthenware ranging from pinkish to red-brown to a dark brown comprise the class of redwares. These are usually made from local surface clays and are of a soft and porous body (Ramsay 1939:128). Common vessel forms made from redware are flowerpots, drain and stove pipes, roof tiles, and tobacco pipes, these being largely unglazed. Mixing pots, baking pots, butter crocks, and bottles were sometimes made of glazed redware, and usually remained in the local area of manufacture. Exploitation of redware is uncommon, due to its local manufacture based on the availability of suitable clays in many locations (Ramsay 1939:128).

Brownware is a transition between the redware and the yellowware. Its paste is finer than redware, it is fired at higher temperatures, and results in sometimes yellowware-looking bodies (Ramsay 1939:143). Brownware was preferred by many small potteries for use as "thrown" or wheel-made ceramics. Many of the potteries in the middle west and southern United States preferred this type of clay. It, like the redware, was formed into large, mainly storage containers or vessels.

Majolica is another type of earthenware which usually falls into the category of a whiteware. It is a term applied to the ornamental ware having a molded design with brightly colored glaze designs applied to its cream- or buff-colored body (Ramsay 1939:154).

In 1813, an Englishman named Charles James Mason patented a new variety of earthenware which revolutionized the ceramics market.

> Various attempts had been made early in the nineteenth century to perfect a new and inexpensive, yet durable, earthenware body. By far the most successful was "Mason's Patent Ironstone China", a much publicized trade-name and one used as an impressed mark on many pieces. The name "Ironstone China" quickly caught the public's fancy implying as it did a tough yet delicate china-like ware (Godden 1975:204).

Between 1830 and 1880 several varieties of this new whiteware came onto the market. Granite China, Opaque China, Stone China, Semi-Porcelain, Flint China, and Stone Ware were some of the trade names used for this ware, which was especially saleable in the export markets (Godden 1975:204). Ironstone contains powdered iron slag, calcinated flint, Cornwall stone, clay, and a slight proportion of cobalt oxide, but the original proportions on file as Mason's patent formula do not produce an ironstone body. Godden (1971:8) believes this to be intentional on Mason's part, so that other manufacturers could not duplicate the mixture until he was able to establish a corner on the market before the patent expired. Mason never did export his ironstone to the United States, but by 1850 many English manufacturers had utilized the ironstone formula to produce that type of ware for the export market, many in the form of heavy, undecorated tableware (Ramsay 1939:153). This heavy tableware was popular for use in hotels and other places where durability was an important factor. The military was one group which required durability in its tableware and, consequently, most of the utility ware found on military establishments in the United States at that time was of this ironstone type. Some wares were decorated with initials of the Quartermaster's Division (Moore 1973:70), but most of the wares were undecorated whitewares (Ramsay 1939:153). As ironstone evolved, its forms became delicate and vessels of ironstone began to look more and more like porcelain.

Stoneware and Porcelain: Clay which is fired above 1,300° Centigrade to become vitrified is called stoneware. It is impervious to liquids, strong, and resilient. Godden (1965:xii) notes that "...early in the nineteenth century stoneware was widely used in the manufacture of molded bottles or flasks, often depicting notable people or events." Stoneware is made from finer and denser clays than earthenwares such as the redware or brownware types, and is fired at a much higher temperature making it lighter in color and forming the vitreous body necessary to make it impervious to liquid (Ramsay 1939:138). Stoneware is either unglazed or salt glazed. Godden (1975:53) describes stoneware as being "...hard as a flint." Even unglazed, it is impervious to liquid and can be used as a storage container.

The differences between earthenware, stoneware, and porcelain are due to the types of minerals used for the original body paste, any inclusions in that paste, and the temperature at which the paste is fired. Earthenware is of a cruder mineral paste with inclusions necessary to control shrinkage during firing. It has a porous body. Ironstone is a more refined, but still earthenware paste. Both are

fired at lower temperatures than stoneware and porcelain. The higher firing temperature of stoneware and porcelain causes both to be vitrified, but porcelain is so highly vitrified that the glaze applied to it becomes almost part of the body, rather than just a covering over the body. True porcelain, or china, is translucent and may be either hard paste or soft paste (Mankowitz and Haggar 1957:179). Those porcelain artifacts made in England in the seventeenth and early eighteenth century were generally soft paste imitations of that produced in the orient, which is a true hard paste. The finer porcelains of the eighteenth century from England and Europe were mostly soft paste of either glass, bone, or soapstone types (Mankowitz and Haggar 1957:179). The standard bone china is actually a hybrid porcelain produced with a high percentage of bone ash included in the paste (Mankowitz and Haggar 1957:179). Porcelain is often considered a delicate ware, because it is so thin, and so was used more exclusively for ornamental objects in the harsher environments of military life.

The properties of porcelain make it as varied as the situations of its use. Porcelain is used for tableware, ornamental pieces, and a variety of utilitarian items such as tiles, insulating articles, and electrical-related materials. Weiss (1964:182) states that what had always been assumed to be simply a homogeneous substance of specific clays was actually "...a medley of different forms of crystals." It is a process of chemistry and physics that requires specific reactions of chemicals to the physical actions of temperature. These complex principles, however, were unknown as such to early potters who simply used methods of trial and error to produce a usable, but still aesthetically pleasing product. Weiss (1964:183) further specifies the definition of porcelain as "...a hard, dense, white, translucent ceramic material, the characteristic crystalline component of which is melilite." Melilite occurs naturally only in basalt, but is formed from the products of kaolin decomposition under heat (Weiss 1964:183). Porcelain is distinguished from milk glass because it has a higher and different crystal content, and can be shaped at room temperature to be hardened under heat. Otherwise, milk glass and porcelain have the same hardness, whiteness, density, and translucency (Weiss 1964:183). The most distinctive characteristic of porcelain is its "ring". That is, good porcelain has a deep, fine ring when tapped gently, while stoneware and earthenware emit only a thud. The better quality the ceramic, the less muffled is the ring. Hard paste porcelain is fired at a temperature of 1,350° Centigrade to 1,460° Centigrade, while soft paste porcelain is fired at temperatures from 1,100° Centigrade to 1,350° Centigrade (Weiss 1964:184). Most European porcelain exported to the United States is of the soft paste, lower firing temperature variety.

Ceramic Manufacture

There are three basic processes by which ceramic vessels are constructed. The first is hand modeling which creates vessels one at a time, each handmade, and each unique. Sometimes these are made from a single lump of clay, and sometimes they are constructed by stacking coils on top of one another to create height, then smoothing them. Either method is time consuming, and not practical for utility vessels other than for personal use. The second method is molding or casting. This essentially means the vessels are still created one at a time, but using a standard mold, so that each piece will resemble the others made from that mold. Clay can be pressed into a mold, or it can be watered down to a "slip" or clay or syrup-like consistency, and poured into a mold. Casting by slip came into use in England around 1745 (Mankowitz and Haggar 1957:184). These molds are usually of plaster, but molds of wood, metal, and fired clay were also used (Mankowitz and Haggar 1957:159). They absorb moisture from the clay, so that slip which is poured into such a mold will dry more quickly on the side against the mold, and the excess slip on the inside can be poured off for another vessel. The third process is wheel formation. This process utilizes a circle of wood lying flat on a framework that allows it to be revolved. These are usually foot powered, but can be machine run. The craftsman places a lump of clay in the center of the circle (wheel) and starts the wheel around. With his hands, the craftsman forms a vessel by pulling and stretching the clay as the wheel turns it around. Each wheel-made vessel is unique, but several can be made in less time than the hand-formed vessels.

The Industrial Revolution had spurred manufacturers to utilize machines to increase production, so in 1844 a machine for mass-producing cups, saucers, bowls, and dishes was introduced in Mason's ironstone factory. It and several others were withdrawn within a year because of worker opposition. It was not until 1947 that automatic plate-making machines were accepted in English pottery factories (Mankowitz and Haggar 1957:181).

Firing

Ceramics are unique because they can be formed in a plastic stage, then when fired, they become solid and permanent. Firing of a vessel means exposing it to high temperatures, usually in the controlled environment of an oven or kiln. First, the moisture is drawn from the clay during the dehydration stage, and the paste loses its plasticity. During this time, the vessel's porosity also increases. Second, the vessel is exposed to low heat causing a chemical change in the clay. Body colors can change during this stage. For example, if there is enough oxygen exposed to the clay, it will retain a clear body color. However, if oxygen is not present because the fire is smothered or there are other gases there to replace the oxygen, then the body color of the vessel will be a darker and grayer color. During the third stage, the fire becomes hot enough that vitrification takes place. This complex chemical reaction causes the vessel body to become almost glassy in appearance if the temperatures are high

enough, such as with porcelain. Earthenwares are fired at lower temperatures, at least to the oxidation stage, while stonewares and porcelains are fired to the vitrification state.

While the vessels are in the kiln for firing, they are often put in a baked fireproof clay box known as a sagger to keep them from sticking to one another (Mankowitz and Haggar 1957:197).

Pottery may be subjected to as many as four firings. The first would be for initial biscuit firing. The second or "glost" firing is to adhere a glaze. The third is for "hardening-on". This is for underglaze transfer-printed wares to burn out the printer's oil before the final glaze. The final firing is for on-glaze color or for gold trim (Mankowitz and Haggar 1957:184).

Glaze

Almost all ceramic is covered with a glaze for both protection of the clay body, as with earthenwares, or as a means of decorating a vessel. Stoneware is glazed in a unique way as compared to the other types of ceramic. Salt glaze is added to stoneware by injecting salt into the kiln when it and its contents have reached a maximum temperature. That heat causes the salt to decompose, forming sodium oxide and hydrochloric acid, which combines with the alumina and silica in the clay to form a hard glaze. Salt-glazed surfaces are slightly pitted and can be compared to an orange peel in appearance (Godden 1965:xiv).

Glazing of earthenware and porcelain is done by adding a glassy material to the body after it has been biscuit fired and cooled. These glazes may be dull, matte, or brilliant. They may be translucent, opaque or brilliantly colored. Glaze has been applied by dusting a lead ore powder on the vessel or by dipping the vessel into a liquid glaze solution. Most glazes before 1820 were lead glazes, but a leadless glaze was introduced at that time and has been used since (Mankowitz and Haggar 1957:97). When the vessel is glazed and placed in the kiln, it rests on spurs or stilts. During firing, these stilts leave spur marks on the base of the vessel. Sometimes the shape and size of these marks can help date the vessel, as these spurs were developed in the early 1800s to replace the bit-stones used earlier (Mankowitz and Haggar 1957:209).

Decoration

For many years, ceramic vessels were decorated by painting by hand a design in or under the glaze. This was time consuming, to say the least, contributing in part to the high cost of tableware. In the 1750s a new decorative technique was introduced that changed the hand-painting processes to make decorated ceramic vessels more quickly

reproduced (Godden 1965:xix). Transfer printing is a process by which a design is placed on the vessel from an engraved plate. An engraver cuts the design into a copper plate which is heated on a stove. The color is rubbed onto the plate and the plate is wiped off leaving the incised lines filled with ink. This ink transfers onto a tissue-like paper or gelatine sheet, and this transfer paper is placed on the vessel which soaks up the colored inks. The vessels are allowed to dry before they are dipped into a glaze, and fired. Transfer printing allows several vessels to carry the same design. Blue was the first color used in transfer printing, and multicolor designs were added in the 1840s (Mankowitz and Haggar 1957:224).

Maker's Marks

Each pottery factory had its own identification mark called a maker's mark or a hallmark. These changed through time, but accurate records allow researchers to identify the marks and date ceramics to within a few years of manufacture. These dates, however, do not allow for shipping and storage time before use, nor for the use time before breakage and subsequent discard. These marks can be either impressed into the vessel before the body has a chance to harden, or they can be transfer printed onto the base of the vessel. Often a vessel decorated with one color will have the maker's mark of the same color transfer printed onto it. Individual artists sometimes signed their works with specific coded marks. Most of these are engraved or impressed. In the early years of manufacture, American pottery factories could not match the quality of English-made ceramics, so they often attempted to duplicate the imported wares and would even copy the maker's mark in an attempt to profit from the popularity of the English wares. Consequently, American-made ceramics are often difficult to identify. The use of "warranted" in a mark can often denote an American pottery company.

Ceramic Types

While there is considerable information about the types of ceramics available, the manufacturing techniques utilized and the methods of decoration preferred, there is only a limited amount of information available about what types of vessels were utilized. Basically, ceramics are divided into two types of vessels based on their use. Household wares include tablewares, storage, and utility vessels. Ornamental ceramics include those pieces made for only an artistic or ornamental purpose, such as figurines, elaborate pitchers, vases, and plates. Most of these were intended to be used only for decoration, and were not meant as utility wares. Housewares, however, are abundant in historic archeological sites. Based on Herskovitz's 1978 report of Fort Bowie Material Culture, the following list has been compiled to describe household tableware as well as household utility and storage wares. Usually an earthenware such as yellowware was used for mixing and other kitchen bowls. Creamware and ironstone

were used for the tableware, both individual place settings and serving pieces. An individual place setting may have included a dinner plate, usually 7 inches to 10 inches in diameter. A soup plate may also have served as a dinner plate. These two differ because the dinner plate is relatively shallow and often has no ridge along the base, while the soup plate can be flat based, but has a depth of about 1½ inches to 2 inches, usually with an edged rim along the outer edge, as opposed to a bowl which would flare directly from the base to the orifice. A smaller plate, possibly a bread and butter or salad plate, was part of a place setting. Also included in an individual place setting would be a cup and saucer. While these may not have always accompanied one another, saucers do appear to be an important part of such an individual place setting. The saucer is smaller than the dinner or soup plate, and often is as deep as the soup plate, but without the edged rim of the plate. Saucers are distinguished from bowls by the presence of an indentation in the center of the vessel into which would fit the base of a cup or mug. They differ from the bread and butter or salad plates because saucers are deeper. Mugs are usually defined as a cup-like body mounted on a small stem and footed base. Cups can vary greatly in shape, but are generally the same size range, at about 3 inches to 5 inches tall. One type of cup is called the "St. Dennis" shaped cup (Herskovitz 1978:100). It has no distinct foot at the base and its sides are nearly vertical, flaring only slightly at the orifice. St. Dennis-shaped cups may or may not have handles. It appears logical that handleless cups might withstand more abuse, such as would occur at a military occupation area. Another type of cup is defined by Herskovitz as an "ovide" cup, meaning the mouth if wider than the base, and the cup characteristically has a curved profile from rim to base. Most of these cups have handles (Herskovitz 1978:100). A third type of cup found is the oriental tea or saki cup, although these are generally not common. Often an individual vegetable bowl would accompany the plate and cup/saucer. These may or may not have had lids. A fruit or ice cream dish, somewhat like a saucer, but without the center indentation, was also part of the place setting. Finally, the place setting is completed with individual butter dishes about 3 inches in diameter.

Serving pieces were usually either platters, bowls, or pitchers. Serving platters are generally flat with a footless bottom, although they may have a ring along the bottom at the base. Bowls included baker's bowls or oval vegetable bowls, round bowls, and St. Dennis type bowls, which are nearly vertical sided, and flaring only slightly at the rim. These St. Dennis bowls came in sizes of one pint, one and one-half pints, and two pints, and often had a "molded ring" at the bottom of the base. This may have been a military issue design, as this base treatment also occurs on the St. Dennis type cups (Herskovitz 1978:29). Serving pieces as well as individual place settings came as round, oval, or multisided pieces (usually eight sides). Pitchers are also part of the serving pieces. These range in size from gravy pitchers which are almost individual sized, to large drink

pitchers to serve many people. There appears to be no standard pitcher size or shape.

Ladles were also mentioned by Herskovitz, but only part of one was found by him so the description is incomplete. Sugar boxes or bowls are part of a serving set, but these are often classed as bowls or ornamental boxes.

In addition to tableware, various types of stoneware vessels were used for preparation and storage. These divide into at least four categories: jugs, crocks, bowls, and bottles, with variations of each of these. Jugs have constricted orifices and handles, while bottles have constricted orifices but no handles. Crocks have more or less equal orifice to vessel diameter ratios, while bowls often have an orifice larger than the vessel diameter between the orifice and the base. These may have lids. Shallow dishes of stoneware were also made, often to use with flowerpots. Other types of household utility ware include chamber pots, and a bowl and ewer (pitcher) combination, which were used in the bed chambers. Earthenwares were used for both, with yellow and creamwares used for the chamber pots and creamwares and ironstone used for the ewer and bowl sets.

Ceramic Dating

There are some general guidelines which can be followed to aid in identification and dating of ceramic pieces. First of all, the more elaborate and ornamental pieces are often signed, and an atlas of maker's marks and signature marks can be used. Geoffrey Godden (1964:11) sets up several other helpful hints concerning this task of identification. In 1891, in order to comply with the American McKinley Tariff Act, all imported wares were required to have the country of origin included in the maker's identification mark. Many manufacturers were doing this prior to 1891, and after that date some foreign-made ceramics were imported through channels that did not enforce the Tariff Act, so this "Rule of 1891" must be used with caution. Regulations in England brought about the use of "Limited" (abbreviated as Ltd. or Ld.) after the firm name around 1860, however this practice did not come into general use until around 1880. The term "Limited" is similar to the United States' "Incorporated", so not all firms were using it. As patents and protection of wares became more important, the term "trademark" was often added to the maker's identification. This generally occurs after 1862, and usually after 1875. Registration of specific styles began in 1884 and is evidenced by the occurrence of "Rd. No." followed by a number. If that number is over 360,000, the piece was registered after 1900. The use of the Royal Arms pattern of a lion and a unicorn with a shield is quite common both English and American ceramics, and is considered to be of nineteenth century origin. A maker's mark with the pattern name included is subsequent to 1810. The use of "Royal" in the title, such as "Royal Ironstone China" suggests a middle to later nineteenth

century origin. Diamond-shaped registration code marks were established in 1843 and dating from them gives indication of when the design was registered, but not when it was manufactured. Finally, "Bone China" or "English Bone China" is of twentieth century origin. These are only general guidelines for dating the origin of specific patterns or styles of ceramic pieces and do not allow for the time lag of shipping, storage, and use before breakage or being discarded, and therefore, represent only the earliest time that these pieces could have been manufactured and not an exact time of site occupation.

There were identifiable ceramic maker's marks representing 29 firms, as documented by Ramsay (1939), Godden (1964), and Kovel and Kovel (1953). These only represent the marks complete enough to identify. Several others were present, but were not complete enough for identification. Of these 29 firms, 19 are English, nine are American, and one is French. It is probable that other manufacturers from these countries, as well as Germany, Austria, and Japan were represented, but identification of specific firms was not possible.

English-made pottery and porcelain wares were generally believed to be of superior quality compared to American-made wares of the time. However, the introduction of creamware to New Jersey potteries in 1854 changed that trend. Trenton, New Jersey became a pottery-producing center for undecorated crude whitewares known as "White Granite" (Ramsay 1939:49). The Greenwood Pottery Company and the Trenton China Company of Trenton, New Jersey made much of the military-issue ware (Herskovitz 1978:100-105). The first whiteware in the United States was probably made from clay found by accident by Andrew Duche' of Philadelphia. However, political squabbles caused his enterprise to fail. Other American potteries began to produce creamware, causing concern for the English potters. Josiah Wedgwood of the famed English pottery company feared the loss of his export business because, "They have every material there, equal if not superior to our own, for carrying on that manufacture" (Ramsay 1939:97).

Simplicity solved problems of manufacture and decoration for American factories. Ramsay (1939:109) states that American "White Granite" is "...almost indistinguishable from imported wares, but often shows a blue-white color." After 1880, there was successful production of white earthenware and between 1860 and 1900, many American potters concentrated on producing heavy, undecorated tableware (Ramsay 1939:153).

After 1842, English manufacturers used a diamond-shaped registration mark on some of their products, as described by Godden (1971:86). This is a universally recognized mark providing a date of pattern registration in England between 1842 and 1883. It provides a day, month, and year date in a code of numbers and letters around the diamond shape. There were only two such pieces recovered from Fort Scott.

Ceramics at Fort Scott

The material inventory from Fort Scott contains 6,760 ceramic items that can be classified as either household or ornamental wares. Excluded from the present discussion are such specialized ceramic objects as marbles, figurines, doll parts, toys, tobacco pipes, buttons, electrical equipment, and bricks and tiles. These objects have been discussed in detail in other sections of the present report. The count of sherds (6,760) was made primarily to identify preferences of ceramic type. It should be understood that this count is an estimate. Sherds which fit together, as well as reconstructed vessels, were counted as one sherd, regardless of size. Whenever possible, vessels were reconstructed so that an understanding of their complete shape could be gained. Nevertheless, considering the large number of recovered sherds and the general uniformity of some types, it is likely that other restorable or partially restorable vessels are still contained within the category of miscellaneous sherds.

All three of the principal types of ceramics recognized in the general discussion of ceramic technology (i.e., earthenware, stoneware, and porcelain) are present in the Fort Scott inventory. As Table 14 indicates, these types were not equally represented at the site and the frequency of their occurrence varied even within the sherd samples from the particular structures. Earthenware vessels were the most abundantly represented ceramics found at the site. These specimens comprise 74.8 percent (5,057 sherds or vessels) of the total ceramic sample. Ironstone (which is herein classified as an earthenware) was the most abundantly represented of the earthenware subtypes. The next most frequently occurring ceramic type was that of stoneware (including some brownwares and redwares) which comprised 18.8 percent (1,273 sherds or vessels) of the sample. Porcelain, including several large sherds of an unidentified utility ware, accounted for only 6.4 percent (430 sherds or vessels) of the sample.

A study of the complete and partially restored vessels in the Fort Scott inventory revealed that the recovered ceramics included a large number of functional types. The majority of these items may be classified as household wares and they include mixing and kitchen bowls, tableware items, serving pieces, utility items (i.e., chamber pots, bowls, and ewers), and storage containers. Tableware items were abundantly represented and included plates, soup plates, bread and butter or salad plates, bowls, saucers, cups, and a wide variety of individual vegetable or butter dishes. Servicing pieces were represented by platters, bowls of both oval and round shape, and pitchers. Storage containers included jugs, crocks, jars, and bottles. Other household or utilitarian items included in the sample were sections of flowerpots and candleholders. Plates 70 to 80 illustrate a representative sample of the wide range of functional household items found in the Fort Scott ceramics.

TABLE 14
14BO302, Ceramic Distribution

Structure	# of Sherds	Earthenware	Stoneware	Porcelain	% of Total
HS 1	2	2	0	0	0.05
HS 2	13	11	2	0	0.2
HS 3	1,310	977	283	50	19.4
HS 4	17	9	0	8	0.3
HS 5	685	581	68	36	10.1
HS 6	2,599	1,947	418	234	38.4
HS 7	828	553	246	29	12.2
HS 8	236	196	26	14	3.5
HS 9	333	280	34	19	4.9
HS 10	101	52	48	1	1.5
HS 11	434	327	82	25	6.4
HS 12	0	0	0	0	0
HS 13	113	78	24	11	1.7
HS 14	0	0	0	0	0
HS 15	0	0	0	0	0
HS 16	2	1	1	0	0.05
HS 17	59	20	39	0	0.9
HS 33	28	23	2	3	0.4
Surface	0	0	0	0	0
Totals	6,760	5,057	1,273	430	
Percent Totals		74.8%	18.8%	6.4%	100%

Ornamental ceramics were also recovered at Fort Scott, although in far fewer numbers than the household wares. Undoubtedly, some of the highly decorative cup and saucer sets and some of the unique plates and other tableware items were more ornamental than functional. Unfortunately, the majority of the strictly ornamental items in the collection were represented by such incomplete specimens that no determination of original shape could be made.

One hundred and thirty-three vessels or vessel sections from Fort Scott contain important information about ceramic manufacturers. Typically, this information consists of hallmarks or maker's marks located on the reverse faces of the vessels. At least 30 different manufacturers of ceramics (from both the United States and foreign countries) are represented in the inventory. Because of the distinctive nature of some of the maker's marks, and because of known dates of operation for many firms, at least some of these items can be identified as to their probable date of manufacture. Manufacturing dates for the identified marked wares in the Fort Scott collection cover a time span from as early as circa 1841 to as late as the mid-twentieth century. Table 15 (pages 236-237) provides a list of the identified makers, the number of vessels associated with each maker, the dates of operation of the makers, specific hallmark dates (when known), and the source for the particular identifications.

Ceramics by Structures

During the analysis of the Fort Scott ceramics, it was recognized that the frequency of occurrence of ceramic types, as well as wares with hallmarks, differed from structure to structure (Tables 14 and 15). Accordingly, a more detailed study of these intrasite relationships was undertaken in an attempt to clarify these differences.

HS1 Officer's Quarters #1
Percent of total sherds recovered at HS1 = 0.05%
Composed of:
100% earthenware
No makers represented
No restorable vessels

HS2 Officer's Quarters #2
Percent of total sherds recovered at HS2 = 0.2%
Composed of:
85% earthenware
15% stoneware
Makers represented:
J. & G. Meakin, England
Restorable vessels:
Flowerpot (redware)

HS3 Officer's Quarters #3
Percent of total sherds recovered at HS3 = 19.4%

Composed of:
74% earthenware
22% stoneware
4% porcelain
Makers represented:
Greenwood Pottery Co., New Jersey
West End Pottery Co., New Jersey
J. & G. Meakin, England
Alfred Meakin, England
Johnson Bros., England
Steubenville Pottery Co., Ohio
W.T.H. Smith, England
Willits Manufacturing Co., New Jersey
Restorable Vessels:
Ironstone plates, cups, saucers, bowls.
Most of the ceramic artifacts recovered from HS3 were pieces of individual tableware settings or were serving pieces with ironstone (heavy and undecorated) predominating. These included four different sizes of dinner plates, an eight-sided platter, flat-bottom plates, and platter, saucers, St. Dennis-shaped bowls and cups, oval-shaped platters and bowls, individual-sized oval bowls, cups with and without handles, individual butter bowls, mixing bowls of creamwares and yellowwares, stoneware jugs, and some transfer-printed plates with landscape-type designs. Restorable porcelain was limited. Manufacturers are those producing military issue wares.

HS4 Officer's Quarters #4
Percent of total sherds recovered at HS4 = 0.3%
Composed of:
53% earthenware
47% porcelain
Makers represented:
One diamond registration mark
No restorable vessels

HS5 Dragoon Barracks
Percent of total sherds recovered at HS5 = 10.1%
Composed of:
85% earthenware
10% stoneware
5% porcelain
Makers represented:
Whittaker, Heath & Co., England
Sampson Bridgwood & Son, England
Dresden Porcelain Co., England
Alfred Meakin, England
W.H. Grindley & Co., England
Davenport & Co., England
Wedgwood & Co., England
Johnson Bros., England
Restorable vessels:
Earthenware bowls, large stoneware crocks, ironstone plates, cups, saucers, stoneware drainage pipe sections, and utility porcelain.

HS6 Infantry Barracks
Percent of total sherds recovered at HS6 = 38.4%
Composed of:
75% earthenware
16% stoneware
9% porcelain
Makers represented:
Western Stoneware Co., Illinois
Anthony Shaw, England
Johnson Bros., England
J. & G. Meakin, England
West End Pottery Co., New Jersey
T & R Boote, England
J.W. Pankhurst, England
Edward Pearson, England
Mellor, Taylor & Co., England
Alfred Meakin, England
Homer Laughlin, Ohio
Thomas Hughes & Sons, England
H. Meakin, England
Wood, Son & Co., England
J. & E. Mayer Pottery Co., Pennsylvania
Wheeling Pottery Co., West Virginia
Haviland, France
Restorable vessels:
Stoneware jugs, mixing bowls, flowerpots, cups of ironstone with and without handles, ironstone and yellowware chamber pots and lids, decorative vases, bowls, platters and cups, seven plates of the same set, pitchers, individual tableware pieces of plates, soup plates, ice cream or fruit bowls, butter dishes, St. Dennis cups, a candleholder, and serving bowls.

HS7 Infantry Barracks
Percent of total sherds recovered at HS7 = 12.2%
Composed of:
67% earthenware
30% stoneware
3% porcelain
Makers represented:
Davenport Co., England
Laughlin Bros., Ohio

Restorable vessels:
Stoneware bottles and jugs, ironstone cups, large bowls, saucers, plates, and stoneware drainage pipe.

HS8 Hospital
Percent of total sherds recovered at HS8 = 3.5%
Composed of:
83% earthenware
11% stoneware
6% porcelain
Makers represented:
Johnson Bros., England
John Wedge Wood, England
Restorable vessels:
Ironstone plates and saucers with transfer-print designs, one six-sided pitcher, and a shallow stoneware dish.

HS9 Guardhouse
Percent of total sherds recovered at HS9 = 4.9%
Composed of:
84% earthenware
10% stoneware
6% porcelain
Makers represented:
J. & G. Meakin, England
Anthony Shaw, England
Restorable vessels:
Porcelain cups and saucers, stoneware bottles, ironstone cups without handles, ironstone saucers and an oval baker's bowl.

HS10 Dragoon Stables
Percent of total sherds recovered at HS10 = 1.5%
Composed of:
51% earthenware
48% stoneware
1% porcelain
No makers represented
Restorable vessels:
Stoneware jug, large stoneware crock.

HS11 Post Headquarters & Ordnance Stores
Percent of total sherds recovered at HS11 = 6.4%
Composed of:
75% earthenware
19% stoneware
6% porcelain
Makers represented:
Johnson Bros., England
J. & G. Meakin, England
One diamond registration mark
Restorable vessels:
Large stoneware crock, stoneware bottles, flowerpots and shallow dishes, ironstone eight-sided plates, saucers, round plates, cups with handles, an oval platter, handleless cups, salad-sized plates, and small oval bowls.

HS13 Quartermaster Stables
Percent of total sherds recovered at HS13 = 1.7%
Composed of:
69% earthenware
21% stoneware
10% porcelain
Makers represented:
Homer Laughlin, Ohio
J. & G. Meakin, England
Restorable vessels:
Earthenware jug, ironstone plates, cups with handles, saucers.

HS16 Flagpole
Percent of sherds recovered at HS16 = 0.05%
Composed of:
50% earthenware
50% stoneware
No makers represented
No restorable vessels

HS17 Powder Magazine
Percent of sherds recovered at HS17 = 0.9%
Composed of:
34% earthenware
66% stoneware
No makers represented
No restorable vessels

HS33 Wagon Scale House
Percent of total sherds recovered at HS33 = 0.4%
Composed of:
82% earthenware
7% stoneware
11% porcelain
Makers represented:
T & R Boote, England
No restorable vessels

The sample of ceramics from HS1, HS2, HS4, HS16, HS17, and HS33 is too small to show a pattern. HS3 and HS5 have a high percentage of heavy, undecorated ironstone tableware, both individual and serving pieces. They also have ironstone and earthenware utility vessels. HS6, on the other hand, has few of the undecorated ironstone, but does have many ornamental pieces of ironstone and porcelain. Several of these are hand painted. Even the plain ironstone has a raised design, and is more ornamental than the totally undecorated wares of HS3 and HS5. Historic Structure 8, HS9, HS11, and HS13 also have tablewares, and these tend to be more durable ironstone, but decorated by

TABLE 15
14BO302, Ceramics with Maker's Mark

Manufacturing Co.	Country (US City)	Structure	# of Vessels	Impressed or Printed	Dates of Operation	Mark Date	Source
Greenwood China Co.	Trenton, NJ	HS3	36	IMP	1870-1900	1870-1876	Kovel & Kovel 1953:54 Ramsay 1939:182
West End Pottery Co.	Trenton, NJ	HS3	1	PR	Est. 1893	-	Kovel & Kovel 1953:142
" " " "	" "	HS6	8	"	" "	"	" " " " "
Western Stoneware Co.	Monmouth, IL	HS6	2	"	1870-1890	-	Ramsay 1939:224
Wheeling Pottery Co.	Wheeling, WV	HS6	1	"	1879-1900	-	Ramsay 1939:223
J. & G. Meakin	England	HS2	"	"	1851-Pres.	1890+	Godden 1964:427
" "	"	HS3	3	PR & IMP	" "	1851-1891	" "
" "	"	HS6	5	PR	" "	ca. 1890+	" "
" "	"	HS9	1	"	" "	ca. 1869+	" "
" "	"	HS11	6	"	" "	1851-1891	" "
" "	"	HS13	1	IMP	" "	n.d.	" "
Alfred Meakin	"	HS3	1	PR	1875-Pres.	1891-1896	" 1964:425
" "	"	HS5	1	"	" "	ca. 1897+	" "
" "	"	HS6	4	"	" "	1891-1892	" "
Johnson Brothers	"	HS3	9	"	1883-Pres.	1883-1913	Godden 1964:355-356
" "	"	HS5	2	"	" "	1891-1913	" "
" "	"	HS6	15	"	" "	ca. 1900	" "
" "	"	HS8	1	"	" "	"	" "
" "	"	HS11	1	"	" "	"	" "
Steubenville Pottery Co.	Steubenville, OH	HS3	1	"	1879-1900	-	Kovel & Kovel 1953:232
W.T.H. Smith	England	HS3	1	PR	1898-1905	-	Godden 1964:584
Willits Manufacturing Co.	Trenton, NJ	HS3	1	"	1879-1900	-	Kovel & Kovel 1953:227
Laughlin Brothers	E. Liverpool, OH	HS7	1	"	1873-1879	-	Ramsay 1939:266
Anthony Shaw	England	HS6	3	"	1851-1900	1860-1882	Godden 1964:570-571
" "	"	HS9	1	"	" "	1860-1900	" "
Whittaker, Heath & Co.	"	HS5	1	"	1892-1898	-	Godden 1964:667
Sampson Bridgwood & Son	"	HS5	1	IMP	1805-Pres.	Mid-1800s	Godden 1964:101
Dresden Porcelain Co.	"	HS5	1	PR	1896-1904	-	Godden 1964:221
W.H. Grindley & Co.	"	HS5	1	"	1880-1960	Pre-1914	Godden 1964:294
Davenport & Co.	"	HS5	1	IMP	1793-1887	1844	Godden 1964:189
" "	"	HS7	1	PR	" "	-	" "

14BO302, Ceramics with Maker's Mark
TABLE 15 (Continued)
14BO302, Ceramics with Maker's Mark

Manufacturing	Country (US City)	Structure	# of Vessels	Impressed or Printed	Dates of Operation	Mark Date	Source
Wedgwood & Co.	England	HS5	1	IMP	1860-Pres.	1860+	Godden 1964:655
Homer Laughlin	E. Liverpool, OH	HS6	2	PR	1879-1897	1885-1889	Ramsay 1939:219
" "	"	HS13	1	"	" "	-	" "
T & R Boote	England	HS6	1	"	1842-Pres.	1890+	Godden 1964:84
" "	"	HS33	1	PR & IMP	" "	1890-1906	" "
John Wedge Wood	"	HS8	1	IMP	1841-1860	-	Godden 1964:687
J.W. Pankhurst	"	HS6	1	PR	1850-1882	1850-1852	Godden 1964:481
Edward Pearson	"	HS6	1	"	1853-1873	-	Godden 1964:728
Mellor, Taylor & Co.	"	HS6	1	"	1880-1904	-	Godden 1964:432
Thomas Hughes & Sons	"	HS6	1	"	1895-1957	1895-1910	Godden 1964:339
H. Meakin	"	HS6	1	IMP	1873-1876	-	Godden 1964:426
Wood, Son & Co.	"	HS6	4	PR	1869-1879	-	Godden 1964:690
J. & E. Mayer Pottery Co.	Beaver Falls, PN	HS6	1	"	1881-1900	-	Kovel & Kovel 1953:252
Haviland	France	HS6	1	"	1860-Pres.	ca. 1893	Kovel & Kovel 1953:61
Diamond Reg. Marks	England	HS4	1	"	-	1864	Godden 1964:527
" " "	"	HS11	1	IMP	-	9/2/1846	" "

transfer-print design. While HS3 and HS5 have mostly undecorated ironstone, HS8, HS9, HS11, and HS13 have decorated ironstone, and HS6 has mostly decorated wares, many being fine ironstone or porcelain. Historic Structure 7 and HS10 have a high percentage of stoneware compared to earthenware.

METAL CONTAINERS

The inventory of material items recovered from Fort Scott contains numerous examples of metal containers, but only a very few specimens were complete enough to allow for analysis and description. This is undoubtedly a result of the generally very poor preservation conditions that existed at Fort Scott for iron objects. Recognizable container types included a coal hod, a teakettle, several sauce pans, and tin cans. Another category of related items, metal closures or lids, is also included in the general category of metal containers because most of these items evidently were used as closures or lids on metal containers. The distribution of metal containers and lids within the fort complex is shown in Table 16.

Coal Hod

The largest metal container recovered from Fort Scott consisted of a tinned coal hod of the open type (Plate 81, A). This specimen is missing the wire handle or bale with which it was carried, but it still has all of the base and most of the body present. The base is circular and has a diameter of 22 cm. The specimen has an overall height of approximately 26 cm, a maximum length of 45 or 46 cm, and an estimated width of 25 cm. The circular base was formed in one piece, with the edge folded down and then a rolled-edge lip completing the base. The upper part of the hod is formed in two sections out of thin metal. A seam line runs vertically from the base up to the top on both sides of the vessel. The top edge is rolled to create a smooth lip, and a flat metal strap was riveted on each side to allow for the wire bale or carrying strap. The specimen was recovered from the fill of one of the latrine pits that was associated with Historic Structure 6.

Teakettle

An enameled steel, flat-bottomed teakettle was recovered from one of the latrines associated with Historic Structure 6 (Plate 81, B). This specimen is missing the lid and a portion of the handle, but otherwise it is nearly complete. The specimen has a flat, circular bottom which measures 23 cm in diameter and the kettle has an estimated height, without the lid, of 12 cm. The vessel diameter at the orifice is 124 mm. In appearance, the kettle looks something like a truncated cone, although the upper shoulder area is quite rounded. The base and the body were formed of two flat pieces of steel that were joined by folding and welding. The lip of the orifice has been

TABLE 16
14B0302, Distribution of Metal Containers, Cooking Implements, Stove Parts, Eating and Serving Utensils

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Coal Hod						1													
Teakettle							1												
Cooking Pans							2												
Metal Cans							3					4							
Lids and Closures			5	1	4	10	6		3	1	4					1	1		
Cast Iron Stove Parts																			
Lids					2	2		1		6	1						2		
Miscellaneous			4	1		11	1												
Lid Lifters					1	1		1			1								
Meat/Pot Hooks						1			1	1									
Common Butcher Knife																1			
Tableware and Mess Knives					2	4					10								
Large Cooking Fork			1						2										
Tableware and Mess Forks					1	1	7	1	1		1								
Tablespoons			1		1		1	1	3		2							1	
Teaspoons			3		2	7	2	1			2								
Miscellaneous Handles			5	1	3	11	3	2	3		5								
Napkin Ring													1						

rolled and two flat straps have been riveted onto the shoulder at opposite sides of the vessel to allow for a bale type of handle to be attached. A large spout projects up from the lower part of the kettle is an S-shaped curve.

Sauce Pans

Two small- to medium-sized sauce pans were recovered from Fort Scott. The first of these is part of a small cooking pan (Plate 81, C). It is cylindrical in shape and has a base diameter of 180 mm and a height of 105 mm. The specimen was formed from a single piece of steel, as no mold seams are evident on the specimen. The upper lip has been rolled to create a reinforced lip element. Two strap handles (each with two rivets) have been added at opposite sides of the vessel just below the orifice. The surface of this specimen has been treated both inside and out with an enameling process. The inner surface consists of a white-colored enamel while the outside consists of a mottled white and blue enameling.

The second sauce pan is a cylindrical, enameled, metal container which has a base diameter of 145 mm and a height of 110 mm (Plate 81, D). The flat base was formed in one piece and was then attached to the cylindrical body by a process of folding and welding. The cylindrical body was formed in one piece by welding it vertically from top to bottom along one side. The top edge was rolled outward to create a smooth lip. The specimen again apparently had some sort of bale-type handle, as elements of two flat straps, each with a double rivet, are located at opposite sides near the rim. The inside and outside of this vessel are treated with a blue to grayish enameling process that creates a somewhat splotchy effect.

While it has not been possible to firmly date any of the four above mentioned specimens, the 1902 Sears Roebuck catalogue contains illustrations of quite similar wares. In particular, the first enameled sauce pan is quite similar to illustrations of "true blue enameled ware" in the Sears, Roebuck and Company catalogue (Crown Publishers 1969:587). The level of metal technology exhibited on these four specimens would suggest a late nineteenth or early to mid-twentieth century dating.

Metal Cans

Portions of seven metal containers or cans were recovered from Fort Scott which are complete enough to merit further discussion. Most of these are of tinned metal. Fontana and Greenleaf (1962:67-78) have provided a quite comprehensive and well-written summary of developments within the tinned steel plate industry of the nineteenth century. It appears that two of the tin cans recovered from Fort Scott are of essentially modern type (example on Plate 82, A). Both are cylindrical cans (the uncrushed specimen is 75 mm in height by 69

mm in diameter) and both employ the double-seam crimp (on top, bottom, and side) that was first developed in 1893 (Fontana and Greenleaf 1962:72). This type of can apparently has been widely used for vacuum-sealed products since 1902 (Fontana and Greenleaf 1962:72-73). Two of the tin cans recovered from Fort Scott are either square or rectangular in shape. The larger specimen measures 51 mm in height, 115 mm long, and 90 mm wide. The smaller specimen (which has a simple press lid that is in place) measures 57 mm on a side and is 21 mm in height (Plate 82, B). Two cylindrical cans were recovered which have screw-top closures. Both specimens have flat bases, cylindrical bodies, rounded or sloping shoulders, and narrow screw-cap closures. One specimen has a height of 72 mm and a diameter of 46 mm and the other is 92 mm high by 43 mm in diameter. One of these specimens is made entirely of tin while the other (Plate 82, C) has a brass shoulder and cap. The caps are present on both specimens.

Lids and Closures

Thirty-five items were recovered at Fort Scott which are apparently closures and lids for a variety of cans and other metal containers. Excluded from this category are metal closures for bottles and other glassware. Five of the closures are tubular spouts of lead which were attached to cans or other implements by means of an internally threaded cap. The metal spouts protrude from the center of this cap. Two different lengths are represented in the sample. Four small, screw spouts all have a length of 53 mm and a screw-cap diameter of 14 mm. One very large example has an overall length of 170 mm and a screw-cap diameter of 28 mm (Plate 82, D). Five other lids recovered from Fort Scott may have been screw-spout caps as each of them contains a large central hole. These examples had cap diameters that ranged from 26 mm to 37 mm in size and they were all of the internally threaded variety.

Five metal lids from Fort Scott (two made of iron, one of lead, and two of brass), have tops that are perforated with more than one hole. The most simple of the perforated tops is a screw-thread, circular top. Two examples of screw-thread, perforated tops were noted in the sample. One of these measures 46 mm in diameter and has somewhat irregularly spaced holes, suggesting that the holes were punched in the top by the user rather than by the manufacturer (Plate 82, E). The reverse face of this cap supports this hypothesis as each of the hole areas has a flange of metal extending through and projecting upward above the reverse face. The second specimen, which is made of lead, is more carefully perforated and it appears to be the top of a salt or pepper shaker or some similar condiment container. One perforated top (made of iron or tin and measuring 29 mm in diameter) has a screen-wire top. This example is apparently of the screw-thread type, although it is so badly corroded that this is hard to determine. Two examples of composite, perforated tops were noted in the sample. The composite, perforated tops have two layers of thin metal (brass)

opposed to each other so that one can be rotated over the other to create a solid top. One of these is a circular example with screw threads which measures 38 mm in diameter. The second example is represented by a circular, screw-thread top of 27 mm diameter which forms a part of a larger oval can. The oval can had an estimated width of 66 mm and an estimated thickness of 34 mm.

Eight threaded, solid, screw caps were recovered from the site. Two of these were made of iron, five of brass, and one of lead. Five of these have internal, screw threads indicating that they fit over the screw threads of a container. These examples range from 38 mm to 64 mm in diameter. Three of the solid, screw caps had external threads and these obviously screwed into threads on some sort of container. These examples range from 15 mm to 32 mm in diameter.

Ten simple, press-on caps were recovered at the site. Three of these were made of iron and the remaining specimens were made of copper, brass, or some similar alloy. These examples range from 28 mm to 95 mm in diameter. Four of the pressed-cap lids deserve special mention because they contain information about either the maker or the user of the can. The largest of these is a 65 mm diameter, circular lid of tin which is marked in the center with a complex logo which consists of a "T", "U", and "S" that are all superimposed. Around the perimeter of the lid is the message "UNITED STATES TOBACCO COMPANY". This is evidently a lid from a snuff can. Another circular press cap, which measures 41 mm in diameter, has three partial lines on it, although several other lines were evidently obliterated. These lines read "--OWS/100/TESTED". The third specimen, which measures 38 mm in diameter and is also circular, is marked "WOLF BROS/SHIRTMAKERS/MEN'S/FURNISHINGS/GOODS/557/MAIN STREET/KANSAS CITY MO.". This item may have contained collar studs or some other item of men's apparel. The fourth marked example is a reverse, press lid made of tin. This circular specimen measures 33 mm in diameter and 10 mm thick. Visible on the reverse, or depressed side, is the following "PRY THIS OUT/USE FOR PLUG". It is evident that this was a plug-type cap that was meant to be pried out and then reused. While the use of this specimen cannot be established, it is quite possible that it was a cap for some petroleum product or other liquid.

A single example of a modern tin can lid (apparently removed from the can with a can opener) was recovered from the site.

STOVE PARTS AND COOKING IMPLEMENTS

A number of items of iron were recovered from Fort Scott which are connected rather directly with either cooking or heating for the interior of buildings. Included in this category are cast iron stove parts, lid lifters for stove lids, meat hooks, and pot hooks. The general distribution of these specimens is shown in Table 16.

Stove Parts

Thirty cast iron, metal items were recovered from Fort Scott which were identified as being parts from stoves. The specimens were all quite fragmentary and thus it could not be determined whether or not these were elements of large cooking stoves or smaller heating stoves. It is probable that other, unrecognized, stove parts are contained in the miscellaneous, badly corroded iron items that were found at Fort Scott. At least three different round stove covers or lids are represented in the sample of stove parts. The more complete of these specimens has an estimated original diameter of 205 mm. Other stove parts recovered from Fort Scott include portions of legs, doors, and stove tops. As noted, the stove parts are quite fragmentary and, in general, very corroded. A single specimen of an ornate stove front has on its reverse side the raised letters "--R-20-A-LT-207C" (Plate 83, A). This is the only stove part that has any identifying letters or numerals on it, and it could not be identified as to manufacturer or date of manufacture. That at least some of these stove parts could date from the very early military occupation of Fort Scott seems certain. Ketcham (1977:34) notes that small, three-legged heating stoves were available during the 1840s and that at least some of these were in use by the U.S. Army. Other stove types, such as the Franklin, were also in use during this period (Ketcham 1978:40).

Lid Lifters

Four lid lifters from cast iron heating or cooking stoves were recovered from Fort Scott. All of these specimens were apparently one-piece, cast iron examples. Two of them are straight lifters and two are of the curved variety. The two curved specimens have ovate holes at the flattened handle end of the object (example on Plate 83, B). The largest complete specimen measures 175 mm in length although the two incomplete specimens were evidently of larger size.

Meat/Pot Hooks

Four probable meat hooks or pot hooks were recovered from Fort Scott. The largest of these is made of 9 mm diameter, circular wire which has been bent into a hook shape or U-shape at both ends (Plate 83, C). One end has been closed back on the shaft of the specimen and the other end is open. This specimen measures 242 mm in length and appears to be hand formed. This may be an example of a pot hook, although it obviously could have served other functions as well. Two small, curved hooks recovered from Fort Scott were intended to be either driven or screwed into wood. The larger of these is a U-shaped hook made out of 10 mm diameter, heavy steel or iron wire which has, on one end, screw threads for attachment into wood (Plate 83, D). The threads terminate approximately halfway up the hook in a metal flange or platform which apparently was the support for the lateral movement

of the hook when heavy weight was placed upon it. The second small specimen is made of lighter gauge wire of indeterminate diameter, and it is of the type that was intended to be driven into wood rather than screwed in. A fourth specimen that was classified as a meat hook or pot hook is a U-shaped hook made of 8 mm diameter round wire. The attachment portion of the hook was formed by simply bending the end of the wire into a circular or eye shape.

EATING AND SERVING UTENSILS

Ninety-seven items were recovered from Fort Scott which have been identified as utensils utilized in either serving of food or eating of food. Included in this category are a section of a common butcher knife, large cooking forks, tableware and mess forks, tablespoons, teaspoons, and a number of handles that are sections of knives, forks, and spoons. The general distribution of the eating and serving utensils is shown in Table 16.

Common Butcher Knife

A single example of a carbon steel butcher knife was recovered from Fort Scott (Plate 84, A). This specimen is represented only by a portion of the midsection and the point of a butcher knife that had a blade that was 2 mm in thickness. The knife is of the clip-point variety and it does not appear to be heavily worn.

Tableware and Mess Knives

Eighteen complete or recognizable tableware knives were recovered from Fort Scott. Many of these are in extremely corroded condition. Only two of the tableware knives were recovered in a complete or nearly complete condition. The first of these (Plate 84, B) is a wood handled table knife with a rounded point. This specimen has an overall length of 224 mm and it is a full-tanged knife with two wooden slab handles. The second complete knife is an all-metal knife that has a handle that is ovate in cross section (Plate 84, C). This specimen measures 230 mm in length and it is slightly more pointed than the aforementioned specimen. Seven of the recovered knives were complete enough to determine that they were full-tanged specimens that had attached slab handles riveted on them. Six of these examples had handles that attached with three rivets and one specimen utilized just two rivets in the attachment. Four of the full-tanged knives evidently had wood-handle slabs on either side of the tang, and two had bone-handle slabs (example on Plate 84, D). The slab material utilized on the seventh specimen was not present. Four of the incomplete tableware knives identified at Fort Scott were metal-handled examples similar to the complete example discussed above (Plate 84, C). These four examples are probably rattail tanged, although it is possible that the metal handles were formed integrally with the blade. The specimens are so corroded that this could not be determined. Two

additional knives had all-metal handles, but with panel recesses on both sides of the handle for inset slabs of some sort. The slabs are missing. The metal-handled knives typically had metal bolsters (sometimes of brass) at the point where the handle meets the blade of the knife. The remaining five knife examples consist of such incomplete sections that no determination as to knife type or size could be made. None of the tableware knife sections recovered from Fort Scott had any identifying marks upon them. Thus, it is impossible to date any of these items with certainty. However, it is noted that the simple, full-tanged knife with slab-wood handles, was of a type commonly employed by the military during at least the Civil War period (Lord 1963:153-154).

Large Cooking Forks

Three sections of large, three-tined or two-tined iron cooking forks were recovered from Fort Scott. All of these were incomplete specimens and no dimensions could be ascertained. Nevertheless, the specimens all were apparently of one piece iron or steel construction.

Tableware and Mess Forks

Eighteen tableware forks or mess forks were recovered from Fort Scott. The forks are all of the two-tined or three-tined pattern, but several different materials were used in their construction. Some specimens are silver plated, one specimen is made of pewter, and the remaining specimens are made of either tin, iron, or steel. Several of these latter examples are composite knives which include bone or wood scales or slabs. Six silver-plated tableware forks were recovered from Historic Structure 6 and they are all of the same pattern (example on Plate 84, E). The reverse side of the handle of each of these contains the following in raised letters "CROWN SILVER PLATE". The obverse face of the handle contains a decorative floral pattern in raised metal. Davis and Deibel (1972:379) indicate that the Crown Silver Plate Company produced this particular pattern, known as the "Cuban" pattern, starting in circa 1911. A second identified fork type is represented by a single example (Plate 84, F). This specimen, which has a very narrow shank or front part of the handle, has a flattened and enlarged, bulbous butt end. It is apparently made out of pewter or some similar substance and it has, marked on the reverse face in stamped letters, the following "HOLMES AND TUTTLE". Davis and Deibel (1972:88) note that Holmes and Tuttle Manufacturing Company was purchased in 1901 by the American Silver Company from the Bristol Brass and Clock Company. The American Silver Company, in turn, was purchased by the International Silver Company in 1935. Thus, while the particular pattern revealed on this fork could not be identified with a known pattern for the Holmes and Tuttle Company, it seems probable that this fork was manufactured in the period before 1901. At least two of the tableware forks recovered from Fort Scott are of

all-iron or steel construction (example on Plate 84, G). Several full-tanged forks with either bone or wood scales were also recovered. One of these examples, which has bone scales, has the scales attached by copper rivets or pins, and this specimen has a bolster present at the front end of the handle element. Another, somewhat similar fork, has wood-scale handles that are held on with three pins or rivets that are made of iron. This specimen has a very elaborate bolster and the uppermost pin is a part of this bolster element (Plate 84, H).

Tablespoons

Nine tablespoons were recovered from Fort Scott. All of these specimens are all metal and four of them are made of either copper or brass, while the remaining specimens are made of iron or steel. A typical example is shown in Plate 84, I. This specimen, which has become considerably flattened, measures 125 mm in length. It has a bulbous butt end which, on the obverse face, has a barely discernible raised pattern in a floral design. A similar pattern, in relief, is discernible on the reverse face. These specimens all lack identifying trademarks or maker's marks and they could not be dated as to manufacturing date.

Teaspoons

Seventeen teaspoons were recovered from Fort Scott. Three of these specimens are made of iron and the remaining specimens are made of either copper, brass, or silver plate. The iron or steel teaspoons are so badly corroded that if any maker's marks or trademarks were present on the specimens, they have long since become obscured. However, several of the copper/brass/silver-plated spoons do have trademarks or maker's marks on their reverse faces. These marks are typically stamped into the reverse face on the narrow part of the handle element. One of the marks reads "1847 ROGER BROS. A10". The obverse face of this specimen has a decorative handle element which has been identified by Davis and Deibel (1972:239) as the Norfolk pattern (Plate 84, J). The Norfolk pattern was first produced in 1905 and it was produced by the International Silver Company which had purchased the 1847 Rogers Bros. trademark on November 11, 1898 (Davis and Deibel 1972:239). A second marked spoon has, on its reverse face, "MERIDEN BRITAIN CO./A1" (Plate 84, K). The two remaining specimens are marked "W NICKEL SILVER" and "STERLING PLATE".

Miscellaneous Handles

Thirty-three handle elements of eating utensils were recovered from Fort Scott. All of these had lost the front ends, so in most cases it was impossible to determine whether they were handle elements from knives, forks, or spoons. Five of the miscellaneous handles were full-tang handles which had bone slabs on the sides of the metal tangs. Two of these bone-slab examples were of plain, polished bone

and three of the specimens have been incised in a checkered pattern. Nine other full-tang handles had a residue of wood scales or slabs present. Four of these examples evidently had metal bolsters at the front end of the handle and the other five examples lacked bolsters. A single example of a round or conical, rattail-tang handle that was socketed into a solid bone handle, was recovered from the site and, another rattail-round tang example had a composition plastic handle. Very badly preserved iron tangs were noted on six miscellaneous handles and one additional bone slab, that was evidently once part of a utensil handle, was also recovered. Ten of the miscellaneous handles were probably elements of either spoons or forks. Six of these examples were made of brass, copper, or silver plate and the remaining four specimens were all of iron or steel construction.

Napkin Ring

A single example of a silver napkin ring was recovered from Fort Scott (Plate 84, L). This ornate implement measures 41 mm in diameter and is 26 mm wide and it is made from a very thin (less than 1 mm thick) continuous circular strip of a silver alloy that lacks any evidence of a seam. Four decorative motifs are present on the outside face. The outer edges of the specimen on the outside face are encircled with 4 mm wide, ridged bands which are oriented parallel to the continuous circle. Two narrower bands, consisting of small nodes, are located 6 mm to 7 mm in from the outside edge on each side. Within the central panel, and extending two-thirds of the way around the circular face, is a carefully executed stamped design which incorporates a diamond-shaped pattern with a curved floral pattern. Some irregularities on the stamped face suggest that the stamping was done by a hand process.

TOOLS OF THE BLACKSMITH, CARPENTER, MACHINIST, FARRIER, AND FARMER

A total of 55 recognizable tools or tool sections were recovered from Fort Scott which are associated with a variety of trades (e.g., blacksmith, carpenter, machinist, farrier, farmer, etc.). The majority of these items were made of iron or steel and they have suffered considerably from corrosion. The general distribution of these specimens within the Fort Scott complex is shown in Table 17. It is likely that additional, but presently unrecognizable, tools are contained in the large category of badly rusted iron objects from the fort.

Axe

One example of a felling axe head was recovered from Historic Structure 6 at Fort Scott (Plate 85, A). This specimen measures 152 mm long, is 72 mm wide at the poll, is 103 mm wide at the blade or bit end, and is 18 mm thick at the poll and swells out slightly at the eye. The axe is single bitted and has a rectangular poll that

TABLE 17
14BO302, Distribution of Tools of the Blacksmith, Carpenter, Machinist, Farrier, and Farmer

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Axe Head						1											1		
Hatchets						1												1	
Wedges										1									
Hammers				1		2					1								
Files			1	2		2	4	2	1	2	2								1
Wood Chisel							1												
Whetstones						1		2										1	
Plane						1													
Cold Chisels and Metal Punches					1		3	1											
Saw Blade					1														
Pliers							1				1								
Leather Punch						1													
Clamp						1													
Wrenches						1			1		2								
Spatula											1								
Trowel									1										
Hoe		1																	
Rakes	1				1					3									
Mower Blades											1								
Scythe Blade							1												
Paint Brush						1													
Branding Iron																			

exhibits slight lipping, indicating that the poll end of the axe was occasionally used as a hammer. The front edge of the axe is set at a 90 degree angle to the poll, and the back edge is gently curved, which creates a bit end that is wider than the poll end. The axe was evidently made with a two-part construction which included a hard steel insert into the bit end. The line of juncture between the inserted steel and the softer steel or iron of the main part of the axe is quite evident on the weathered surface of the axe. The eye of the axe, which measures 41 mm in length, is straight and untapered and is somewhat ovate in section. It is not possible to determine whether this is a blacksmith-made axe or a partially machine-made axe, although regularity of thickness and other dimensions suggests that it is a machine-made axe dating either from the latter part of the nineteenth century or the early part of the twentieth century. Kauffman (1972:143) indicates that the felling axe, or American axe, was developed about the middle of the eighteenth century and has been made in a variety of types subsequent to that time.

Hatchet

A single example of a portion of a hatchet was recovered from Historic Structure 17 at 14BO302 and another was found in Historic Structure 6. The first specimen is incomplete but in shape it is essentially like a miniature broad axe (Plate 85, B). It evidently had an original length in excess of 110 mm and a bit width of approximately 80 mm. The poll end of the specimen is missing. The eye is oval in shape, untapered, has a width that is indeterminate, a height of approximately 30 mm, and a length of 54 mm. In shape, this hatchet appears quite similar to the Kent axe as described by Bealer (1976:66-67). Bealer notes that the Kent axe "...had a straight eye sharpened like a knife and it had a light poll behind the eye. It was used for roughening and for pounding and was retained by Pennsylvania rural carpenters until the early years of the twentieth century" (Bealer 1976:68). This hatchet was apparently first developed in England during the eighteenth century and was later adapted widely by American carpenters. Another hatchet section is represented by a portion of an eye and a hammer poll. This specimen is of approximately the same size as the previously described hatchet, although it is so incomplete that measurements could not be taken.

Wedges

Two iron or soft steel wedges were recovered from Fort Scott. The largest of these is a large splitting wedge, probably used to split firewood. This specimen is a simple wedge shape with a concave bit and a bit end that is larger or wider than the poll end. The specimen measures 152 mm long, 83 mm wide at the bit, 64 mm wide at the poll, and has a thickness of 42 mm at the poll end. The specimen weighs 1,425 gms. Considerable lipping of the poll end is present, suggesting that the specimen saw considerable use. The second example

of a wedge is a much smaller wedge which also exhibits considerable lipping on the poll end, presumably from being struck with a heavy hammer (Plate 85, C). This specimen is straight sided and has a length of 98 mm and a poll area that is more or less square. The poll, just below the lipped area, measures 25 mm by 25 mm.

Hammers

Four complete or partially complete examples of hammers were recovered from 14B0302 and four different types of hammers are represented in this sample. A very badly rusted example of a portion of a claw hammer was recovered. The claw is rather sharply curved, but more specific identification of the specimen could not be made because of its incomplete nature. A single example of a ball peen hammer head was recovered from the site. This specimen consists of a ball and eye portion of a rather large hammer. The eye on the specimen is narrow and oval in shape with a height of 23 mm, a width of 8 mm, and a length of 48 mm. Overall measurements of the hammer could not be made because of the incomplete nature of the specimen. A nearly complete specimen of a small tack hammer was recovered at the site (Plate 85, D). This specimen weighs 103 gms. This light specimen has an overall length of 135 mm, a width of 14 mm, and an elongated poll which measures 21 mm. The eye is oval and is 21 mm long by 15 mm high and is tapered so that the broadest part of the eye is toward the back of the hammer. The striking portion of the hammer is circular in cross section, measuring 13 mm in diameter. This element lacks any evidence of tapering and it is flattened on the tip or striking end. A curved and flattened claw element extends off the opposite end of the poll and terminates in a split claw that is only partially present. The claw element itself is very short, being restricted to the tip end of the flattened clay section. The fourth hammer specimen recovered from Fort Scott is a complete double-faced blacksmith sledge of modern type. This specimen weighs 2,800 gms and it is 170 mm long. The eye is oval and untapered and is 30 mm high by 20 mm wide.

Files

Fifteen complete files or sections of files, all made of hardened, high-carbon steel, were recovered from Fort Scott. Cross-sectional shapes represented in this sample include flat, triangular, square, half-round, and round. For many of the examples, the teeth had become so badly corroded that is was impossible to tell whether they are single-cut or double-cut files.

Five flat files were recovered from the site. The largest of these, missing a tang, is a single-cut file which measures 36.2 cm long, 35 mm wide, and 7 mm thick. This specimen exhibits an even thickness and is rectangular in shape. Another flat file is of approximately the same size, although the tip end has been broken off, making is impossible to determine its overall measurement. Nevertheless, this specimen is a single-cut file which has four cutting faces.

It tapers in width from 33 mm near the tang to 28 mm near the tip end. A third, nearly complete, single-cut file with four cutting faces was recovered. This specimen tapers in width toward the tip end. It has an overall measurement, including the tang, of 36.8 cm and has a maximum width of 29 mm and a maximum and uniform thickness of 5 mm. The two remaining flat files are much smaller examples. The more complete of these examples has an overall length, including the tapered tang, of 195 mm. Its maximum width is in front of the tang where it measures 15 mm wide and it measures 11 mm in width at the tip end. This specimen has a uniform thickness of 4 mm. The second small file is virtually identical to this first example, although it is missing the tip end. Both of the small, flat files are single-cut files and it appears that they had four cutting faces.

Five examples of triangular files are represented in the sample. Four of these are of the tapering variety and one is untapered. Two complete examples are quite small, with overall length measurements of 139 mm and 146 mm. The single example of an untapered triangular file is apparently from a much larger file, although original length could not be determined.

The two examples of square files in the sample both appear to be of the tapering variety. Both are incomplete and no overall measurements could be obtained. They appear to have a maximum thickness of approximately 10 mm on a side at their thickest portion.

Two half-round files were also recovered and the larger of these, missing a tang, has an overall length of 26 cm, a maximum width of 31 mm, and a maximum thickness of 6 mm. The teeth are missing from this specimen so it is impossible to determine whether it is a file or a rasp. The second example is quite obviously a rasp. This specimen, missing its tip end, has a tapering tang and a blade element that measures 18 mm wide and 10 mm thick. Coarse rasp teeth are still visible on the convex upper face. A single example of a rattail-round file was recovered. This very incomplete and much corroded specimen apparently had a diameter of 13 mm.

Wood Chisel

A single example of a possible wood chisel was recovered from 14B0302. This specimen is missing the tang. It is rectangular in shape and has a blade element that measures 19 cm long. It is parallel sided and of even thickness and it measures 22 mm wide by 6 mm thick. The tip is missing from the specimen. However, the lateral edges are present and they are beveled toward the upper face.

Whetstones

Sections of four sharpening stones or whetstones were recovered from 14B0302. Three of these are of natural mineral or rock composi-

tion and the fourth one appears to be of a synthetic material. The largest example is a section of a rectangular whetstone of very fine grit (Plate 85, E). This specimen is 44 mm wide by 20 mm thick and it is of indeterminate length. The central faces have become slightly concave from repeated use. The material from which it is made is a very fine-grained stone, possibly novaculite. Two other natural stone sharpening implements are both somewhat oval in cross section and are of indeterminate length. Both are made of fairly fine-grained stone, although they are not nearly as fine as the first example. One measures 30 mm wide by 13 mm thick and the other measures 36 mm wide by 6 mm thick. While the first example mentioned was evidently a stationary stone, these latter two examples appear to be hand-held stones that would have been moved against the edge of a tool. The fourth example measures 40 mm wide by 8 mm thick. This specimen appears to be made of a fairly light synthetic material and it may originally have had some function other than as a grinding or sharpening stone. The lateral edges are carefully shaped or molded. One face is covered with a series of very fine lines that appears to be a residue from a molding process. The other face has been abraded and made somewhat concave through a grinding process.

Plane

One section of a woodworking plane was recovered from the site (Plate 85, F). This is a portion of a double-plane iron that measures 55 mm wide by 12 mm thick and which has an extant length of 182 mm. The slotted face of the specimen indicates that it is a portion of an adjustable plane of large size.

Cold Chisels and Metal Punches

Two, or possibly three, cold chisels were identified in the collection and two additional cylindrical metal specimens may be punches. Two of the cold chisels appear to be made from octagonal-shaped rod of 21 mm and 24 mm diameter. One of these tapers to a somewhat chisel-like end. The second specimen tapers octagonally to a point. The third possible cold chisel may actually be a woodworking chisel. This specimen has an octagonal-shaped tang and a rectangular-shaped blade. The tip end is missing so it is impossible to determine what the cutting edge of the implement looked like. The specimen has a present length of 160 mm and is 16 mm wide at its widest point and 13 mm thick at its thickest point. Two probable punches were recovered and one of these, which has an overall length of 140 mm, is made from a hexagonal iron or steel bar with a diameter of 22 mm (Plate 85, G). One end of the specimen has been pointed and reduced in size by a combination of hammering and filing. The second specimen, which measures 84 mm long, is made from circular iron or steel stock. This specimen has a maximum diameter of 13 mm and is slightly

flattened on one side. About two-thirds of the way toward the tip, the piece has been much reduced in diameter to only 8 mm. This apparently forms the tip end of the specimen.

Saw

A single example of a saw blade was recovered at 14B0302. This specimen is the end section of a hacksaw blade. The specimen measures 12 mm wide and 2 mm thick and the hole for attaching it to the handle of the hacksaw is present at one end.

Pliers

Two examples of pliers were recovered from Fort Scott. The first of these is a complete but badly rusted pair of common, slip-joint pliers. This is a modern type of plier that is designed with a slip joint that permits the jaws to be opened wide at the hinge pin for gripping large diameter objects. This example measures 165 mm long. Another pair of pliers of different types was recovered. This smaller and more lightly built plier has an overall length of 123 mm (Plate 85, H). While this specimen is very badly corroded, it appears to be an example of either a long needle-nose plier or a flat-nose plier.

Leather Punch

A single example of a probable leather punch was obtained from the vicinity of Historic Structure 6 (Plate 85, I). This specimen, which has an overall length of 200 mm, has a handle that is designed like a conventional pair of pliers. The jaws, however, consist of two square-shaped elements, one of which has a punch inset into it. Apparently the other half-jaw acted as an anvil for punching holes in relatively thin leather. A portion of a flat steel spring, which projects toward the hinge, is still visible on the inside of one of the handles, suggesting that this leather punch had a self-releasing spring device attached to it.

Clamp

A single example of a C-clamp was recovered from 14B0302 (Plate 86, A). This specimen is made from steel and is rectangular in shape. It is missing the upper part of the jaw but apparently had an overall length, exclusive of the screw, of 87 mm outside diameter. The specimen is made from forged steel and on one outside edge it has a stamp which is partially legible and which says "made in". The width of the clamp is 52 mm and it has a maximum thickness of 17 mm.

Wrenches

Four forged wrenches were recovered from 14B0302. Three of these examples are open-end wrenches and only one of these is complete. The

relatively complete specimen has an overall length of 210 mm and has a jaw width of 17 mm, suggesting that it was designed to accommodate a nut or bolt of slightly less than three-quarter inch size (Plate 86, B). This example has an offset handle and it terminates at the end opposite from the jaw in a spud that projects at a 90 degree angle to the handle itself. This spud is 55 mm in length. Also present at the butt end of the wrench is a 13 mm diameter hole through the end of the wrench.

The two broken open-end wrenches are of a much simpler pattern. Both are open-end wrenches that are represented by the jaws and a portion of the shaft of one end of the wrench. One of these is a straight, open-end wrench which has a jaw width of 20 mm, or three-quarters of an inch (Plate 86, C). The second example, for which measurements could not be taken because of corrosion, is similar to the other open-end wrench except that it has jaws that are set at a 15 degree angle to the shaft.

A single example of a box wrench was recovered. This example is a hex-box wrench that has a handle that is offset in a 45 degree offset pattern. That is, a portion of the handle projects vertically up from the edge of the jaw for a distance of 56 mm and then turns at a right angle and extends for another 170 mm. This may have been a double-ended wrench, although this could not be determined because the butt portion is broken. This wrench, as indicated, is a hex-head type with an internal diameter of 33 mm. It was evidently manufactured to accommodate a hex-head bolt or nut of approximately one and one-quarter inch (33 mm) diameter. Another possible box wrench was recovered which has an overall length of 227 mm. This specimen has a long and rather slender handle which terminates in a very heavy working end that consists of a cylinder of steel (27 mm in diameter) which projects at a 90 degree angle to the handle. This example is much corroded and it was not possible to determine whether a box-wrench jaw was once present on the terminal end of this cylindrical projection. There is a suggestion of a slot, running horizontal to the long axis of the wrench, indicating that this may be a simple slot wrench for a specific mechanical application.

Spatula

A single example of a steel or iron spatula was recovered from 14BO302. This example could be associated with cooking or food preparation purposes, but it is also of very generalized type such as is commonly found in workshops. Most of the blade of this specimen is missing. It is a full-tanged spatula which originally had a handle that was 86 mm long and 24 mm wide. Remnants of wooden handle slabs are visible on both sides of the specimen. These slabs were attached to the tang by three iron or steel rivets which are spaced at 33 mm intervals along the center of the handle. The spatula was apparently made of a piece of steel of relatively light gauge (3 mm in thickness) which probably gave it a great deal of flexibility. As indicated, most of the blade of this specimen is missing. However, the portion of blade that is present indicates that the blade element expanded out to at least a width of 27 mm.

Trowel

A single example of a metal trowel, probably representing the bricklaying or masonry trade, was recovered. The blade of this specimen is mostly missing, so it is impossible to determine whether it was originally a margin, pointing, or brick trowel. It obviously was a trowel that had a handle that was offset from the main blade. The blade itself was apparently welded rather than riveted, since no riveting marks are present on the extant portion of the blade. The handle is still present and consists of a turned, round wood dowel of 97 mm length and with a maximum diameter of 22 mm. A portion of an iron ferrule, 12 mm wide, is still present at the front end of the turned wood handle.

Hoe

A single example of the metal head of a hoe was recovered. Since most of the blade is missing, it is not possible to determine the specific purpose of the hoe. However, it was evidently of the socket pattern. That is, the wooden handle of the specimen, which is now entirely missing, was apparently attached to the head of the hoe by inserting it into a socket that was made in one piece with the shaft and blade of the hoe.

Rakes

Two examples of metal rakes, either garden or industrial types, were recovered from Fort Scott. In both cases, only five tines and a portion of the backplate are present. One of the examples has straight teeth that are set at approximately 28 mm intervals. Length of teeth could not be determined on this specimen. The second example had curved teeth that are set at 25 mm intervals (Plate 86, D). This latter specimen has teeth that measure 70 mm long.

Mower Blades

Three hay mower blades were recovered from Historic Structure 10. These triangular blades are of a type that was commonly utilized on horse-drawn mowers during the nineteenth century. Two of these blades are 77 mm wide (example shown on Plate 86, E) and the third one is 92 mm wide.

Scythe Blade

A portion of the blade and the tapering tang of a large steel scythe was recovered from the vicinity of Historic Structure 11. This

specimen has a tapered tang that measures approximately 145 mm in length. The blade width is approximately 45 mm and the back edge of the blade is upturned for reinforcement. Two hundred and forty millimeters of the blade itself is still present, although it is obvious that this was once a much larger specimen.

Paint Brush

A single paint brush was recovered which is encased within a collapsed tin can (Plate 86, F). While the bristles are not discernible, the metal band that encloses the bristles, and the wooden handle, are still partly extant. This was apparently a two-inch wide paint brush. The presence of the paint brush within a collapsed tin can can be easily understood by anyone who has done much painting. It is obvious that the brush was placed in a can which contained some sort of cleaning solution and then the cleaning process was not completed. Eventually, probably through misadventure, the can was collapsed and became a permanent memorial to a lazy painter.

Branding Iron

A single example of the tip end of a branding iron was recovered from Historic Structure 6 (Plate 86, G). While only a short portion of the tang is still present, the steel stamp is nearly complete. This stamp consists of a simple letter "K" that has a height of 60 mm and a width of 32 mm. Company K of the Regiment of Mounted Rifleman was stationed in Fort Scott from November of 1852 until the fort was closed, and this branding iron may be associated with that company (Thompson 1967:37).

BUILDING AND CONSTRUCTION HARDWARE

A large amount of building and construction hardware was recovered from 14BO302. Unfortunately, much of this material is iron and it is in an extremely corroded state. In the following discussion, only those identifiable items of building and construction hardware are included, although it is suspected that many additional fragments of such materials are included in the category of miscellaneous metal fragments. Nevertheless, considerable diversity of hardware types is represented in the artifact inventory. Included in this category are hand-wrought square nails, machine-made square nails, modern wire nails, iron staples, flat-head wood screws, nuts and bolts, washers, rivets, chains, several types of hinges, hasps, door and drawer pulls, door hooks, locks and lock parts, keys, plumbing hardware, gutter parts, window and plate glass, bricks, mortar, wood, coal, miscellaneous iron-steel-brass-copper-lead scrap, etc. The general distribution of the more diagnostic of the hardware specimens within the fort complex is shown in Table 18.

TABLE 18
14BO302, Distribution of Selected Categories of Building and Construction Hardware

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Staples																			
Washers																			
Ferrous Metal						2	6		1	3									
Nonferrous Metal		1	1	2	1	3	2		1		3								
Nuts and Bolts																			1
Bolts		1	4		2	3	8	4	2	4	1		1						1
Nuts					2	4	1	2		2	1								
Rivets																			
Solid Copper				1		23	2		3	1	6								
Solid Iron						1													
Copper Washers					1	7			2		1								
Grommets (copper)					5	3			1										
Wire (not electrical)					4	11	4				2								2
Spring		2			2		1				1						2		
Chain		1			3	3	1	1	1	3	1						1		
Hinges		3	3		3	12	2	2	3	3	2		1			1	1		2
Window Hardware	1						1		1										2
Handles and Pulls from Chests and Drawers					2	8			1	1	2						1		
Harness and Door Hooks					2	2			1		2								1
Casters	1	1			2	5	1	1			11			1					
Padlocks					1	1	1		2	3						1			1
Doorlocks				2	1	4				1								1	
Barrel Bolts					1	1					2								
Keys	1				2	1	2	1	2	1	2								
Trunk & Cabinet Hardware	1				1	1					1				1				
Doorknobs and Roses	5				5	10	3	1	2	1	2	1							
Plumbing Supplies		1			1	7	1		1	3	4	1							
Gutter Parts						2			1		2								
Magnets						1													
Round Wire Eyed Stakes	1				1	6	3		1	1	3								1

Iron Nails

Iron nails, both square and round, were encountered throughout the investigation of every structure and excavation unit at Fort Scott. These were of a variety of types and sizes and they constitute the single largest category of artifacts from Fort Scott. All three of the construction styles of nails are represented in the inventory (hand-wrought, machine-cut square, and round wire) although machine-cut square nails are clearly the most numerous. A complete analysis of the nails found at the site has not been attempted. A representative sample of larger-sized nails is shown in Plate 87, A-I.

Staples

Fourteen iron staples were recovered from the site which are complete enough to merit description. This category includes staples made from flat to square iron bar stock as well as staples made from round iron wire. While the specific function of these items cannot be determined, they are of various sizes (the largest is 64 mm long by 54 mm wide and the smallest is 40 mm long by 15 mm wide) and they are either U-shaped or rectangular in overall shape. Several of the large rectangular-shaped specimens were recovered from HS10 (Dragoon Stables) and HS13 (Quartermaster Stables), suggesting that they may have been connected with horse or transportation-related activities (examples on Plate 88, A, B). Two examples are virtually identical in shape and size to 1 3/4 inch wagon bow staples as illustrated in a 1906 Sears, Roebuck & Company Mechanics and Builders Catalogue (1906:543). These specimens could have served equally well as parts of sliding gate or door fasteners.

Screws

Only a few screws were noted in the artifact sample from 14BO302. The most common type represented in the inventory was slotted, flathead, iron wood screws which ranged in length from 20 mm to 50 mm and which had shank diameters ranging from 4 mm to 7 mm. A few slotted, flathead iron machine screws were also recovered. These examples are 70 mm to 80 mm in length and they have shank diameters of approximately 5 mm. Typically they are untapered and screw threads are limited to the tip end and extending back one-half to three-fourths of the length of the screw. A few small, and very badly corroded, slotted, roundhead, wood screws were also noted in the sample. Additional screws are still attached to various kinds of hardware (locks, hinges, etc.) and these will be discussed in the sections of this report which treat those artifact categories.

Washers

Twenty-six circular, flat washers with center perforations were recovered from Fort Scott. Twelve of these examples were made of iron or steel and the other fourteen specimens are made of nonferrous metals (e.g., copper and brass) or are coated with nonferrous plating. The ten iron washers range in outside diameter from 26 mm to 90 mm and have thicknesses ranging from 1 mm to 21 mm. All of the iron or steel washers are simple flat washers (although some are obviously quite thick) and all have circular center perforations (example on Plate 88, C). The fourteen washers of nonferrous metal range in diameter from 16 mm to 28 mm and have thicknesses ranging from 1 mm to 3 mm. While the majority of these nonferrous washers have circular perforations (example on Plate 88, D), several specimens have perforations of different shape (rectangular, square, and irregular). Excluded from the subcategory of nonferrous washers are those specimens which are obviously elements of rivet and washer sets. These items are discussed in another section of this report.

Nuts and Bolts

A total of 44 nuts and bolts were recovered from Fort Scott which were recognizable as to shape. The specimens are all composed of iron or steel and most of them are poorly preserved. The specimens indicate a wide diversity of nut and bolt types, although square-headed nuts and bolts were the most common type in the sample. Also represented were stove bolts, carriage bolts, and hex-head bolts and these occurred in a variety of sizes. Thirty-one of the specimens are bolts and 13 are nuts and in several cases the nuts and bolts (and even washers) are still together. The largest nut and bolt combination in the inventory is a very long (43.5 cm) bolt which has a square head and a square nut is attached at the base of the screw threads (Plate 88, E). The bolt has a shaft diameter of 14 mm and a washer is present on the shaft. The shaft has corroded so badly that it was not possible to determine whether or not it was continuously threaded.

Rivets and Grommets

Thirty-six copper rivets and 19 flat, circular washers were recovered from Fort Scott which were all probably utilized (or intended for use) as fasteners for leather or very heavy cloth. One additional iron rivet was also recovered. The most common rivets in the sample were rivets that had flat, circular heads. This type was represented by 33 examples and nine of these specimens had washers attached to them and the tip ends of these rivets had been rounded and flattened by pounding. The flatheaded rivets had head diameters that ranged from 8 mm to 14 mm in diameter and the washers ranged from 7 mm to 9 mm in diameter. Many of these specimens had obviously been flattened by hammering, so estimates of their length could not be made. Several unused examples had lengths from 11 mm to 24 mm. The iron rivet recovered from 14BO302 and two copper rivets were roundheaded examples. The copper examples had head diameters of 10 mm and 13 mm and the iron example had a head diameter of 25 mm. The iron specimen, which had an estimated original length of 90 mm, is

clinched. A single example of a double-ended rivet (this is probably not the correct technical term for the item) was recovered. Both ends of this specimen (which has an overall length of 21 mm) are round-headed ends of 19 mm diameter.

In addition to the numerous copper rivets recovered at Fort Scott, nine copper grommets were found which were probably also fastening devices for leather or very heavy cloth or canvas. Seven of these specimens had overall diameters ranging from 7 mm to 9 mm and two specimens range in diameter from 13 mm to 15 mm.

Wire (not electrical)

A representative sample of 25 specimens of fairly well-preserved iron and copper wire were studied from Fort Scott. The majority of these specimens are made of iron and they are in a rather poor state of preservation. The simplest wire specimens in the collection are examples of circular wire which typically measure less than 5 mm in diameter. The smallest of these specimens is 1 mm in diameter. Several examples of double-twisted round wire are also found in the collection. The largest specimen which has been classified as a piece of wire may actually be a piece of ornamental iron work (Plate 88, F). This consists of a 50 cm length of rectangular iron stock which has been twisted all along its length to form an ornamental pattern. The specimen may also be a lightning rod connector. This specimen measures 12 mm in diameter.

Springs

Seven springs or elements of springs were recovered at Fort Scott. Five of these are made of iron and they are in a rather fragile state. The two remaining specimens are made of some metal which has a fairly high copper content as they have weathered to a green color. The majority of the specimens are tightly coiled springs which have diameters ranging from 8 mm to 18 mm. The most interesting of the recovered springs is a possible bed spring that is formed of circular iron wire of approximately 3 mm diameter (Plate 88, G). The spring is cylindrical in shape and at the two ends the wire has been elongated and bent into a U-shape for attachment, probably to a bed frame. The specimen has an overall length of 133 mm and a barrel diameter of 14 mm.

Chains

Nineteen sections or links of linked chain were recovered from Fort Scott and these are of a variety of types and sizes and probably reflect several different activities. Activities suggested by the sample include use of some of the specimens as log chains, harness chains, wagon chains, trace chains, and various types of safety chains. Three small chain examples are all made from nonferrous

metals, presumably copper or brass. One of these specimens is made of one-half inch long links of jack chain while another is a 400 mm length of ladder chain which has a hook on one end. The remaining 16 chains are all made of iron or steel. The largest chain indicated in this sample is a 230 mm long length of chain which is composed of five heavy, oval links of chain (Plate 88, H). Each one of the oval links is made of heavy rod of 13 mm diameter. The links are continuous and no joint seam is evident. The remaining iron chain sections are represented by elements of chains or single links of oval iron chains, which are of smaller dimension than the aforementioned specimen. The smallest of these examples is made of wire which is slightly less than 5 mm in diameter and each oval link is approximately 34 mm long. One of these specimens is a complex ladder chain which consists of one long section of chain, measuring approximately 310 mm long, with another 140 mm long section of chain attached to it on one of the central links (Plate 88, I).

Hinges

A number of hinges of various types were recovered from Fort Scott as well as other building hardware associated with doors, gates, and windows. In addition, a number of smaller hinges and other hardware are probably associated with such specialized items as cabinets, trunks, etc. Most of the hinges are made out of iron or steel although three examples of hinge parts are made out of brass or some similar alloy. Double-ended strap hinges were the most commonly encountered hinge type in the Fort Scott inventory (Plate 89, A). Typically, these had tapering or triangular-shaped hinge plates that were joined together with a fast joint that cannot be disassembled. Rectangular plate strap hinges were also noted in the sample. Thirteen strap hinges of various sizes were encountered during the excavation at Fort Scott and the largest number of these, five, were obtained from Historic Structure 6, one of the infantry barracks. The largest strap hinge noted in the sample measured 330 mm long in the open position by 72 mm wide at the pin element. In addition to the common strap hinges, which typically have two to four drilled holes in each plate for insertion of screws or nails, several examples of strap hinges, rectangular in shape, were encountered which have a slot for a hasp. In these cases, the slotted plate is normally somewhat longer than the attachment plate. Another hinge type encountered consisted of several iron or steel examples of T-hinges (example on Plate 89, B). The largest T-hinge recovered measured 131 mm in length in the open position by 76 mm wide at the broadest part. The T-hinges commonly had a fixed pin. Butt hinges encountered range from quite large examples to much smaller examples that are, more properly, cabinet hinges. Both fixed-pin butt hinges and loose-pin butt hinges were encountered (examples shown on Plate 89, C, D). The largest butt hinge encountered measured 102 mm in height by 72 mm in width in the open position. Twelve butt hinges were encountered in the sample and portions of several more are probably represented in the scrap metal

category. The smallest butt hinge measures 32 mm in height with a width in the open position of 50 mm. Most of the butt hinges are simple rectangles or squares in outline, although one small example has a trifoliate, leaf shape on each plate. Two of the relatively complete butt hinges are made of brass or similar alloy while the remainder are made of iron or steel. These two examples are of the cabinet type. Butt hinges of a type suitable for use on doors include both loose-pin butt hinges that are relatively complete as well as one butt hinge pin (Plate 89, E) with a finial on the end.

A very heavy brass pin that may be from a door is included in the sample (Plate 89, F). This specimen is particularly interesting because it consists of a 100 mm long cylinder of brass which has a diameter of 18 mm. The specimen has been drilled longitudinally and has an iron rod still in place. Iron bands encircle the brass rod or cylinder in two places and are joined together. The iron has been attached by some sort of welding process which incorporates brass with the iron. That the specimen is hand crafted and has been turned on a lathe is obvious, but the specific function of this item is not known.

Pintle hinges of a variety of types were recovered from the site (Plate 89, G-I). Some of the pintle hinges were apparently of the type that were actually driven or screwed into wooden posts or frames while others are two-part pintle hinges where the female part of the hinge is designed to receive the elongated pintle. At least four examples of various types of pintle gate or shutter hinges were included in the sample. The simplest of these in design is a flat strap hinge which terminates in an eye at one end. An eye pintle was then apparently attached through this strap eye and driven into a wood post. A much more complex type, probably a shutter hinge, is represented in Plate 89, I. This example, which has a height of 89 mm and an estimated original length of 168 mm, is a two-part pintle which incorporates separate plate elements, one of which has a hole in it to receive a pintle and the other of which has a strong pintle element. Fragments of two such specimens were recovered. Another example of a somewhat similar gate hinge was recovered. This latter piece is ornamental iron work which has a flat plate and a projecting pintle receiver area that sticks out in front of it. This half of a pintle hinge measures 88 mm in height, 92 mm in length, and has a thickness of 64 mm.

Window Hardware

Window hardware is represented by a single example of a spring-sash fastener and three turn buttons. One of the turn buttons is of the single-ended variety and the other two are of the double-ended variety. A single example of a window spring bolt was also recovered from the site. A window or cupboard catch of rather complex design was recovered from Historic Structure 13 (Plate 89, J). This example is made of cast iron that has apparently been Japanned, as the

preservation of the specimen is rather good. The strike is missing but the remaining portion is a rectangle (42 mm wide by 33 mm long) which has, on its outer plate, a sliding hammer with a knob on the top for operating it. The sliding hammer is fastened to the frame by a cotter pin located on the back of the plate. The back of the plate is marked, in relief, with "PAT 1871".

Staple Plates

Several examples of staple plates, two of which are relatively complete, were recovered from 14BO302. Both of these examples are of a size suggesting that they were used with large hasp, strap hinges. The staple plate measures 43 mm by 32 mm in size and the staple itself has an estimated diameter of 6 mm. Another strap hinge fastening device recovered from the site was a portion of a half turn staple lock that had been riveted onto flat, but relatively thin, iron stock.

Handles and Pulls from Chests and Drawers

Because of similarity of types and because of the fragmentary nature of the examples from Fort Scott, handles and pulls are discussed as a major heading even though it is likely that some served as pulls on chests and trunks while others may have been utilized on drawers, cabinets, or even doors. Fifteen specimens from Fort Scott were identified as handles or pulls (examples shown on Plate 90, A-E). Twelve of these are represented solely by surviving handle elements. That is, the plates or other devices by which these handles were attached have not survived. These come in a variety of sizes and some are quite plain while others are ornamental. Nine specimens are made of iron or steel, three are made of brass, one of glass, and one of ceramics. One of the brass specimens is ornamental in design and appears to have been painted with a gild-like substance (Plate 90, A). Only one of the handles is of solid construction (Plate 90, B). That is, the entire handle is one continuous piece of iron. The other examples are all either interrupted or of the eared variety where the back part of the handle is composed of two projections which either flare out or in for insertion into a plate. The largest handle or pull recovered (presumably a door or gate pull) measures 180 mm in length and the smallest measures 93 mm in length. A single example of a plate from a chest handle or drawer pull was recovered. This example is of iron and it is of the flush type (Plate 90, C). The plate is rectangular and measures 94 mm high by 88 mm wide. The metal has been formed with a deep, circular inset in the center which received the actual handle of the specimen. This flush-type handle was obviously mortised into a chest or drawer so that no handle element projected beyond the flat face of the furniture piece.

Two of the handle elements recovered from Fort Scott are knobs from drawers or cabinets. One of these is made of glass (31 mm long

and 28 mm diameter) that is hexagonal in shape and the other is a round ceramic form (22 mm long and 33 mm diameter) (Plate 90, D, E).

Harness and Door Hooks

Eight items were recovered from Fort Scott which are either harness hooks or lighter hooks suitable for use as coat hooks or for other items of apparel. Three of these specimens have backplates that have been perforated so that the hooks could be attached by screwing or nailing them into vertically standing wood. These three specimens are all quite heavy hooks and could have served as equipment or harness hooks (example on Plate 90, F). One lighter hook, of the door hook or coat hook variety, also has holes in a backplate for attachment to wood. Two other light hooks have ends that are threaded and pointed so that they could be screwed into a piece of wood (example on Plate 90, G).

Casters

Twelve casters were recovered from Fort Scott. A caster is a wheel, or set of wheels, that is mounted in a swivel frame and used for supporting and moving furniture and machines. One brass frame of a caster was also recovered which is missing the wheel elements. At least three different types of casters are represented in the sample. Five of the casters are made of white, glazed ceramic and these specimens range in diameter from 23 mm to 47 mm (example on Plate 90, H). These are all evidently parts of single-wheel casters as the iron swivels are present (though badly preserved) on four of the examples. Three of the casters are made of metal, two of iron, and one of brass. The brass specimen (which has a portion of the iron frame still present) measures 27 mm in diameter. One of the iron casters is single-wheel caster with a diameter of 38 mm, and with the iron swivel still present. The second iron example is a double-wheel caster and each of the wheels has a diameter of 50 mm. Three wood casters were recovered and only one of these has the swivel present. This specimen (the largest example of the wooden caster type) could not be measured because it is poorly preserved. The other two wooden casters measure 28 mm and 30 mm in diameter. One additional caster element is missing the actual caster but still contains the axle of the caster as well as the swivel. This swivel is attached to a flat plate which has four holes drilled or punched into it for attachment to a piece of furniture or machinery. This is the only plate swivel in the sample as the other swivel types are of the elongated socket type. The remaining caster-related item found at the site is a large brass frame swivel which is of the two-wheel type (Plate 90, I). This specimen, which is shaped something like a horseshoe, is 135 mm in height.

Locks and Lock Parts

Padlocks

Five padlocks were recovered from Fort Scott. One of these is a self-locking, spring-shackle, all-brass padlock with a bottom key insertion (Plate 91, A). This specimen is marked, in raised letters on the front panel, with "EXCELSIOR 6 LEVER". The front of the hasp is stamped with a "L1" and the back of the hasp is stamped "Made in USA". It is evident, from the shape and size of the keyhole in the bottom of the tumbler, that a flat steel key was used with this lock. The tumbler portion of this padlock is circular when viewed from either face and it has a diameter of 55 mm. The faces are parallel and the lock has a thickness of 15 mm. The hasp is made of heavy flat brass and it is 8 mm thick and, when viewed from the front, it appears to be a square with cutoff corners at the top and with a hole (19 mm in diameter) through the center.

A second padlock is made entirely of iron and is badly corroded. This specimen has a shield-shaped tumbler element and a flattened (in side view) hasp element. The specimen has a height, from top of hasp to bottom of tumbler, of 84 mm, a width of 52 mm, and a thickness of 19 mm. Keyhole placement could not be determined, but presumably it was located on the front panel.

The third padlock, which was made of iron, has a tumbler element which is in the shape of a heart (71 mm high, 64 mm wide, and 22 mm thick). This specimen was obviously made of thin sheets of hardened steel, as the front, back, and edge plates are still visible (Plate 91, B). The hasp element is composed of 6 mm diameter steel wire which is enlarged at one end to accommodate a rivet and at the other end it is flattened to project into the tumbler. Although it could not be determined with certainty, it appears that the front panel of the tumbler was equipped with an iron or steel drop, similar to the drop escutcheon on a door lock.

The fourth padlock recovered is of modern type. It consists of a tumbler element which is rectangular in front or back view (41 mm wide by 37 mm high) and which has a thickness of 18 mm. The keyhole element consists of a circular area in the base of the tumbler which apparently once turned. A keyhole slit is located in the center of this circular area. The hasp is a U-shaped piece of circular steel (5 mm diameter) which is presumably hardened steel. The three padlocks discussed previously all had side-swing hasps but this fourth example is of the pull-up variety.

Another padlock example is represented by two iron or steel plate elements from a large, shield-shaped padlock. This specimen had a maximum width of 90 mm and a height of 80 mm. Three holes, averaging 8 mm in diameter, are drilled or stamped through the flat plates, presumably so that the tumbler plates could be riveted together. One

hole is located at the bottom of the shield and a hole is situated on each of the shield ears. While this lock was clearly of the swing-out hasp type, the hasp element is not present. The two plates may have both been a part of a backplate unit for a padlock as no keyhole is visible on either specimen. Alternately, the padlock may have been equipped with a side lock keyhole.

Four additional iron or steel hasps were recovered that are probably hasps from padlocks. All appear to be of the swing-out variety. The largest is of flat steel and measures 78 mm long, 15 mm wide, and 10 mm thick, and the smallest measures 56 mm long, 10 mm wide, and 8 mm thick. This small specimen has a hinge element (18 mm wide) which is still present.

Door Locks

Door locks were represented at Fort Scott by both mortise lock parts and rimlock parts as well as by keys.

Rimlocks: A nearly complete horizontal iron rimlock was recovered from Historic Structure 10 (Plate 91, C). This specimen, which is missing its strike, is rectangular in shape with a length of 90 mm, a height of 63 mm, and a thickness of 19 mm. The very corroded condition of the specimen prevented a determination as to whether or not this was a key-operated rimlock (from both sides) or simply a spring deadlatch. A brass rimlock bolt was recovered which is of much more solid construction than the iron rimlock. This specimen is 108 mm long and has a butt element which is 24 mm wide and 10 mm thick (Plate 91, D). An iron drop escutcheon was recovered which is evidently from the side of a door opposite a rimlock. Two other simple or open keyhole escutcheons were recovered which were also probably from the side of a door opposite a rimlock. One of these is a round type, iron escutcheon of 47 mm diameter and 2 mm thickness which has a central hole (6 mm diameter), and a larger hole (14 mm diameter), offset from this (Plate 91, E). The second example is a flat oval keyhole escutcheon of brass which measures 42 mm long, 30 mm wide, and 1.5 mm thick. It has a keyhole-shaped cutout and a small screw hole at either end (Plate 91, F).

Mortise Locks: Mortise locks are represented in the Fort Scott inventory by bolts, strikes, escutcheons, and a hammer. Two mortise lock bolts were recovered. Both are made of corroded iron or steel and only one is anywhere near complete. This relatively complete specimen has a height of 94 mm and a width of 52 mm (Plate 91, G). A solid brass hammer, with a hole through the butt end, was recovered. This hammer could actually have been utilized either with a mortise lock or with a rimlock. It has a length of 40 mm, is 13 mm wide, and 11 mm thick. Five strikes from mortise locks were recovered. Two of the strikes are of brass and the other three are of iron and all are of slightly different type. One of the brass specimens is a simple, flat, rectangle of brass (66 mm long, 23.5 mm wide, and 2 mm thick) and it has a punched T-shaped hole to receive a single hammer (Plate 91, H). The screw holes at either end are countersunk so that the flathead screws used to attach it to the door frame would sit flush. Three additional linear holes, of unknown function, are located adjacent to the center receiver hole. The second brass strike is larger and made of heavier brass and it appears to be one-half of a strike which was riveted to a larger strike backplate (Plate 91, I). This example, which is 114 mm long, has a stamp on the front which reads "CARPENTER PATENTED". One of the iron strikes is a simple, rectangular, flat iron plate with a tongue of iron offset on one side and with two rectangular holes stamped in it to receive two hammers. This specimen measures 86 mm long, 39 mm wide, and 2 mm thick. The two remaining iron strikes are both of much heavier types and were obviously used on much more massive door locks. Both are oval in shape and quite thick. The first specimen has a length of 107 mm, a width of 40 mm, and a thickness of 9 mm. It has a single tapered cutout which measures 60 mm long. The second example (115 mm long, 32 mm wide, and 11 mm thick) has two smaller T-shaped hammer cutouts. A single plate escutcheon of rather unusual type was recovered from Historic Structure 33 (Plate 91, J). This example is made of iron and it has a keyhole cutout with a large rectangular or square cutout situated above the keyhole cutout. The entire surface of the extant portion of the plate has been drilled, at somewhat irregular intervals, with holes of 5 mm diameter. The only overall measurements which could be taken on this specimen were of its width (72 mm) and the thickness of metal (2 mm) of which it was made.

Barrel Bolts

Three barrel bolt sections were recovered. In each case, the only portion of the barrel bolt which has survived is the cylindrical barrel and the mushroom-shaped thumb piece which projects at a 90 degree angle to the long axis of the barrel. All of the barrels are made of badly corroded iron or steel and all of the thumb pieces are made of brass. The largest bolt has a length of 129 mm and a barrel diameter of 15 mm (Plate 91, K) and the smallest is 102 mm long and has a barrel diameter of 14 mm.

Keys

Twelve keys were recovered from Fort Scott which were obviously associated with rimlocks, mortise locks, or padlocks. Nine keys are of the skeleton type which was commonly utilized with a variety of door rimlocks and mortise locks during the nineteenth century and early part of the twentieth century, and which are still sometimes employed in modern door locks. Four of the skeleton keys are of brass or copper (examples on Plate 92, A-C) and the remaining five are made of iron (example on Plate 92, D). The largest skeleton key is 120 mm long and shortest complete key is 86 mm long. One flat iron key was recovered which is so badly corroded that a determination of its lock type could not be made. However, the lateral edges of the specimen appear to be parallel without cutouts for teeth. Two brass keys are

of the modern padlock type. Both are flat, stamped metal keys with serrated edges along one side of the blade for engaging the tumblers of a lock. One is marked "SARGENT" on one side of the handle end and a number "94" is stamped (by hand-held punch) into the other side. The second flat padlock key is marked in raised letters on both sides. One face contains the legend "Independent Lock Co., Fitchburg, Mass., 1897 X" and the other side has "Made in USA" on it.

One additional brass key was recovered from Fort Scott which is slotted at the tip end and which has a circular handle element (Plate 92, E). This specimen is 74 mm in length and it appears to be a key for winding a large clock.

Trunk and Cabinet Hardware

Trunk and cabinet hardware are represented at Fort Scott by a few pieces of locks and by various fastening devices, as well as by handles, pulls, and ornamental plates and corner pieces.

Lock Parts

Two keyhole escutcheons were recovered which were evidently originally on trunks, boxes, or cabinets. The most complex of these is a drop escutcheon made of brass (Plate 92, F). This specimen is made of a flat piece of thin brass (1 mm thick) which is rectangular in shape (94 mm wide and 60 mm high) and which has an extension protruding from the bottom of the plate which is similar in shape to the lower one-third of a shield. Four holes (3.7 mm diameter) are located near the four corners of the specimen and these are obviously holes for attachment. A large, brass drop escutcheon in the shape of a cherub (i.e., winged infant with curled hair) is located on the front of the escutcheon plate. The plate is slotted at the top to accept a brass rivet and washer which securely pins the drop to the plate. Another slot is located near the base of the plate and a brass projection from the drop slides back and forth in this slot to allow the drop to swing. The keyhole is located centrally on the plate and is asymmetrical. Interestingly, a nearly identical escutcheon, though of slightly smaller size, was recovered from Fort George Trading Post in South Dakota (Smith 1968:83, Plate 10a). Fort George Trading Post was a fur trading post which had a very limited temporal duration. It was established in 1842 and was abandoned in 1845 (Smith 1968). Thus, it is possible that the escutcheon recovered from Fort Scott can be associated with the very early fort period. The other keyhole escutcheon is also made of brass but it lacks a drop. This specimen is a small circular brass washer (21 mm diameter and 6 mm thick) and it has a circular hole in it with a slot at the bottom.

Suitcase Fastener

A single example of a "common sense" type suitcase fastener was recovered. This brass specimen is the type of fastener which is

employed on the inside of modern suitcases to secure inside flaps. The type consists of a stationary post which has a swivel on the top. A grommeted piece of cloth or leather is then placed over the post and the top of the post is turned 90 degrees to provide a secure closure. The present example consists of the post element and it is 22 mm high, 19 mm long at the base, and 13 mm wide. While this has been labeled as a suitcase fastener, for lack of a more definitive term, it seems obvious that this type of closure could have been utilized on various leather and heavy cloth bags and it would have served equally well for attaching canvas or cloth tops to wagons, automobiles, etc.

Corner Piece

A Japanned iron or steel corner piece, presumably from a trunk, box, or cabinet, was recovered. This specimen is made from thin metal (0.6 mm thick) and it has been drilled or punched for attachment at the bottom and on two sides of a square corner. Another brass or copper corner piece is of a more ornamental type (Plate 92, G). This example has had a gild wash or plating applied to it and the outside face of the specimen has a stamped design consisting of a series of two parallel rows of dentate stamps all around the border.

Doorknobs and Roses

Doorknobs

Twenty-six doorknobs or doorknob sections were recovered. Twenty-five of these are porcelain knobs and the remaining specimen is a hollow brass knob. Eleven of the porcelain knobs are of a hard, white ceramic and they typically have a vitreous or glass-like surface. Ten of the porcelain knobs are made from a clay which is reddish brown in cross section and whose external surfaces have had a mottled, brown, slip glaze applied to them. This glaze is typically vitreous. Four porcelain knobs, also with reddish brown clay interiors, have a black vitreous slip glaze. All 22 of the porcelain knobs originally had iron or steel spindles which, judging from the interior threads on the depression on the inner faces of the knobs, were of the screw-in type. Two examples still have portions of the iron spindle present and one of these spindles has an iron rose. Five nearly complete porcelain knobs ranged from 54 mm to 57 mm in diameter. The hollow, brass knob has a smaller diameter (45 mm) than the porcelain knobs and it has an extruded projection on the handle side. It is possible that this knob was not intended for use on a door, as it could equally well have been an ornamental knob on a flagpole tip or may have another function.

Roses

Four iron roses or rosettes were recovered which were designed to attach to doors where a spindle protruded through the door for a

doorknob (example shown on Plate 92, H). Two of these are simple, flat disks that have perforations for the spindle and for attachment screws, and the other two are slightly thicker and have a depressed panel to receive the spindle. These specimens range in diameter from 48 mm to 60 mm.

Plumbing Supplies

At least 19 items were found at Fort Scott which are directly related to the plumbing trade. Thirteen pieces of pipe were recovered which are made either of lead (one example) or iron (12 examples). The short sections of pipe recovered have internal diameters that range from 19 mm to 45 mm and several of the examples have couplers attached (T-shaped couplers and caps). A single rubber faucet washer (flat and 14.5 mm in diameter) was recovered. One brass handle from a sink (Plate 93, A) and four iron handles (three are T-shaped and one is L-shaped) were also recovered (example of iron T-shaped handle on Plate 93, B).

Gutter Parts

Five gutter parts, as well as several actual sections of galvanized metal guttering, were recovered. Three of the gutter parts are gutter hooks (these are also sometimes called hooks for conductors). Only one of these is complete and it measures 190 mm long and is curved to accommodate a 95 mm diameter gutter (Plate 93, C). All three of these hooks were of the type that were driven into wood and they have projections on the driven end to hold them securely into the wood. Two gutter, eave, trough-hanger strap sections were also recovered at the site. These items are made of strap metal (13 mm wide and 1.5 mm thick) and they are perforated for riveting. One specimen (measuring 200 mm long) has five perforations spaced approximately 55 mm apart and the other has four perforations with the same spacing. Two of the rivets are present on the latter specimen (which has an overall length of 170 mm) and one rivet is still present on the first strap.

Bricks

While hundreds of bricks were discovered during the investigations at Fort Scott, the vast majority of these were quite obviously associated with recent or modern construction and these specimens were therefore not collected. Of those few specimens that were thought to be early examples, none is a complete brick. The small sample of bricks exhibits considerable color range with the darkest bricks being a dusky red (Hue 10YR, 3/2) and the lightest a reddish yellow (Hue 5YR, 6/6) as measured on the Munsell Soil Color charts. The only brick with any markings on it is a small, dusky red brick which

measures 45 mm long, 20 mm thick, and is of indeterminate length. A raised figure of the back half of a bovid is situated on the obverse face of the brick along with a partial advertising identification "---Brick Co./---nsas". This very small brick was probably a promotional brick and not a functional construction item. A small fragment of a brick was recovered from Historic Structure 17 which is also worthy of brief mention. This brick section has a very heavy, glass-like glaze on its outer surface which is apparently a salt glaze. Salt glazing of tile, and occasionally brick, was performed to create a ceramic construction material which was impervious to liquids.

Mortar and Plaster

Quantities of mortar and plaster were encountered during the excavations conducted at Fort Scott and the surviving structures that date from the early constructional period of the fort all have at least some surviving remnants of the original mortar and plaster contained in their fabric. Intensive study of the plaster and mortar composition was conducted by the National Park Service during the rehabilitation of those structures and as a necessary preliminary to the reconstruction of other structures. While the specific results of those studies are not presently available, it is noteworthy that the original plastering and mortar was successfully replicated utilizing materials native to the Fort Scott locale.

Wood

Thirty-nine small fragments of wood were recovered and four of these were charred while the remaining specimens were in a natural, weathered state. Three of the specimens are small sections of 20 mm thick tongue and groove boards and two of these are complete enough to determine board widths of 81 mm and 127 mm (example on Plate 93, D). A charred wooden peg was recovered from Historic Structure 8 which appears to be hand formed or carved (Plate 93, E). This specimen has a length of 148 mm, a width at the butt end of 25 mm, and a consistent thickness of 12 mm. It tapers from the butt to the tip to form a sharply pointed peg or stake. While it is known from historic sources that much of the original wood construction at Fort Scott utilized lumber from the immediate locale (a sawmill was in operation by at least July of 1842) it is not known whether any of the few surviving archeological wood specimens were produced of local material (Thompson 1967:17-18).

Coal

It is not known to what extent coal was utilized as a combustible material during the earliest years of Fort Scott. Nevertheless, approximately 45 small coal fragments and some coal clinkers were recovered from a number of structures during the archeological investigations and these attest to the use of this material by at least

some of the inhabitants. This is not surprising since southeast Kansas contains rather rich coal resources which have been exploited since well before the turn of the century (Blackmar 1912:376-377).

Window Pane and Plate Glass

A total of 4,399 shattered fragments of flat glass were recovered from 14BO302. The majority of these are, or evidently were, fragments of clear glass from thin, broken window panes. Thicker plate glass from door panels, mirrors, etc., was also present. The surfaces of the glass fragments were typically corroded and were often covered with iridescent flakes. Fontana and Greenleaf (1962:98) note that this type of patination is characteristic of pre-1900 glass and apparently resulted from excessive alkalies which were added to the silica to lower the melting point and viscosity during the forming process. Pertulla and Shaw (1980:63-64) suggest that glass thickness, as well as patination, are important variables in determining age. Following Walker (1971), they note that sheet glass evidently became thicker through time. Glass thinner than 1.6 mm is pre-1845 in origin and modern glass is typically thicker than 3 mm. As Table 19 indicates, 3,775 sheet glass fragments, or 86% of the total sample, are thinner than 3 mm and thus presumably date prior to 1900 when machine methods were adopted for forming glass (Fontana and Greenleaf (1962:98). A much smaller portion of the sample, perhaps no more than 5 to 10 percent, falls in the thickness range below 1.6 mm and presumably this glass was manufactured prior to 1845. Colored glass (either green or blue) was represented by only four specimens and all were in the thickness range from 1.9 mm to 3.2 mm. Nine glass fragments (all thicker than 1.6 mm) had paint residue adhering to their surfaces. The paint colors represented are gray-green, white, green, and dark blue. Mortar or putty was present on one fragment and tar was noted on 26 fragments. Historic Structures 5, 6, 7, and 9 (Dragoon Barracks, two infantry barracks, and the Guardhouse) yielded the most glass fragments in all thicknesses. The thickest fragments (3.9 mm to 11.4 mm) were found most abundantly in Historic Structure 7 (an infantry barracks).

Miscellaneous Metal

Iron and/or Steel

As noted previously, badly preserved objects of iron and steel comprise a major artifact category in the inventory of material culture items recovered from Fort Scott. It is likely that the majority of these items, which are presently unidentifiable as to function, are hardware connected with a variety of trades such as machinists, builders, plumbers, electricians, blacksmiths, etc. We have not attempted to list or describe the majority of these corroded items because such a list would be meaningless. However, at least a

TABLE 19
14BO302: Distribution of Window Pane and Plate Glass

Thickness of glass in mm	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
1.0 to 1.4					18	9	14		39	3	7		2						
1.5 to 1.9	4			26	147	302	144		473	27	24		8				5	1	
2.0 to 2.4	27			26	218	376	560	6	556	96	63		24				25	2	
2.5 to 2.9	2			5	49	124	193	2	117	27	20		25				8	1	
3.0 to 3.4	1			8	28	86	142		44	19	7		15				1		
3.5 to 3.9				1	1	13	40		2	3			3						
4.0 to 4.4						1	7		1	3									
4.5 to 4.9						1	1			1			4						
5.0 to 5.4						1	16												
5.5 to 5.9							18		2				1						
6.0 to 6.4							14						1						
6.5 to 6.9							5			1									
7.0 to 7.4					5		10		1	1									
7.5 to 7.9							1			1			1						
8.0 to 8.4							7			2									
8.5 to 8.9							2												
9.0 to 9.4							8												
9.5 to 9.9																			
11.0 to 11.4							1												

few of the miscellaneous items require some explication because of their possible affiliation with the military occupation of Fort Scott.

Magnets: Two items were recovered from Fort Scott which have been tentatively identified as magnets. Both are made of iron or steel and they are of the same size. They look like small horseshoes which have had their ends bent in until they nearly meet. The more complete specimen measures 95 mm long, 41 mm wide, and is 9 mm thick. The iron rod from which the two specimens are made is oval in cross section.

Round-Wire Eyed Stakes: Sixteen objects were recovered from Fort Scott which are all share a uniformity of overall shape and construction, but which differ considerably in size. These specimens are made of round wire (in cross section) which has been pointed at one end and which has been bent into a circle at the other end. In appearance they are similar to a surveyor's chain pin. The smallest item of this type recovered at Fort Scott is made of very light wire (2.5 mm diameter) and it has an overall length of 88 mm. The largest complete example is made of round wire of 7 mm diameter and this specimen has an overall length of 50 cm (Plate 93, F). An incomplete example is made of round iron rod of 14 mm diameter. The function of these items (or functions) could not be determined although several of them are of a size that would have made them suitable as picket pins for holding horses. Several of these examples are quite crudely and carelessly made and these examples were either made by a blacksmith or by a layperson. One example has been flattened on the tip end and this object may have functioned as a fireplace or stove poker (Plate 93, G).

Round Iron Stakes: Five sections of round iron bar were recovered which have one end that is lipped over and flattened. Diameters of these specimens range from 16 mm to 25 mm and the longest such item is 225 mm in length. While the function of these items is unknown, it is evident that they were struck with a very heavy implement, probably a sledge.

Square Iron Rod: Numerous examples of sections of iron rod were recovered which are square in cross section. These specimens occur in a variety of sizes and some of them have appendages. Three square iron rods (240 mm long and 13 mm on a side) have been pointed at one end and have a curved piece of lighter, flat iron welded onto their sides. These objects may have functioned as stakes for securely holding some object to the ground. One of the more interesting examples of a square rod is a 330 mm long section which is 8 mm wide on each side. This specimen has an ornate iron finial at one end which is four sided and which terminates in a sharp point (Plate 93, H). This may be an example of a decorative fence element.

Flat Strap Iron: There are numerous examples of flat strap iron in the Fort Scott collection. These range in shape from flat to curved sections and also include a number of flattened iron hoop straps. While most of these could not be identified as to function, suggested functions would include use as barrel bands, wagon straps, construction hardware, etc.

Copper and Brass

Forty-seven pieces of brass and copper were recovered from Fort Scott which are of a variety of shapes and sizes and which are predominantly unidentifiable. Included in this category are flat, plain strips of metal, ornamental flat strips, twisted strips (both plain and ornamental), light circles of brass and copper, and hollow copper and brass tubes. Two of the items in this category are particularly interesting. One of these is a thin, brass specimen which was recovered from Historic Structure 3 and which is quite similar in shape to an item identified by Francis Lord (1979:186) as a telegraph key. This specimen has a circular thumb piece which measures 13 mm in diameter and, extending from one side of this circular piece, is a flat strip of brass that is formed in one piece with the thumb piece and which is 6 mm wide and 1 mm in thickness (Plate 93, I). Corroded iron is present at the end of the specimen opposite the thumb piece. The brass portion of this specimen measures 50 mm in length and the corroded iron extends for another 8 mm beyond this.

The second specimen is a formed brass object which has the shape of a turtle shell (Plate 93, J). The specimen is oval is a shape with a length of 73 mm and a width of 61 mm and it is formed of brass of 2.5 mm thickness. The obverse face of the shell-like object is decorated with a series of diamond and square patterns, and a five-pointed star has been cut from the center. Two possible hinge remnants are present on one of the long sides on the reverse face of the specimen. This object is probably a portion of an ornamental jewelry or pin holder.

Lead

Scrap fragments of lead were also recovered from the site although no attempt has yet been made to tabulate them.

Celluloid Leg Band

A single example of a celluloid leg band was recovered from Historic Structure 16. Celluloid leg bands are used as marking devices on the legs of chickens and other kinds of poultry. The specimen in the Fort Scott collection is of blue plastic or celluloid and it has an interior diameter of 17 mm. This specimen is quite similar to celluloid leg bands advertised in the 1927 edition of the Sears, Roebuck Catalogue (Mirken 1970:1075). A small section of

twisted, copper wire was recovered from Historic Structure 6 which may have had an identical function. This small example, which has the shape of an interrupted spring, has an internal diameter of 11 mm.

LIGHTING DEVICES AND ELECTRICAL EQUIPMENT

Many different types of lighting devices were utilized in North America during the nineteenth century. Candles were undoubtedly the most often used lighting devices and they continued in use well into the twentieth century. Nineteenth century candlesticks and candleholders were made from a variety of materials (e.g., ceramic, glass, and metal) and they were of a variety of types (Hough 1928). Historic sources (as summarized by Ketcham 1973, 1977, and 1978) suggest that candles were the primary lighting devices utilized by the military during the initial period of occupancy at Fort Scott (1842-1853). Many other lighting devices were available during the nineteenth century, although some of these developments obviously occurred after 1850. Lamps designed to burn oil, usually whale oil, had been known since the latter part of the eighteenth century. Such lamps as the Argand lamp, which had been developed in 1783, and the Mile's Agitable lamp, developed in 1787, had gained widespread popularity in portions of the eastern United States well before 1800 (Watkins 1952:392). Whale oil lamps were comparatively safe but provided little advantage over candles in terms of their illumination (Watkins 1952:397-398). In 1830, Isaiah Jennings discovered or developed "burning fluid", a combination of alcohol and spirits of turpentine, and a variety of lamp types were developed between 1830 and 1860 to utilize this highly volatile mixture (Watkins 1952:398). Lamps that employed lard as a fuel had been developed by a least the 1830s and possibly 20 years earlier (Watkins 1952:401). A variety of lighting devices were developed in the period after 1830 that utilized illuminating or natural gas as a fuel for illumination (Watkins 1952:393). One of the most important lighting developments during the nineteenth century occurred as the result of the discovery of kerosene by Dr. Abraham Gesner in 1854 (Thuro 1976:15). Kerosene lamps of a great variety of types became the predominant lighting devices during the period from 1860 until 1900 (The Rushlight Club 1972:71). The late nineteenth century was also a time when electricity was being investigated as a method for providing superior lighting. The light bulb produced by Thomas Edison received world-wide patent rights in 1879 and this paved the way for the successful utilization of electricity as a lighting medium (Freeman 1968:185). Electricity, however, was not generally available in rural or small town areas like Fort Scott until after 1900.

Very few of the recovered lighting devices from Fort Scott are of a type which would have been available to occupants of the site in the period from 1842 to 1853. The most commonly encountered lighting devices at Fort Scott are sections or pieces from a variety of types of kerosene lamps. Also included in the Fort Scott inventory are

brackets and burners for gaslights, and a variety of electrical fixtures. The general distribution of the recovered specimens is shown in Table 20. In a previous section of this report dealing with the analysis of recovered ceramics from Fort Scott, it was noted that a number of ceramic candlesticks or candleholders were recovered and some of these could have been associated with the early fort period. Interestingly, no metal candleholders were noted in the archeological inventory. This is somewhat surprising in view of the fact that metal candleholders were probably the most widely used lighting implements at Fort Scott during at least the early part of the fort occupation.

Thirty-two brass and/or copper items were recovered from Fort Scott which are all probably sections from kerosene lamps. Twenty-five of these are burner parts (often with ratchet turner attached), two are flattened cylindrical wick holders, and five are globe rings. A representative sample of kerosene lamp parts is shown in Plate 94, A-F. Patent dates and/or manufacturer's marks were present on 13 specimens although the information was legible for only 11 of the specimens. This information consistently was located on the obverse faces of the surviving stem turners. Patent date information located on these specimens has a chronological range from January 24, 1860 to October 18, 1874. At least four different manufacturers are indicated by the surviving specimens. One burner section (including a stem turner, stem holder, and clamping device for a glass globe) is marked in raised letters "PINAFORE/H.B. & H." (Plate 94, A). This is apparently one of the brand names of the Holmes, Booth and Hayden firm, a brass manufacturer located originally in Waterbury, Connecticut (Thuro 1976:44). This firm had apparently begun to manufacture brass kerosene lamps by at least 1865. One other burner section is attributable to the same firm. This specimen is marked "H.B. & H./Jan. 24, 1860/Aug. 1, 1865" (Plate 94, B). Two kerosene lamp parts were apparently produced by another manufacturer. Both are marked "THE WILMOT MY. CO./BRIDGEPORT, CT." (Plate 94, C, D). A single specimen was recovered which is marked with another maker's name and with additional information "BENEDICT & BURNKAM MFG. CO./BLAKE & LEE'S PAT./SEP. 29, 1868". A fourth manufacturer is suggested by the following partially visible mark "---HEISS/PATENTED APRIL 25, 1861/ MARCH 14, 1865". Other patent dates occurring on the stem turners are "July 21, 1863; December 10, 1867; October 11, 1862; December 3, 1861; August 9, 1864; and October 18, 1874".

As noted, the widespread use of kerosene did not take place on the American frontier until after 1860 and it is likely that all 32 of the recovered specimens date in the period from 1860 until the early years of the twentieth century. The lamp types of the recovered specimens could not be determined, although kerosene lamps were made in a wide variety of types including hand lamps, wall lamps, table lamps, and various transportation lamps utilized for such diverse purposes as automobile, bicycle, railroad, and coach and carriage transportation. At least one of the specimens recovered from Fort

TABLE 20
14BO302, Distribution of Lighting
Devices and Electrical Equipment

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Kerosene Lamp Parts																			
Burners			2			9	1		1	1	11								
Wick Holders						1													
Globe Rings						4			1										
Glass Chimneys and Globes						5					1								
Gas Lamp Parts																			
Short L-Burner Gas-Light Cock					1														
Brackets						2				2									
Burner Parts						1													
Electrical Equipment																			
Cylindrical Porcelain Insulators			1			4	4												
Porcelain Insulator Tubes							3	1	3										
Two-Wire Cleats				4		3	1	1											
Fuses		1					1												
Snap-in Light Bulb												1							
Switch Plates												2							
Chain and Tube Fixture										1									
Push-in Light Bulb Socket							1												
Flashlight Base												1							
Carbon Battery Rods					1	2	2			3		1		2		1	2		
Glass Insulators						2													

Scott may be a portion of a carriage or bicycle lamp (Plate 94, F). This specimen consists of the top part of a brass lamp that had a bracket on the back for attachment. The specimen is similar to kerosene and carbide bicycle lamps illustrated in a reprint of the 1902 edition of the Sears, Roebuck Catalogue (Crown Publishers 1969:384-285).

Four different types of lamp chimneys or globes were represented in the Fort Scott inventory. All of these could presumably have been adapted to several different lamp types (e.g., hand, wall, table, etc.) and they may have been utilized with several differently fueled lamps (e.g., kerosene and whale oil predominating). The first type, represented by one complete specimen, is made from clear or flint glass (Plate 95, A). This specimen measures 254 mm tall and has a base diameter of 67 mm. The chimney is somewhat pear shaped, with the maximum diameter of 87 mm occurring just 55 mm up from the base. The top is plain with a fire polished lip and with a top diameter of 51 mm. This chimney example was evidently of a very common type as it is frequently illustrated as a chimney for both whale oil and kerosene lamps (Freeman 1968; Thuro 1976). A second chimney type is represented in the Fort Scott inventory by several examples of untapered, flint-glass cylinders (example on Plate 95, B). While none of these specimens is complete, they had a diameter of 49 mm and a height in excess of 120 mm. The lip and body of one end of these cylinders is typically frosted for a distance of 36 mm down from the lip. The third chimney type in the collection is represented by several incomplete rim sections of clear glass chimneys (example on Plate 95, C). These examples are readily identified as belonging to a broad type on the basis of the nodes that occur on the lip. This gives the rim a distinctive appearance which has been called the "pearl top" (Pyne Press 1972:111). They typically have a neck constriction below the rim and a body that expands out to a somewhat globular shape. Unfortunately, none of these specimens was recovered intact so the only measurements that could be determined were orifice diameter (circa 70 mm) and neck diameter (circa 50 mm). The "pearl top" chimney was apparently patented in 1883 and achieved great popularity after that date (Pyne Press 1972:111). The fourth lamp chimney type may more properly be considered a globe (Plate 95, D). Two complete examples of this type of globe and several broken examples are contained in the Fort Scott material inventory. These globes are made of opaque white (or opal) glass. The body of these specimens is globular with a maximum diameter of 107 mm and a height of 165 mm. The body of the specimens constrict two-thirds of the way up and then flare out to create a bulbous ring that sits on top of the globular bodies. This ring of glass has a maximum diameter of 73 mm and is perforated horizontally with six holes that each measure 14 mm in diameter. A straight tubular rim (27 mm high and 50 mm in diameter) extends from the ring to the lip of the specimens.

Six parts of gas lamps were recovered from Fort Scott. The most diagnostic of these is an L-burner gaslight cock (Plate 94, G), which is similar to the short L-burner gaslight cock illustrated on page 662 of the reprint of the 1902 edition of the Sears, Roebuck Catalogue (Crown Publishers 1969:662). Also included in the Fort Scott inventory were four brass tubular bracket parts and one burner part from a gas lamp.

Items of electrical equipment were well represented in the Fort Scott inventory and include such diverse items as electrical wire, porcelain insulators, cleats, fuses, light bulbs, the base of a flashlight, brass fixture parts, and numerous carbon rods from batteries as well as switch plates. Also included were sections of two large glass insulators. The electrical devices represented in the Fort Scott inventory obviously have functions other than just lighting. Some of these items are probably related to the telegraph and telephone industries and to generation of electric power for purposes other than lighting. A perusal of available mail order catalogues from the period from 1895 to 1927 indicates that most of these items would have been available to the general public after 1902 (Dover Publications 1969; Cohen 1969; Israel 1969; Crown Publishers 1969; Schroeder 1969; and Mirken 1970).

Nine cylindrical porcelain insulators or sections of porcelain insulators and several suspect fragments were recovered from Fort Scott. These specimens typically are channeled at one end and have a perforation that runs through the long axis of the insulator. The recovered specimens range in size from a very large example which is 50 mm high by 40 mm in diameter to much smaller examples measuring 43 mm high by 25 mm in diameter. Seven unglazed porcelain insulator tubes were also recovered from the site. This type of insulator was utilized where wires were drawn through a partition or joist and served to isolate the wire from contact with the constructional material. Both single-wire and double-wire cleats were represented in the inventory. At least eight complete or nearly complete half sections of two-wire cleats were recovered and sections of one-wire cleats were also recovered. Portions of two screw-thread fuses were recovered. One of these, which has a glass top and brass screw thread, is marked on the top in raised letters "shockproof/thrift/125" and underneath this is a "30", indicating that it is a 30 amp fuse. A single snap-in light bulb of small size was also recovered from the site. A face plate from a push button flush switch was recovered which is made of brass or copper and another half of a lock-out, electric switch plate was also recovered. Other metal electrical parts include a chain and tube from a hanging light fixture and a push-in light bulb socket. The recovered flashlight is a basal part from a screw-on flashlight base that is marked on the base with "Eveready". Fourteen sections of cylindrical carbon rods were recovered from Fort Scott which are evidently carbon rods from batteries. These specimens range in diameter from 8 mm to 23 mm.

Two complete or nearly complete glass insulators were recovered from Fort Scott. One of these is made from a translucent, green-colored glass and the other is made from a semitranslucent, blue-colored glass. Both are of the threaded type and both have patent information on them which gives a firm beginning date for the manufacture of each one. The green specimen, which measures 93 mm high and has a skirt or base element that is 61 mm in diameter, is marked on one side of the body "HEMINGRAY No. 12" and on the other side "PATENT/MAY 2, 1893" (Plate 95, E). The May 2, 1893 patent was issued to R.G. Hemingray and J.C. Gill as patent number 496,652 (Tibbitts 1967:18-19). The patent concerned the use of drip points on insulators. Drip points were supposed to help moisture drip off of the insulator before it could get inside and cause a short (Tibbitts 1967:15-16). The second insulator recovered at Fort Scott is the semitranslucent, blue specimen and it is incomplete. This specimen has a base diameter of 70 mm and the height could not be determined. Two patent dates "May 2, 1893" and "December 19, 1871" were observed on opposite sides of the insulator, near the base. Like the first specimen from Fort Scott, this insulator has drip points and presumably the later of the two patent dates refers to the drip point patent. The December 19, 1871 patent, which had patent number 122,015, was issued to Robert Hemingray of Covington, Kentucky, and concerned a basic improvement in the molding of telegraph insulators (Tibbitts 1967:32-35). This particular patent had to do with the forming of the threads in the pin hole after the inverted cup of glass had been molded.

TRANSPORTATION OBJECTS

Harness, Farrier, and Wagon Parts

One hundred and forty-seven items were recovered from Fort Scott which are almost certainly transportation-related items associated with harness, farrier, and wagons and carriages. The general distribution of these items within the fort complex is shown in Table 21. Excluded from this discussion are such harness and farrier items as were covered in other sections (e.g., harness bells, wagon bow staples, chains, and lighting devices).

Bridle Bits

Twelve sections of bridle bits were recovered from Fort Scott. While it is probable that some of these bits are military bits, or at least date from the military period of occupation at Fort Scott, the corroded and fragmentary nature of the specimens did not allow for a certain determination of this. The most common bridle bit type encountered was the snaffle bit of which there were seven recovered specimens. Six of these were apparently simple, ring-snaffle bits. The ring-snaffle bits consisted of two, more or less straight, mouthpieces which were linked together in the center and which had rings at

TABLE 21
14BO302, Distribution of Harness, Farrier, and Wagon Parts

	HS 1	HS 2	HS 3	HS 4	HS 5	HS 6	HS 7	HS 8	HS 9	HS 10	HS 11	HS 12	HS 13	HS 14	HS 15	HS 16	HS 17	HS 33	Surface
Bridle Bits																			
Ring-Snaffle Bit						1			1	1	2								1
Loose-Cheek Fancy-Driving Snaffle Bit											1								
Medium, Port-Curb or Riding Bit								1											
Whitman Curb Bit																	1		
High, Port-Curb Bit						1													
Full-Cheek Driving-Curb Bit						1													
Mule, Port Curb Bit										1									
Saddle Guard Plate						1													
Ladies Stirrup																		1	
Rope Halter Ring						1					1								
Harness Snaps					2	1	1	1		3							1		
Brass Toggle Hooks						1											1		
Harness Backband Ring										2									
Tongued Harness Ring									1										
Harness Ring																			
Iron						6	1						13				2	1	1
Brass						1					2								
Harness Buckles			2		13	7		1	1	5	4						3		1
Steel, Driving-Harness Hame									1										
Hame Knob End					1														
Hame Hook					1														
End Ring from Tug or Trace					1														
Clevis											1								
Brake Handle for Wagon								2											
Trip Latch						1													
Hoof Pick											1								
Horseshoes			2		3		1	5	4	15	1		1						1
Muleshoes				1		4	1		1									3	1

the outer ends. No complete ring-snaffle bits were recovered, but two half bits were recovered which each included one entire ring and most of the mouthpiece half. The better preserved of these two specimens has a ring with a diameter of 60 mm and it has a mouthpiece with an estimated original length of 90 mm and with a maximum diameter of 11 mm (Plate 96, A). This is a rather gracile bit which might have been utilized as a watering bit. The other nearly complete half has a ring with a diameter of 70 mm and a mouthpiece half which has an estimated original length in excess of 85 mm. The mouthpiece has a maximum diameter of 13 mm. Ring sizes for the remaining snaffle bit parts range from 45 mm to 85 mm in diameter. Snaffle bits of this type are quite common and apparently have been in use since well before the Civil War and up until the present time. Herskovitz (1978:85) indicates that several different varieties of snaffle or watering bits that follow this basic pattern were utilized by the military from at least 1861 until the turn of the century. Civilian utilization of this form was also apparently widespread. Steffen (1978:60) illustrates a watering bridle bit that apparently was associated with the McClellan horse equipment of the Model 1859, and this example is similar in overall shape to a number of the ring-snaffle bits recovered from Fort Scott. However, as indicated, this is a very common bit style and is still being produced today. This type of bit is also sometimes referred to as the Bradoon bit (Berkebile 1978:415). The seventh snaffle bit recovered at Fort Scott is of a different type than the simple, ring-snaffle bits. This specimen, which is very corroded and very incomplete, appears to be a section (including most of one-half of the mouthpiece and a portion of the cheek piece) of a fancy, driving-snaffle bit. This is almost certainly not of military issue. It is similar to a fancy-driving bit illustrated in Bible of Bridle Bits by Haug and Malm (1975:117, Figure 597). The bit is of the loose-cheek variety and the mouthpiece had an estimated original length (for one-half) of 90 mm.

The remaining five bit sections are all apparently curb bits. A curb bit is a name that has been used for bits which have cheeks (either straight or curved) which extend above and below the mouthpiece and which have rings or loops upon the lower arms for receiving the driving reins. The upper arms have loops for attaching the bit to the bridle (Berkebile 1978:418). The first of the curbed bits recovered at Fort Scott is a section of a medium port-curb or riding bit (Plate 96, B). This specimen has a cheek width of 143 mm and the cheek piece is made out of 14 mm diameter round wire. The second curb bit represented in this sample is a much more gracile specimen. The mouthpiece is mostly missing from this specimen but one of the cheek pieces is largely present (Plate 96, C). This cheek piece is estimated to have had an original length of circa 160 mm. This specimen appears to be quite similar to the "Whitman Curb Bit" illustrated on page 123 of Bible of Bridle Bits (Haug and Malm 1975:123, Figure 627). This type of bit was apparently developed after the Civil War and saw wide use during the Indian wars (Haug and Malm 1975:123). Thus, it

would appear to postdate the military occupation of Fort Scott. The third curb bit specimen in the Fort Scott inventory consists of the mouthpiece of a high, port-curb bit. The cheek pieces are missing on this specimen but the mouthpiece has a length of 133 mm and it is made out of heavy round wire which has a diameter of 11 mm.

The most complete bit recovered at Fort Scott is a nearly complete mule-port curb bit that is quite similar to several mule-port bits illustrated in Bible of Bridle Bits (Haug and Malm 1975:83-84). This is a high, port bit which has a mouthpiece width of 152 mm and a cheek piece length of 153 mm (Plate 96, D). The remaining bit specimen from Fort Scott is a cheek piece from a full-cheek, driving bit (Plate 96, E). This specimen has an overall cheek piece length of 150 mm and is made of round wire which has a diameter of approximately 11 mm. The ring part of the cheek piece has an outside diameter of 63 mm.

Stirrup

A single example of a steel stirrup was recovered at Fort Scott (Plate 96, F). This all-metal stirrup has a footrest portion that measures 70 mm in length and 23 mm wide and the bow-shaped upper part has a height of 78 mm. The upper end of the specimen is slotted for insertion of a stirrup strap. The small size of the specimen suggests that this is a ladies' stirrup for use with a sidesaddle.

Saddle Guard Plate

A single example of a brass, guard-plate oval was recovered (Plate 96, G). This specimen has an overall length of 40 mm, a width of 23 mm and is less than 1 mm in thickness. It has a rectangular slot which is oriented with the long axis of the specimen and this slot measures 23 mm in length and is 4 mm wide. Two small perforations (each 2 mm in diameter) are located at the ends of the specimen. This specimen is quite similar to a McClellan saddle guard plate illustrated in Fort Bowie Material Culture (Herskovitz 1978: Figure 37, I). Herskovitz notes that guard plate ovals "...served to protect the mortises in the saddle's pommel and cantle through which the four coat straps were passed" (Herskovitz 1978:85). Herskovitz (1978:85) indicates that such guard plate ovals were found on McClellan saddles from at least 1874, but illustrations in Steffen (1973) indicate that similar guard plate ovals were in use on the 1859 McClellan saddle.

Halter Rings

Two halter rings for use with rope halters were recovered from Fort Scott. Both of these all-metal items are shaped like a figure eight. One of the specimens has an overall length of 74 mm and a maximum width of 42 mm and the other has an overall length of 59 mm and a maximum width of 45 mm. The larger specimen is made of fairly

light gauge wire which measures 5 mm in diameter while the smaller specimen (Plate 96, H) is somewhat sturdier and is made out of round wire that has a diameter of 8 mm.

Harness Snaps

Nine iron or steel items were recovered from Fort Scott which are evidently harness snaps (example on Plate 96, I). A harness snap is a "...metal hook having a spring catch, by which the opening in the hook is closed, thus preventing the hook from detaching itself" (Berkebile 1978:437). All but one of the specimens identified from Fort Scott have or once had a spring catch. These harness snaps typically have a rectangular section at the top end for strap attachment and a hook at the distal end that is offset at a 90 degree angle to the strap fastener. The largest specimen in the Fort Scott collection measures 102 mm in length and is made out of very heavy round wire of 13 mm diameter. The smallest complete specimen measures 59 mm in length and is made out of wire that has a diameter of approximately 6 mm.

Brass Toggle Hooks

Two brass, toggle hooks were recovered from Fort Scott which are of the same basic pattern as the previously described harness snaps, except that they are made of brass wire and they lack a spring catch (example on Plate 96, J). These may have been utilized for securing horse blankets. The two specimens are the same size and they have an overall length of 35 mm and are made of brass wire which is slightly less than 4 mm in diameter.

Harness Backband Rings

Two harness backband rings were recovered from the site. The more complete of these rings, which has a ring part that is made out of steel that is oval in cross section, has an interior ring diameter of 39 mm (Plate 97, A). A 30 mm long projection of heavy wire (which has a thickened circular part on it) extends off one side of the ring. The second specimen, which is incomplete, is made of 5 mm diameter round wire and the ring part has an estimated original diameter of 38 mm.

Harness Rings

Twenty-eight circular, metal rings were recovered from Fort Scott which are most likely rings for attachment of various types of harness. One of these, which might more properly be considered a circular buckle, consists of a ring of steel or iron (with an internal diameter of 40 mm) which has a projecting tongue of iron or steel off one side. This tongue is of the loose-tongue variety. Twenty-four simple iron rings were recovered which have internal diameters that range from 25 mm to 88 mm (example on Plate 97, B). These specimens

are made of round wire with a range in diameter for the wire from 3 mm to 8 mm. Three additional harness rings recovered from the site are made of solid brass, round wire (example on Plate 97, C). The smallest of these has an internal diameter of 29 mm and is made of wire that has a diameter of 4 mm. The largest such specimen has an internal diameter of 38 mm and is made of round wire that has a diameter of 6 mm.

Harness Buckles

Thirty-seven iron or steel buckles were recovered from Fort Scott which were probably used on horse or mule harness. These fall into four recognizable categories. Four of the recovered buckles are definitely roller buckles, as they have a cylinder of iron attached to one side (example on Plate 97, D). These specimens are typically greater in width than they are in length and they are typically rectangular in shape. The smallest roller buckle measures 34 mm wide and 29 mm long, and the largest recovered specimen measures 52 mm wide and 39 mm long. All of the recovered examples apparently had a single, loose tongue which pivoted off the side opposite the roller sleeve. Six buckles were recovered which have frames that are shaped like the letter "D" (example on Plate 97, E). These specimens all have a single tongue which pivots off the flat backside. The largest such specimen measured 46 mm wide by 56 mm long and the smallest measured 36 mm wide and 36 mm long. Six rectangular, single-tongue buckles of rather simple shape were recovered from the site (example on Plate 97, F). The largest of these specimens measures 61 mm wide by 50 mm long and the smallest measured 45 mm wide by 31 mm long. The most common harness buckle type encountered at Fort Scott was a rather complex bar buckle (example on Plate 97, G). Eighteen of these bar buckles were recovered. These specimens had frames which range from square to rectangular to oval in shape. They all shared a common characteristic of having a central bar upon which a single tongue pivoted. This central bar is often recessed, so that in cross section it was oriented lower than the rest of the buckle. The smallest bar buckle recovered measured 27 mm long by 23 mm wide and the largest measured 103 mm long by 56 mm wide.

Steel Driving Harness Hame

The left half of a steel hame for a driving harness was recovered from Fort Scott (Plate 97, H). This curved piece of iron or steel has two draft eyes on the outside edge of the hame for attachment of the traces. The specimen has an overall length of 51 cm and is made of fairly light gauge steel or iron and was thus probably intended as a driving harness rather than for use with a working harness.

Hame Knob End

A hollow brass ball was recovered from Fort Scott which is opened on one side (Plate 97, I). This specimen appears to be an ornamental

metal ball such as might have been located on the top of a hame. Berkebile (1978:434) notes that ornamental hame balls were often made of brass but were also sometimes made of tinned, plated, or Jappaned iron. This specimen has a diameter of 48 mm and is made of brass that is 1 mm thick.

Hame Hook

A single example of a hame hook was recovered at Fort Scott (Plate 97, J). Hame hooks were located on the lower part of hames and were utilized for attachment of the hame tug or trace. The specimen recovered at Fort Scott is 82 mm long and is quite similar in overall shape to two hame hooks recovered at Fort Bowie (Herskovitz 1978:87). Such hame hooks were evidently utilized on at least some military harness from 1877 and later (U.S. War Department 1877, Plate 2).

End Ring from Tug or Trace

A large end ring from a tug or trace, with another figure eight-shaped ring attached to it, was recovered from Fort Scott (Plate 98, A). The end ring has an overall length of 112 mm and is 39 mm in width and is made out of iron wire that is round and has a diameter of 8 mm.

Clevis

A single example of a possible clevis made of iron or steel was recovered at Fort Scott (Plate 98, B). This somewhat U-shaped metal shackle has two holes drilled through the end and two pins are still present. This presumably served to couple a wagon tongue to a double tree. This specimen has an overall length of 196 mm.

Brake Handles

Two possible brake handles for wagon or carriage brakes were recovered at Fort Scott. The more complete example is a piece of bar stock that is rounded at one end and flattened at the other, and that is slightly curved and bent when viewed in cross section (Plate 98, C). This specimen has an overall dimension of 56 cm and the flattened end has been perforated with two holes (each measuring 8 mm in diameter) that are spaced 65 mm apart. The second example has the same general configuration. That is, one end is flattened and the other end is rounded and the flattened end has two drilled holes through it.

Trip Latch

A single very elaborate hook-like object was recovered from Fort Scott which appears to be machine made and which may be a portion of a trip latch used to join two sections of chain together (Plate 98, D).

The specimen is made from very heavy round iron or steel stock which is 10 mm in diameter. It is U-shaped and one end of the U has bent into a circle. The other end of the U has been somewhat flattened and it has a rectangular cutout in it. This specimen is 96 mm high and 67 mm wide and one face of the specimen has been stamped with a series of four numbers of which three are visible "664". Eggenhofer (1961:43) notes that trip latches were often used to join rough-lock chains which were used to lock the wheels of wagons and cause them to drag, and thus slow down.

Hoof Pick

A single badly corroded example of what may be a hoof pick was recovered at Fort Scott (Plate 98, E). This specimen is incomplete but it consists of the front portion of a bent piece of iron or steel rod which is fairly sharply pointed and it is, in all likelihood, a hoof pick that was used to clean foreign matter from soles of the hooves of horses and mules.

Horseshoes and Muleshoes

A total of 33 horseshoes or sections of horseshoes were recovered from Fort Scott and 11 complete muleshoes were also recovered (examples on Plate 98, F-H). The majority of these specimens appear to have been made from iron or steel bar stock rather than from commercially produced shoe blanks. That is, they all were apparently manufactured by horseshoers or farriers who started the process with the raw metal stock. The considerable irregularity of size and thickness of the sample supports this hypothesis. The distribution of the recovered horseshoes and muleshoes from Fort Scott is shown in Table 21. The largest number of horseshoes (15 of the 33) were recovered in association with Historic Structure 10, the Dragoon Stables. Muleshoes were found most abundantly in association with Historic Structures 6 and 33.

Twenty-three of the recovered horseshoes are represented by at least three-fourths of the original horseshoe (one and one-half branches) and these specimens obviously provide the most information as to size and construction. A branch of a horseshoe is one-half of the shoe, from the toe to the heel (Wiseman 1973:130). The toe is the portion of the shoe between the front nail holes that are located on either side, and the heels are the opposite ends of the branches. The quarter is the portion of the shoe between the last nail hole and the heel, and the two surfaces of the shoe are referred to as the ground surface (lower surface) and the foot surface (upper surface). A crease, if present, is a semicircular depression which occurs on the ground surface of each branch and which contains nail holes (normally four to each branch). A toe clip is a projection of metal (formed by hammering the shoe) which projects up or above the upper surface.

Calks are projections on the ground or lower surface that are used primarily to increase traction (Wiseman 1973:137-138). Toe calks are normally formed by welding a small bar of iron or steel to the ground surface at the toe end of the shoe, while heel calks are most often formed simply by bending over the projecting ends of the branches, or heels, in the direction of the ground surface. While a few of the twenty-three complete or nearly complete horseshoes recovered at Fort Scott appear to be unworn, the majority of the specimens are worn and often somewhat deformed. Unfortunately, the horseshoes, like most of the iron and steel items recovered during the excavations are quite corroded and in many cases heavy scale rust has nearly obliterated any evidence of wear.

There is a considerable variation in size in the sample of 23 complete or nearly complete horseshoes from Fort Scott. Comparison of a single measurement (maximum width from branch to branch) reveals a range from 117 mm to 148 mm and no two specimens are of exactly the same size. Thirteen of the recovered specimens were evidently hind shoes while the remaining 10 examples were front shoes. Front and hind shoes may be differentiated on the basis of circularity. That is, front shoes are nearly circular and present a smooth parabolic curve when viewed from either surface, while hind shoes are more pointed in the toe and quarters area and are usually narrower at the heels (Herskovitz 1978:82). Only three of the recovered horseshoes were plain or regular shoes, while the remaining twenty specimens had been modified with heel calks, toe calks, toe clips, or a combination of these. Ten of the examples had just heel calks and eight of these specimens had been squared off while the remaining two had calks that were knife edged. Eight other specimens had both heel and toe calks. Four of these had squared heel calks, one was knife edged, and the remaining three examples were so corroded that no determination of calk termination could be made. Two of the horseshoes had just toe clips.

The 11 recovered muleshoes exhibited considerably more diversity than the horseshoes. They ranged in size (maximum width of the branches) from 80 mm to 99 mm and most examples had either heel calks, toe calks, toe clips, or a combination of these features. Toe calks were all of welded construction while heel calks and toe clips were simply modifications of the existing shoes. Three of the muleshoes had both heel and toe calks present and two of these specimens had knife-edged heel calks while the third had been squared off on the bent projections. Two of the muleshoes were plain or regular shoes although one of these specimens had one elongated heel, suggesting that it was a corrective shoe. Four muleshoes had just heel calks and all of these specimens had points that had been squared off. The two remaining muleshoes had squared heel calks and toe clips in combination.

Automobile Parts

Thirteen items were recovered from Fort Scott which can definitely be associated with automobiles. Included are two steel valves, a portion of a timer, a battery cable clamp, a valve stem cover of brass, a steel connecting rod for a piston, two universal vibrator points, a flexible section of speedometer shaft cable, a gear shift lever handle, a Mosler Spit Fire spark plug, a lead wheel weight, and a tire valve cap. These items all date after the turn of the century and their occurrence within the fort complex is to be expected since the area of the fort was subject to so much disturbance during the twentieth century.

Railroad Spikes

A number of railroad spikes were recovered Fort Scott, primarily from the fill of a latrine located east of Historic Structure 6. As noted previously, the first railroad in Fort Scott (the Missouri River, Fort Scott and Gulf) was completed as far as Fort Scott by 1869 and rail service to the town of Fort Scott has been continuous since that date. The recovered railroad spikes exhibit considerable size range with the smallest specimens measuring circa 100 mm long and 8 mm thick and the larger, and more common examples, measuring 140 mm to 150 mm long and 15 mm thick.

The Fort Scott Omnibus Line was a private transport company which operated from at least 1889 until 1898 (Hoye Directory Company 1889:72; and Chittenden Directory Company 1898). Extant photographs, dating before 1900, are contained in the photograph collections of the Kansas State Historical Society and several of these photos show horse-drawn wagons and carriages in Fort Scott. At least one of the Fort Scott photos clearly shows a horse-drawn vehicle operating on a set of steel rails and it is quite possible that this is a photo of the Fort Scott Omnibus Line in operation. Thus, a number of the spikes recovered within the fort complex could be related to this horse-powered mode of transportation rather than to railroads. At least one artifact was recovered from Fort Scott which is clearly associated with the Omnibus Line. This object, which has been described in detail on page 119 of this report, is a brass claim check which is marked "Fort Scott Omnibus Line/67/Claim Check". The Fort Scott city directory for the years 1889 and 1890 lists the Fort Scott Omnibus Line and indicates that Mrs. J.M. Terry was the proprietor (Hoye Directory Company 1889:72). Interestingly, Thompson (1967:182) notes that Historic Structure 8, the Hospital, was utilized by a Mrs. Terry as a bus barn around 1900.

FLORA

The Fort Scott material inventory contained only a few specimens of nuts and seeds. This was undoubtedly partly a result of the collection strategy which was utilized during the investigations.

That is, no screening of fill (either dry or wet) was attempted and no flotation was attempted. The few specimens of peach pits, walnut shells, and oak nuts which were recovered were not found in association with datable stratigraphic units. Several examples of intentionally cut wooden artifacts were recovered from the fort area and these have been discussed in a previous section of this report.

FAUNAL REMAINS

The identification of faunal remains from Fort Scott was capably performed by Ed Sudderth of the Midwest Archeological Center, National Park Service, U.S. Department of the Interior. Ed also prepared descriptive tables on the distribution of faunal remains by structure and on the minimum number of individuals by taxa (Tables 22 through 36). Unfortunately, the stratigraphic situation at Fort Scott was so confused by postmilitary disturbance that it was difficult to segregate faunal materials by vertical stratigraphic zones. Thus, information gained through the identification of faunal elements from Fort Scott is of somewhat limited value at this time. As noted previously, this confused stratigraphic situation also presented problems in terms of the analysis of identifiable artifacts at Fort Scott. However, for the artifacts, at least certain classes were amenable to chronological discrimination on the basis of their technological attributes. Such was not the case with the faunal material. Most of the recovered faunal remains from Fort Scott are apparently representative of butchering activities but the temporal span of these butchering activities ranges from 1842, when Fort Scott was first occupied by the military, up until the present day.

A total of 1,293 bone elements of vertebrate animals recovered from Fort Scott were identifiable as to taxa. Five additional taxa of gastropoda and mollusca were also represented in the Fort Scott inventory. For the purposes of this analysis, the calculation of minimum number of individuals represented for each taxa was done for each structure. That is, all of the identifiable bone units within each structure were considered as a unit in arriving at the minimum number of individuals present for each taxa for the site as a whole. If the stratigraphic relationships within each individual structure had been more amenable to analytical separation, it is likely that the minimum number of individuals for each taxa represented would be considerably higher for the Fort Scott complex. The minimum number of individuals for each structure was determined on the basis of a count of the largest number of any one diagnostic bone (e.g., right tibia) for each taxa. While it was recognized that finer discriminations could have been made in terms of the minimum number of individuals (e.g., presence of both adult and possibly semiadult bones for some taxa within some structures) it was decided, because of the size of the collection, to utilize the same criteria for minimum number of individuals of each taxa within each structure. As Table 22 indicates, the most abundant vertebrate species represented in the Fort Scott faunal inventory are domestic animals. Domestic cattle and domestic hog are each represented by at least 23 individuals while domestic sheep are represented by only 10 individuals. It is obvious that all three of these animal species were important food resources

for the inhabitants of Fort Scott. The most abundant bird bones in the Fort Scott inventory were those of chickens, for which a minimum number of 48 individuals was determined. The next most abundant bird bones were those of the turkey, with a minimum number of 11 individuals.

As Table 22 indicates, the dietary habits of the inhabitants of the Fort Scott locale were quite varied, and included some wild animal forms (e.g., deer and cottontail rabbit) as well as a variety of wild birds (prairie chicken, ducks, and geese). Several local fish (channel catfish, freshwater drum, and carpsucker) are also included in the inventory and might have been a part of the diet either of the earlier or later peoples at Fort Scott. The domestic horse is represented by at least one individual, although as historic sources indicate, horses were found in great numbers at Fort Scott throughout the nineteenth century. At least 10 domestic cats and four domestic dogs are represented in the Fort Scott inventory and these presumably were not food sources for the local people. Several taxa of mollusca and gastropoda were also identified, but the small numbers of these specimens suggests that they were not an important dietary element (Table 23). The occurrence of identifiable faunal remains, by structure, is tabulated in Tables 24 through 36. Inferences drawn from the faunal analysis of the Fort Scott material must at this time be viewed as quite tentative. It is, however, interesting that few wild animal forms are represented in the inventory and those that are represented are of a type that are common to the immediate Fort Scott locale even today. Conspicuous by their absence are upland game mammals, particularly bison, such as are commonly encountered in excavations of prehistoric archeological sites in Kansas. Whether the absence of recognizable bones of upland species indicates that these animals were not a protein source for the inhabitants of Fort Scott, or whether it simply indicates a difference in hunting and butchering techniques for the wild forms, is something that can probably be best answered through archival and documentary research.

TABLE 22

Vertebrate Taxa Represented at 14BO302, Fort Scott, Site Totals

N = Minimum Number of Individuals

Bos taurus	(Domestic Cattle)	N = 23
Sus scrofa	(Domestic Hog)	N = 23
Ovis aries	(Domestic Sheep)	N = 10
Odocoileus sp.	(Deer)	N = 5
Equid	(Domestic Horse)	N = 1
Canis familiaris	(Domestic Dog)	N = 4
Felis cattus	(Domestic Cat)	N = 10
Sylvilagus sp.	(Cottontail Rabbit)	N = 11
Sciurus niger	(Fox Squirrel)	N = 4
Procyon lotor	(Raccoon)	N = 1
Rattus sp.	(Common Rat)	N = 29

TABLE 22 (Continued)

Vertebrate Taxa Represented at 14BO302, Fort Scott, Site Totals

N = Minimum Number of Individuals

Aves	(Unidentified Bird)	N = 1
Meleagris gallopavo	(Wild or Domestic Turkey)	N = 11
Gallus gallus	(Domestic Chicken)	N = 48
Tympanuchus cupido	(Greater Prairie Chicken)	N = 3
Anatidae	(Duck, Goose, etc.)	N = 2
Aythya americana	(Redhead Duck)	N = 2
Branta canadensis	(Canada Goose)	N = 1
Ictalurus punctatus	(Channel Catfish)	N = 1
Aplodinotus grunniens	(Freshwater Drum)	N = 2
Carpiodes	(Carpsuckers genus)	N = 3
Testudinata	(Turtle or Tortoise)	N = 1
Amphibia		N = 1

TABLE 23

Gastropoda and mollusca taxa represented at 14BO302, Fort Scott. Minimum number of individuals as determined by gross count of left and/or right valves for mussels and whole shells for snails.

Structure Totals	HS5	HS6	HS7	HS9	HS11
Triodopsis cragini		2			
Lampsilis sp.	1	2		2	1
Elliptio dilatatus					1
cf. Ostera sp.		1	1		
cf. cardium sp.	1				

TABLE 24

14BO302, Historic Structure 3

Vertebrate taxa and bone elements represented
N = Minimum number of individuals

* = Element used to determine minimum number of individuals

Structure Totals		Femur	Humerus	Ulna	Vertebra
Bos taurus	N = 1	*1			2
Gallus gallus	N = 1		*1	1	

TABLE 25

14B0302: Historic Structure 4, vertebrate taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tubercalcis	Tarsus	Metatarsus	Humerus	Radius	Ulna	Metacarpus	Os coxae	Rib	Mandible	Maxilla	Dentition	Carpometa-carpus	Tibiotarsus
Bos taurus	N = 3		*3	1									1	1		
Sus scrofa	N = 3		1		1				2			*4	1			
Ovis aries	N = 1				1		*1									
Canis familiaris	N = 1	*1														
Rattus sp.	N = 1									*1						
Meleagris gallopavo	N = 1					1									*1	1
Gallus gallus	N = 3	5				3		1								*4
Carpiodes	N = 1										*1					

TABLE 26

14B0302, Historic Structure 4, taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Tarsus	Metatarsus	Scapula	Humerus	Radius	Ulna	Os coxae	Vertebra	Cranium	Mandible	Coracoid	Sternum	Carpometa-carpus	Furculum	Tibiotarsus	Tarsometa-tarsus
Bos taurus	N = 1	*1									2								
Sus scrofa	N = 1				*1					1									
Odocoileus sp.	N = 1			*1				1											
Felis cattus	N = 1												*1						
Sylvilagus sp.	N = 2	1	*2																
Rattus sp.	N = 2											*2							
Meleagris gallopavo	N = 6	1				1	5	1	*6		1			3		5		4	
Gallus gallus	N = 6	6				1	7				2	1		1	11	1		*10	4
Tympanuchus cupido	N = 1	*3					1												
Anatidae	N = 1														*1				
Aythya americana	N = 1																*1		

TABLE 27
14B0302, Historic Structure 5, taxa and elements represented
N = Minimum number of individuals; * = Element used to determine number of individuals

Structure Totals		Femur	Tibia	Metatarsus	Humerus	Radius	Ulna	Metacarpus	Vertebra	Rib	Mandible	Dentition
Bos taurus	N = 2	*3	1		1	1	1		2	3		1
Sus scrofa	N = 2	*2	1		2	1				1		6
Ovis aries	N = 1			1				*1	2			
Equid	N = 1											*1
Canis familiaris	N = 1						*1					
Sylvilagus sp.	N = 1	*1										
Procyon lotor	N = 1										*1	
Rattus sp.	N = 1											*1
Gallus gallus	N = 2	1			*1							

TABLE 28
14B0302, Historic Structure 6, taxa and bone elements represented
N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Patella	Tuber calcis	Tarsus	Metatarsus	Astragalus	Phalanx	Scapula	Humerus	Radius	Ulna	Carpus	Metacarpus	Os coxae	Vertebra	Rib	Cranium	Mandible	Maxilla	Dentition	Coracoid	Sternum	Carpometa-carpus	Tibiotarsus	Tarsometatarsus
Bos taurus	N=1	2	2		1	2		2	2	4	*4	5	1	9		1	4	8		2		9					
Sus scrofa	N=3	3	*4	1		1		1	1	2	1	1			3	1	1					5					
Ovis aries	N=1						1				*1		1														
Odocoileus sp.	N=1														*1												
Felis cattus	N=3	*5	1							1		2	1				2										
Sylvilagus sp.	N=1									1										*1							
Sciurus niger	N=1										*1																
Rattus sp.	N=2	*3														3					2						
Meleagris gallopavo	N=1												*1														3
Gallus gallus	N=7	*14								2	11	1	8			8	8		2				2	2	1	5	2
Anatidae	N=1										*1																

TABLE 29

14B0302, Historic Structure 7, taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Tuber calcis	Tarsus	Metatarsus	Phalanx	Scapula	Humerus	Radius	Ulna	Os coxae	Vertebra	Rib	Maxilla	Dentition	Coracoid	Tibiotarsus	Tarsometatarsus
Bos taurus	N = 4	20	2	4	4	2		13	7	*6	7	18	10	11					
Sus scrofa	N = 3	4	1				3		5	*3			2		1				
Ovis aries	N = 1			*1							1	2		2					
Equid	N = 1															*7			
Felis cattus	N = 1								*1										
Rattus sp.	N = 1															*1			
Gallus gallus	N = 4	2									1						1	*7	1

TABLE 30

14B0302, Historic Structure 8, taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Tuber calcis	Fibula	Metatarsus	Scapula	Humerus	Radius	Ulna	Metacarpus	Os coxae	Vertebra	Rib	Mandible	Dentition	Carpometa-carpus	Tibiotarsus	Tarsometatarsus
Bos taurus	N = 1	1						*2				5	3	5	2				
Sus scrofa	N = 1		*3	2	1		3	1							1	11			
Ovis aries	N = 1										*3								
Odocoileus sp.	N = 1		*2																
Sylvilagus sp.	N = 1	*2				1					1								
Rattus sp.	N = 1		*2																
Aves	N = 1																*1		
Gallus gallus	N = 3	1						6	2	*7								4	5
Tympanuchus cupido	N = 1							*2	2								2		
Amphibia	N = 1											*1							

TABLE 31

14BO302, Historic Structure 9, taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Fibula	Metatarsus	Phalanx	Scapula	Humerus	Radius	Ulna	Carpus	Os coxae	Vertebra	Rib	Cranium	Mandible	Maxilla	Dentition	Coracoid	Sternum	Carpometa-carpus	Tibiotarsus	Tarsometa-tarsus	Dorsal spine	Cleithrum
Bos taurus	N = 1	36	2				34	8	1	*2	2	3	16	19											
Sus scrofa	N = 2	2	4	5	4	3	1	1	*4	2		1					2	2							
Ovis aries	N = 2	*2	2			1	8	2	3	3	2	3	3												
Odocoileus sp.	N = 1					*1	2																		
Sylvilagus sp.	N = 5	3					2	1				*8													
Sciurus niger	N = 3	*3										1	1												
Rattus sp.	N = 19	*34	20				11	18		3		27	8		12	18	8	2							
Meleagris gallopavo	N = 2	*2					1	2	2			1							1	1	1	11			
Gallus gallus	N = 15	*20					2	16	2	11		3				2			8	5	2	19	5		
Aythya americana	N = 1											1									*1				
Branta canadensis	N = 1																				*1				
Aplodinotus grunniens	N = 1																							*1	
Carpiodes	N = 1												1												*1
Testudinata	N = 1	1					1	*1																	

TABLE 32

14BO302, Historic Structure 10, taxa and bone elements represented

N = Minimum number of individuals

* = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia	Tuber calcis	Astragalus	Phalanx	Scapula	Humerus	Ulna	Metacarpus	Os coxae	Rib
Bos taurus	N = 1	4	*2		1		1	1			2	
Sus scrofa	N = 1		1			1		1	*2	1		
Ovis aries	N = 1		*2					1				1
Canis familiaris	N = 1	*1		1								
Rattus sp.	N = 1		*1									
Gallus gallus	N = 1								*1			

TABLE 33

14BO302, Historic Structure 11, taxa and bone elements represented

N = Minimum number of individuals; * = Element used to determine minimum number of individuals

Structure Totals		Femur	Tibia Tuber calcis	Fibula	Metatarsus	Astragalus	Scapula	Humerus	Radius	Ulna	Carpus	Metacarpus	Os coxae	Vertebra	Cranium	Mandible	Maxilla	Dentition	Coracoid	Carpometa-carpus	Tibiotarsus	Tarsometa-tarsus	Opercle	Preopercle	Dorsal spine
Bos taurus	N = 1	1	2	1			1		5	*6	2	1		3	2	1			1						
Sus scrofa	N = 5	8	6	4	3	7	4	3	*9	8	4	1	9				2	4	1						
Ovis aries	N = 1		2			2	1	1	*1	1			1		1										
Canis familiaris	N = 1												*1												
Felis cattus	N = 4	2	3						*6	3	3				9	1	2								
Sylvilagus sp.	N = 1	*2	1											1											
Rattus sp.	N = 1	*2																							
Meleagris gallopavo	N = 1	*1							1		1				1					2		1	1		
Gallus gallus	N = 4	*7						1	6		2									6	1	5	2		
Aplodinotus grunniens	N = 1																								*1
Carpiodes	N = 1																							*1	1
Amphibia	N = 1													*5											

TABLE 34

14BO302, Historic Structure 13, taxa and bone elements represented

N = Minimum number of individuals

* = Element used to determine minimum number of individuals

Structure Totals	Femur	Tibia	Tuber calcis	Metatarsus	Humerus	Radius	Ulna	Vertebra	Rib	Mandible	Coracoid
Bos taurus N = 1											
Sus scrofa N = 1	*1		*1	1					1	1	
Ovis aries N = 1							1				
Odocoileus sp. N = 1		*1		*1							
Felis cattus N = 2		3				*2	1				1
Gallus gallus N = 1	*1	2				1					1

TABLE 35

14BO302, Historic Structure 17, taxa and bone elements represented

N = Minimum number of individuals

* = Element used to determine minimum number of individuals

Structure Totals	Scapula	Vertebra	Mandible	Dentition
Bos taurus N = 1				
Sus scrofa N = 1	1	*3		
Gallus gallus N = 1	*1		*1	1

TABLE 36
14BO302, Historic Structure 33, taxa and bone elements represented
N = Minimum number of individuals
* = Element used to determine minimum number of individuals

Structure Totals

		Femur	Tibia
Bos taurus	N = 1	1	*1

SUMMARY AND CONCLUSIONS

The preceding report has presented the findings from investigations conducted at archeological site 14BO302, Fort Scott, by the Archeology Department of the Kansas State Historical Society. These investigations were performed during five separate field seasons between 1968 and 1972 and they were made possible by a cooperative research contract between the Society and the National Park Service.

Fort Scott was a significant frontier military outpost which was established in 1842 in southeast Kansas along the north-south military road which connected Fort Leavenworth, Kansas with Fort Gibson, Oklahoma. Dragoon and infantry troops were stationed at the fort to stabilize relations between white settlers and Indians (both native and eastern emigrant tribes) and to guard the military road. The active years of early Fort Scott were from 1842 until 1853. During this time, numerous military expeditions were dispatched from Fort Scott to the western plains. One of their more frequent tasks was to guard wagon trains traveling the Santa Fe Trail. Beginning in 1846, the fort functioned as a departure point for troops sent southwest to the war against Mexico. The troop strength at Fort Scott achieved its maximum in 1843 when 200 enlisted men and eight officers were quartered there. Fort Scott was never encircled by a fortification of any kind during the early fort period, but it was a permanent post and the structures built there were solid and durable. Permanent structures at the fort during the period from 1842 to 1853 included four sets of officer's quarters, three barracks, a post headquarters and ordnance building, a quartermaster and commissary building, a dragoon stable, a quartermaster shops and corral, a hospital, a guardhouse, a bake shop, a powder magazine, a well, and numerous outbuildings.

Fort Scott was abandoned by the military in 1853 as the frontier moved west. The fort area was never totally abandoned from the time of its first habitation by military personnel in 1842. After the government abandoned the fort area in 1853, a number of the fort structures were purchased by civilians and these structures formed a nucleus for the growing town of Fort Scott. The extant structures were utilized for diverse purposes, including use as private residences, hotels, trade shops, professional offices, and schools.

The U.S. military returned to Fort Scott several times during the period from 1853 until the outbreak of the Civil War in 1861. Troops were brought back into the area to help to quell the border strife that was engendered by the proslavery and antislavery adherents in the period just prior to the Civil War. Fort Scott was in a very strategic location during the Civil War and it was occupied by Union troops for much of this time, as well as by resident civilians. Several of the original fort structures were rented or commandeered by Union forces during the Civil War and a number of other buildings in the

surrounding town were also utilized by troops. The Civil War Fort Scott encompassed a much larger area than had the Fort Scott Military Post and only a portion of the original fort was included within the Civil War fort. A number of the early structures continued to be used by civilians throughout the Civil War.

During the period following the Civil War, the Fort Scott area returned to civilian hands and the city of Fort Scott continued a slow but steady growth in population and industry. Today it is one of the larger cities in southeast Kansas. By December of 1869, Fort Scott was linked to the East by rail and the population of the area underwent a considerable increase. Controversy connected with the construction of the railroad from Fort Scott to points south resulted in the establishment of the Independent Post of Southeastern Kansas with headquarters at Fort Scott. During the period from 1869 to 1873, U.S. troops were stationed at intervals along the construction route for the new railroad to protect railroad personnel and property from irate local citizens. These troops were directed in their activities by a commanding officer and a small staff who were quartered somewhere in the city of Fort Scott. Following this last military occupation of the Fort Scott locale, the structures and grounds of Fort Scott Military Post continued to serve a variety of civilian functions as they slowly deteriorated or were replaced. By 1968, only seven structures survived from the early fort which still had at least a semblance of original fabric. These extant structures included two and one-half officer's quarters, the Hospital, the Quartermaster and Subsistence Storeroom, the Bake Shop, and a stone quartermaster's building.

Fort Scott was recognized as a National Landmark in 1964 and the city of Fort Scott and the National Park Service subsequently cooperated in major restoration and interpretive development of the original (1842 to 1853) Fort Scott Military Post. The archeological investigations that were performed at Fort Scott were implemented as a necessary step in this planned restoration. The primary goal of the archeological investigations was to provide information about the nature and size of original fort structures. A secondary goal was to obtain a representative sample of material culture items to be utilized in the fort's interpretation. The Archeology Department of the Kansas State Historical Society eventually conducted archeological investigations of 20 fort-related structures within the area of the original fort complex. Extensive archeological excavations were conducted in 15 separate areas, and this work resulted in the exposing of 13 structural foundation elements which date from the early constructional history of Fort Scott.

The site for Fort Scott was chosen on April 9, 1842 and temporary quarters were constructed almost immediately. The site chosen for the post was on the south side of the Marmaton river slightly less than five miles west of the Kansas-Missouri line. The post was situated on

high and relatively level ground just back from the point of a bluff. This bluff is oriented in a northeast to southwest direction and the axis of the fort was similarly oriented. The fort included a large parade ground, approximately 350 ft on a side, and a series of buildings that surrounded the parade ground on all four sides. The entire fort was thus contained within a large square which measured slightly less than 500 ft on a side. The parade ground included two primary structures, the Powder Magazine (Historic Structure 17) and the canopied Well (Historic Structure 15), and it may have also included a permanent flagpole (Historic Structure 16). Four nearly identical duplexes (Officer's Quarters #1 through #4) were constructed on the north side of the parade ground and three structures, Historic Structure 7 (Infantry Barracks), Historic Structure 8 (Hospital), and Historic Structure 9 (Guardhouse) were constructed on the south side of the parade ground. Two structures, Historic Structure 5 (Dragoon Barracks) and Historic Structure 10 (Dragoon Stables) were located on the west side of the parade ground and a single structure, Historic Structure 6 (Infantry Barracks) was located on the east side. Historic Structure 11 (Post Headquarters and Ordnance Stores) was located off the northwest corner of the parade ground and Historic Structure 12 (Quartermaster and Subsistence Storerooms) was located off the northeast corner of the parade ground. Historic Structure 13 (Quartermaster's Stables) was located further to the northeast and included a large stone building (Historic Structure 30) which is extant and which evidently dates from the early constructional period at Fort Scott. Historic Structure 14 (Bake Shop) is situated to the north of Historic Structure 13 and is outside of the main fort complex. Two extant structures, Historic Structures 31 and 32, are carriage houses that are located to the north of the row of officer's quarters. These two structures were constructed sometime after the army abandoned Fort Scott in 1853.

The development of the town of Fort Scott over the area of the Fort Scott Military Post resulted in the destruction of many of the original fort structures, but it also indirectly caused the preservation of substantial elements of seven fort structures and two slightly later structures (the carriage houses behind Officer's Row). This preservation occurred because the nine structures had adaptive utility for the citizens of Fort Scott during the long period following the 1853 abandonment of the post by the military. The remaining early fort structures had suffered total eradication of above-ground structural elements. Controlled archeological excavations were thus conducted in the areas of the missing structures to provide critically needed data about structure locations and dimensions.

The majority of the structures which were built during the early fort period shared many similarities. They were typically built on the existing ground elevation (only one structure had a true basement) and the foundation footings for the structures were composed of native limestone slabs set into shallow footing trenches. The limestone-

lined footings, or sometimes the emptied footing trenches, provided the primary surviving subsurface evidence for the missing structures. The structures were typically framed and weather-boarded and they incorporated much locally available constructional material. For instance, much of the lumber used in the structures was locally procured and was sawn in a sawmill established by the army. Much of the metal building and construction hardware was evidently transported to the site from other areas.

The best preserved of the surviving fort structures were Historic Structures 1 and 2 and the west one-half of Historic Structure 4. These structures had all been designed as officer's quarters and they were duplexes. While all of the surviving officer's quarters had suffered some post-1853 modification, they nevertheless contained significant amounts of original fabric and structure, both on the exteriors and interiors. Extensive archeological excavations were performed in the suspected location of Historic Structure 3 (Officer's Quarters #3) and in the area of the missing one-half of Historic Structure 4 (Officer's Quarters #4). The presence of standing officer's quarters was an immense aid in planning and executing this work. As was common at a number of the locations of missing structures, significant portions of the footing of Historic Structure 3 had been obliterated by later footings. Nevertheless, sufficient elements of the footings of this structure and of the missing half of Historic Structure 4 had survived, and these allowed for their recognition and delineation.

Historic sources indicate that three enlisted men's barracks were constructed at Fort Scott during the active years of the military post. Historic Structure 5 was a dragoon barracks and Historic Structure 6 and 7 were infantry barracks. None of these structures had survived and the archeological investigations thus provided the clearest evidence as to their actual size and placement. All three of the barracks were quite similar in size and plan, and they were located on three different sides of the parade ground. The most complete of these was Historic Structure 5, where extant footings revealed that the structure was originally 65 ft long and 32.5 ft wide. It had two double fireplace footings at either end and a 10 ft wide verandah extended off the east or parade ground side. Internal footings provided information about the placement of load-bearing walls and columns. Excavations of Historic Structures 6 and 7 provided similar information, although these two foundations had been much more severely impacted by post-1853 construction. Tests to the east of Historic Structure 6 demonstrated the presence of a small auxiliary structure (26 ft long by 16 ft wide) which may have been affiliated with the early fort. Two rock-lined latrines were located immediately north of the small structure footing.

The Hospital (Historic Structure 8) was one of the seven original fort buildings which had survived, in part, until the present day.

Nearly all of the interior of the Hospital had been removed and the exterior had been severely altered. The excavations that were conducted in the Hospital area were designed to provide information about the missing structural elements. This work resulted in the uncovering of an external limestone-lined walkway which encircled the building and the discovery of two storeroom areas on the outside of the structure and underneath the second floor verandah. Two large fireplace footings were uncovered on the interior floor of the building.

All above-ground traces of the Guardhouse (Historic Structure 9) had disappeared sometime around 1900. Fortunately, extant early photographs provided considerable information about the location and external features of this building. Archeological investigation demonstrated that the foundation footing for this structure was one of the better preserved examples at Fort Scott. This was true in spite of the fact that a modern foundation footing overlay portions of the original foundation. The Guardhouse excavation was particularly rewarding because portions of the foundation had apparently been well sealed off from later disturbance and these areas yielded a significantly higher number of period artifacts, many of them military items, than did most of the other excavations performed at Fort Scott.

Excavations in the area of Historic Structure 10 (Dragoon Stables) were disappointing because large portions of the original footings had been obliterated by a modern construction. Elements of the east and west footings were uncovered and these indicated that the structure had an original width of 32 ft. The structure's length could not be established because only a small section of the north footing, and none of the south footing, was recovered.

The basement of a modern home obscured most of the original footings of Historic Structure 11 (Post Headquarters and Ordnance Stores). Thus, while important elements of the north, west, and east perimeter footings were uncovered, evidence for the location of the south perimeter footing was inconclusive.

The excavations conducted in the vicinity of Historic Structure 13 (Quartermaster's Stables) were limited in extent, and were designed primarily to verify the existence of the rock enclosure which was thought to have surrounded the complex. Elements of a footing trench were discovered on all four sides of the area designated as HS13.

Historic Structure 15 (Well) was still present although the actual well hole was covered with a cement cap. Historic documents indicated that the Well had originally been covered with an octagonal canopy which was supported by eight columns. Since all above-ground evidence of this canopy was missing, this structure location was not considered to be a surviving structure. Excavations were conducted in the vicinity of the Well to uncover subsurface evidence of the canopy

support footings and six of these footings survived, as well as elements of a stone-lined walkway which had encircled the Well.

Historic documentation suggested, but did not conclusively prove, that a flagpole was once present in the center of the parade ground. Excavations conducted in the center of the parade ground revealed no such feature.

While all above-ground evidence of the Powder Magazine (Historic Structure 17) was lacking, excavation of the suspected area of this building demonstrated the presence of an octagonal footing trench which had an approximate diameter of 20 ft. This is interpreted to be the footing of the Powder Magazine.

One other area within the fort complex received fairly extensive testing during the excavation phase of the Fort Scott project. This area, Historic Structure 33, was reputed to be the location of a fort-related structure, a wagon scale house. Historic documentation for the existence of this structure during the period from 1842 to 1853 was very tenuous. Excavations were conducted in the vicinity of the putative structure and these tests yielded no information of a possible fort period structure.

A secondary, but still important goal of the archeological investigations conducted at Fort Scott, was to recover a representative sample of material culture items. In excess of 36,800 items, both artifactual and ecological, were recovered from the site during the five excavation seasons, and the analysis of the most important of these specimens comprises the largest section of the present report. Both military and civilian artifacts are present in the collection and many of these items can be related to specific functions such as transportation, building construction, weaponry, clothing, recreation, subsistence, adornment, etc. Datable items cover a temporal range from the very early history of the fort (1842) right up to the mid-twentieth century. Included in the material culture sample are objects made of metal, leather, cloth, paper, glass, ceramics, bone, rubber, wood, plastic, shell, etc., as well as brick, mortar, coal, and plaster and numerous examples of animal bone and some vegetal remains. Many of these objects, particularly those items made of ferrous metals, are in a very poor state of preservation.

The continuous occupation of the fort area since its 1842 origin has resulted in a tremendous amount of disturbance in virtually every investigated portion of the post. Thus, very few of the recovered artifacts were found in a primary stratigraphic context. In nearly every case, early period artifacts were discovered in association with artifacts of later occurrence. This obviously presented the analyzers with an almost insoluble problem. That is, while it was possible to date many of the recovered artifacts in terms of their time of manufacture, there was no way to accurately assess the time of

deposition. It is obvious, however, that the datable items cover a considerable temporal span and at least a portion of these items are surely attributable to the earlier years of the fort complex. The material culture items recovered from Fort Scott have particular value and importance precisely because of the size, diversity, and temporal range of the collection. In the present report, the authors have attempted to emphasize this diversity and to pinpoint those items which can most securely be dated to their time of manufacture. The size of the collection precluded a specific description of each item, although detailed descriptions are provided for those items which are particularly diagnostic or which illustrate some portion of the long history of the Fort Scott area. The primary emphasis in this report was upon those items which dated prior to the beginning of the twentieth century. This emphasis was obvious in the collection strategy employed during the excavation phase and, accordingly, it was maintained during the artifact analysis. Military items were given considerable attention, although the authors also attempted detailed studies of many civilian items. It is hoped that these descriptions, plus the 87 plates which illustrate many of the recovered artifacts, will prove useful to other researchers who are faced with highly disturbed and stratigraphically complex historic sites.

This report must end on a cautionary note. The potential of the Fort Scott complex for yielding additional meaningful archeological information has by no means been exhausted. This applies equally to those portions of the fort area which have not yet been disturbed by the contractor's shovel and the archeologist's trowel and to that corpus of data which has already been collected. In particular, it appears that the concentration of the planned research and restoration upon just those structures associated with Fort Scott Military Post (dating 1842 to 1853) has severely hindered, if not prevented, an understanding of the long and complex history of this military-civilian fort-town. The civilian occupation of the Fort Scott area, which actually began in 1842, is certainly deserving of additional study as this occupation covers a temporal span that includes nearly the entire frontier period in Kansas. Similarly, the attention paid to the early military occupation at Fort Scott has detracted from a fuller understanding of the role of Fort Scott during the Civil War and during the time of border conflict which preceded the Civil War. A more complete study of the history of the Fort Scott area will depend, in large part, on historians and historic documents but archeology can, and should, provide additional data and insights.

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PLATES

PLATE 1: 1963 aerial photograph showing a portion of downtown Fort Scott and urban encroachment which has intruded into the area of Fort Scott Military Post. Photograph courtesy of the Kansas Department of Transportation: Photo Packet #832, Photo #BB-5-12, Photographed on May 9, 1963 at 1500 ft altitude.

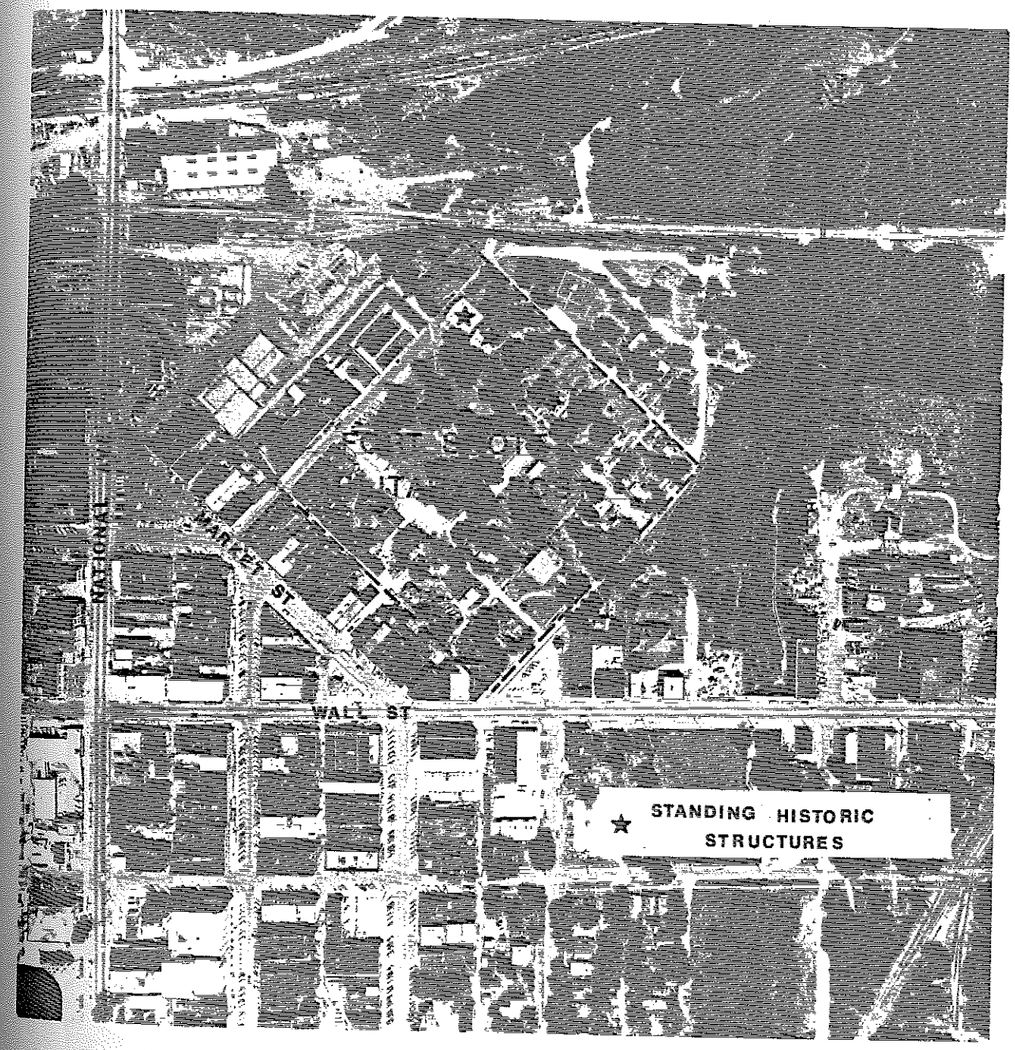

PLATE 1

PLATE 2: 14BO302, Historic Structure 4 (Officer's Quarters #4), view to south of excavation of the east one-half of the structure showing foundation footings, fireplace footing, and flagstone in foreground.

PLATE 3: 14BO302, Historic Structure 6 (Infantry Barracks), view to north showing a portion of the uncovered footing of HS6 as well as a more recent foundation element. HS12 (Quartermaster and Subsistence Storerooms) is the frame structure to the north of the HS6 footing.

PLATE 2

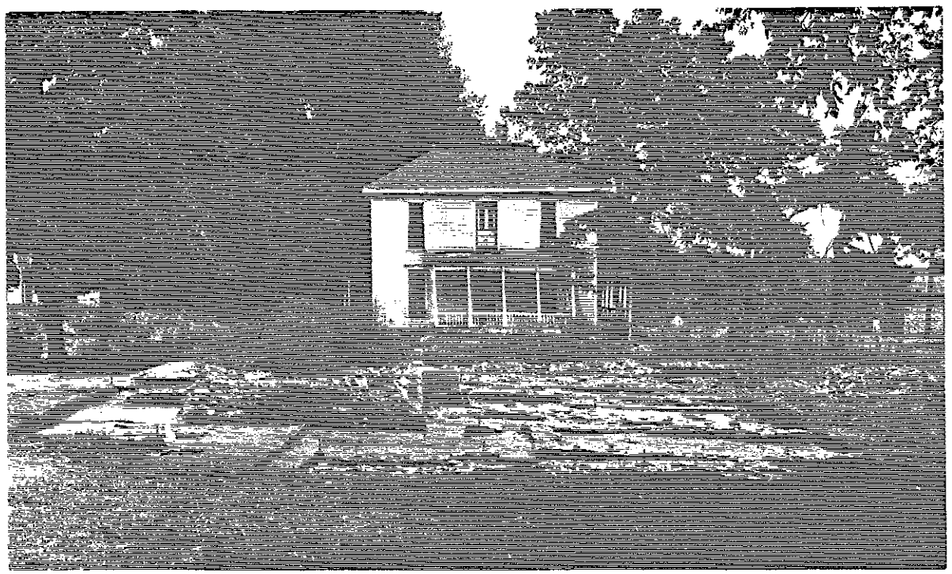

PLATE 3

PLATE 4: 14BO302, Historic Structure 6 (Infantry Barracks), view to southwest, showing column supports and footings.

PLATE 5: 14BO302, auxiliary structures located to the east of Historic Structure 6, view to south.

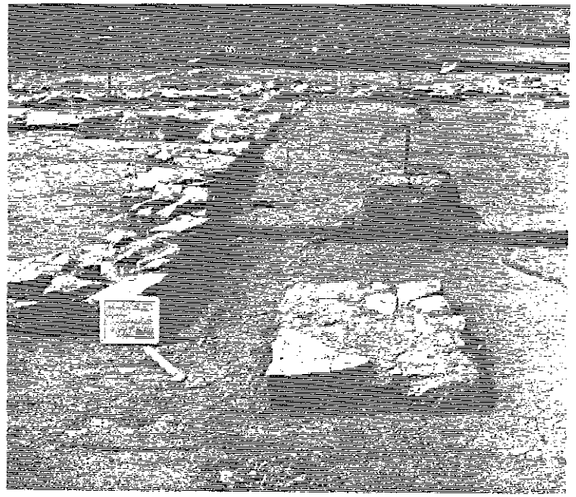

PLATE 4

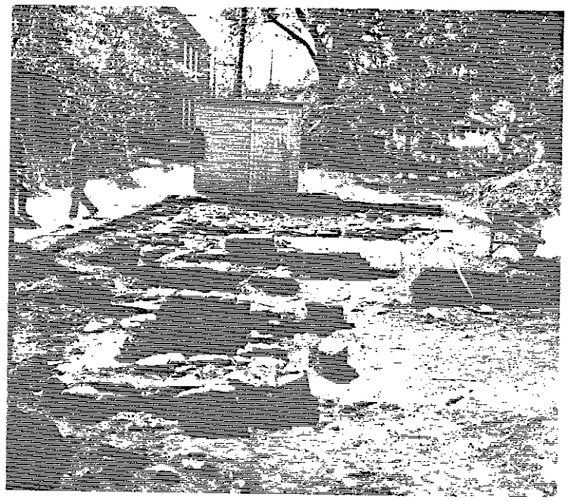

PLATE 5

PLATE 6: 14BO302, Historic Structure 7 (Infantry Barracks), view to west showing footings.

PLATE 7: 14BO302, 1867 photograph of Fort Scott structures, Historic Structure 8 (Hospital) is the large two-storied building at the upper left which has the broad verandah surrounding the upper floor and the Guardhouse (Historic Structure 9) is visible at the upper right. Photo courtesy of the Collections in the Museum of New Mexico.

PLATE 6

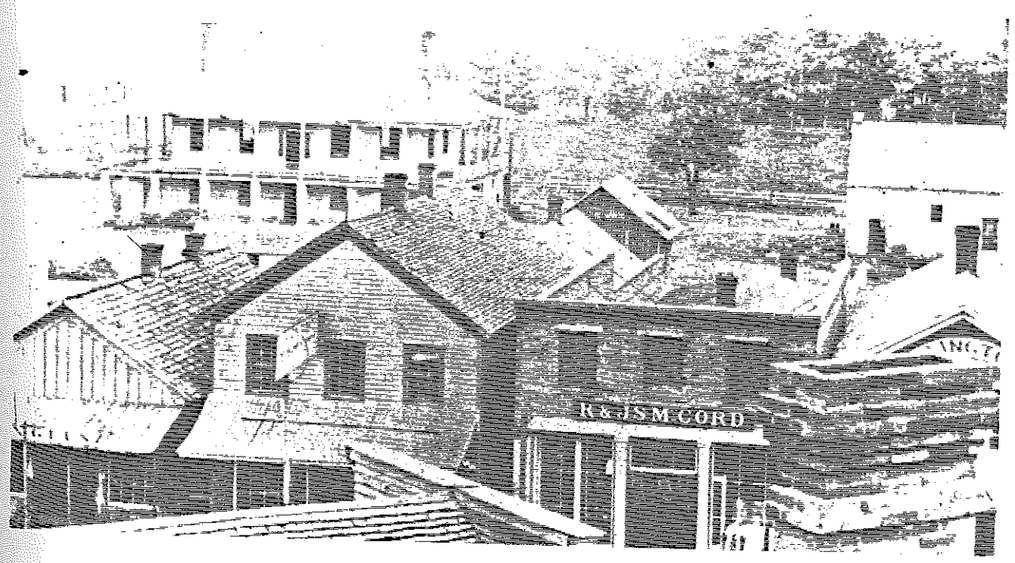

PLATE 7

PLATE 8: 14BO302, Historic Structure 8 (Hospital), renovation and restoration, view to southwest.

PLATE 9: 14BO302, Historic Structure 8 (Hospital), west fireplace footing, view to north.

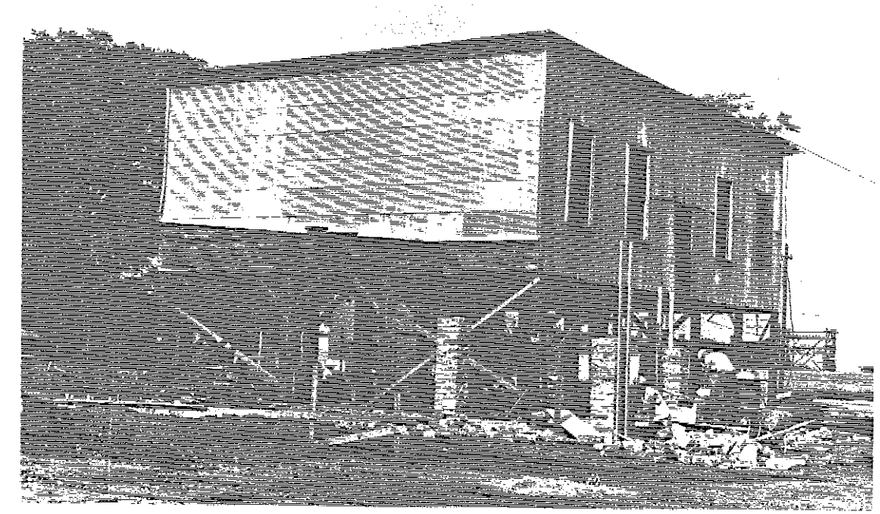

PLATE 8

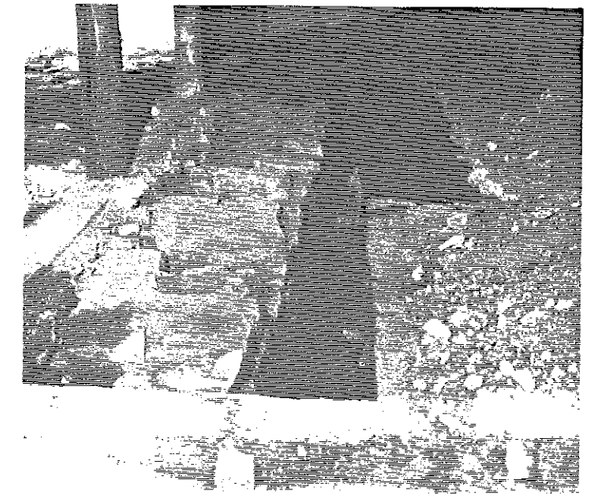

PLATE 9

PLATE 10: 14BO302, Historic Structure 9 (Guardhouse), photograph dating from the late nineteenth century, view to west. Photo courtesy of the Kansas State Historical Society.

PLATE 11: 14BO302, Historic Structure 9 (Guardhouse), view to southwest showing a portion of the original footings.

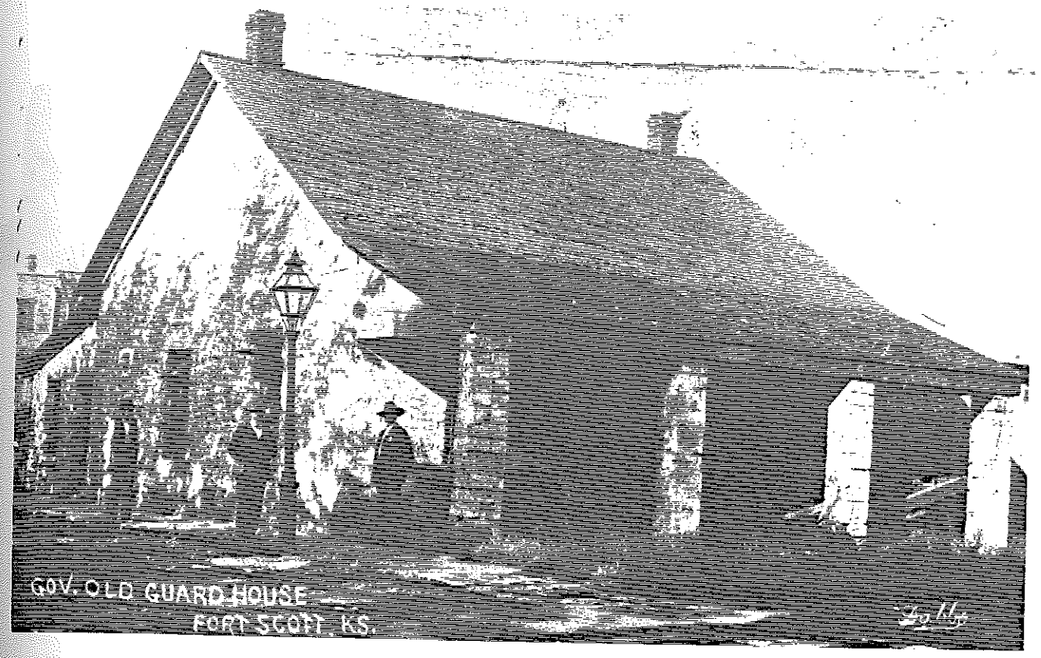

PLATE 10

PLATE 11

PLATE 12: Firearms Parts and Gunflints

A. Brass front barrel band from a muzzle-loading musket or rifle; catalogue #36,840; discussion on page 82.
B. Iron flintlock cock; catalogue #36,338; discussion on page 83.
C. Iron percussion hammer; catalogue #25,630; discussion on page 83.
D. "French" gunflint of amber color; catalogue #22,447; discussion on page 84.
E. Hard brass breech tang screw; catalogue #19,933; discussion on page 83.

PLATE 13: Ammunition and Percussion Caps

A. 12 mm pinfire cartridge; catalogue #32,686; discussion on page 84.
B. .22 caliber short rimfire bullet; catalogue #35,410; discussion on page 86.
C. .38 caliber rimfire cartridge; catalogue #6,179; discussion on page 86.
D. .50 caliber centerfire cartridge; catalogue #5,796; discussion on page 87.
E. 30-06 centerfire cartridge; catalogue #5,743; discussion on page 88.
F. 12 gauge pinfire shotgun shell base; catalogue #25,801; discussion on page 88.
G. 12 gauge shotgun shell base, marked "WINCHESTER/NEW/RIVAL"; catalogue #34,560; discussion on page 88.
H. 12 gauge shotgun shell base, marked "WINCHESTER/No. 12/REPEATER"; catalogue #4,021; discussion on page 88.
I. 12 gauge shotgun shell base, marked "PETERS/No. 12/TARGET"; catalogue #6,138; discussion on page 88.
J. .52 caliber Minie' Ball; catalogue #7,457; discussion on page 89.
K. .59 caliber Minie' Ball; catalogue #17,562; discussion on page 89.
L. .69 caliber Minie' Ball; catalogue #23,339; discussion on page 89.
M. .52 caliber Sharps bullet; catalogue #17,561; discussion on page 89.
N. .52 caliber solid lead conical bullet; catalogue #18,504; discussion on page 89.
O. 8 mm diameter buckshot; catalogue #33,330; discussion on page 90.
P. 11 mm diameter ball; catalogue #33,567; discussion on page 90.
Q. 13.5 mm diameter ball; catalogue #33,841; discussion on page 90.
R. 17 mm diameter ball; catalogue #18,506; discussion on page 90.
S. "Top Hat" or "Musket" percussion cap; catalogue #36,310; discussion on page 90.
T. Ground-edge percussion cap; catalogue #36,311; discussion on page 90.

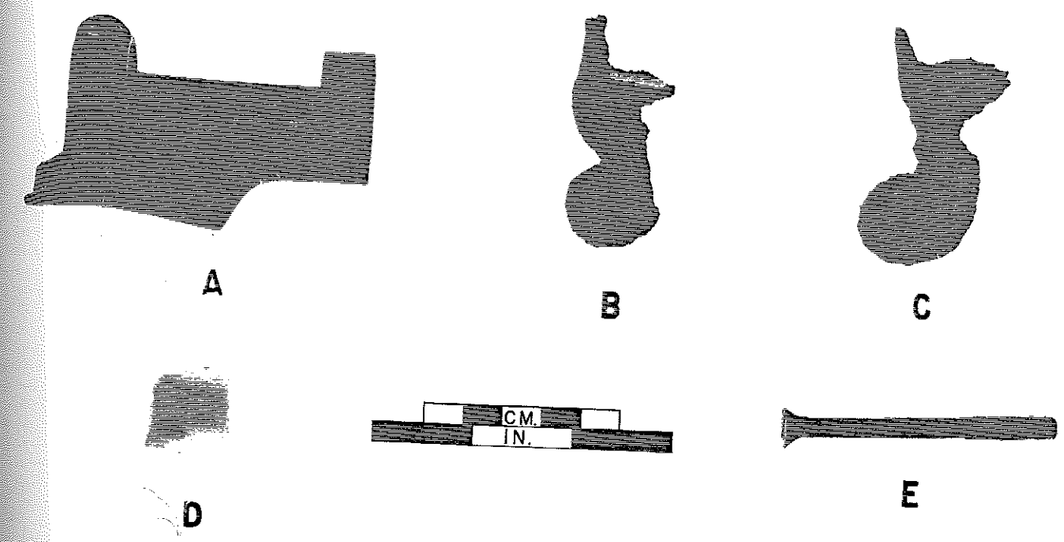

PLATE 12

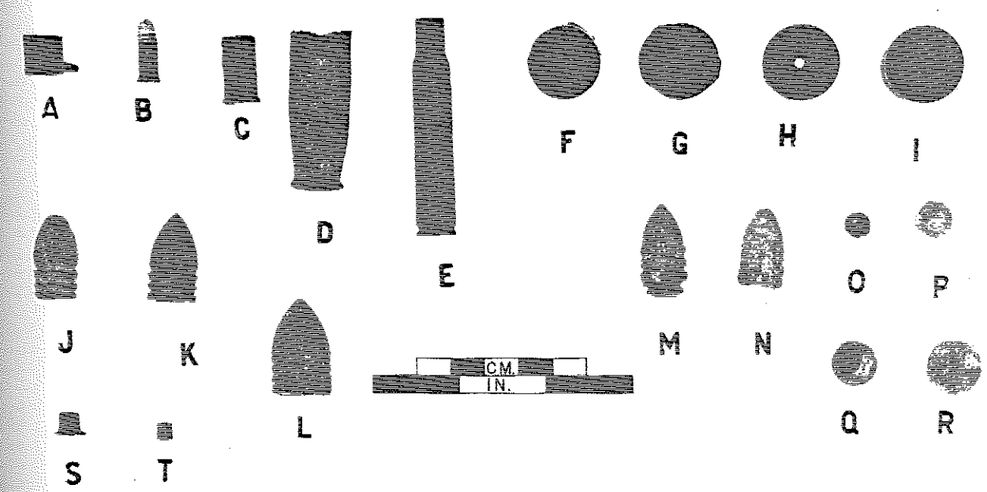

PLATE 13

PLATE 14: Edged weapons

A. Dagger section with crossguard; catalogue #36,335; discussion on page 90.
B. Dagger crossguard; catalogue #33,974; discussion on page 90.
C. Bayonet scabbard tip; catalogue #19,133; discussion on page 90.

PLATE 15: Military insignia and accoutrements

A. Flaming grenade device for use on cap, Ordnance Branch; catalogue #18,669; discussion on page 91.
B. Crossed saber device, Cavalry Branch; catalogue #9,318; discussion on page 91.
C. Company letter, made of pewter or white metal, "B"; catalogue #18,125; discussion on page 92.
D. Company letter, brass, "G"; catalogue #36,331; discussion on page 92.
E. Brass scale from epaulette (1830s to 1850s); catalogue #7,751; discussion on page 92.
F. Brass scale from epaulette (1854 or later); catalogue #5,978; discussion on page 93.
G. Cartridge box buckle or plate, lead-backed with raised letters "US" faintly visible on obverse face (circa 1840-1870s); catalogue #18,731; discussion on page 93.
H. Adjustment hook, brass; catalogue #25,500; discussion on page 93.
I. Guidon finial, brass; catalogue #8,102; discussion on page 94.

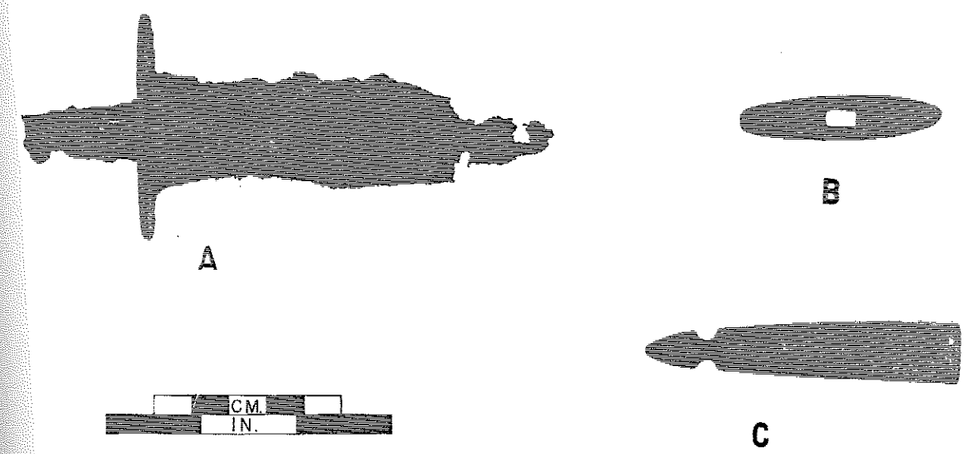

PLATE 14

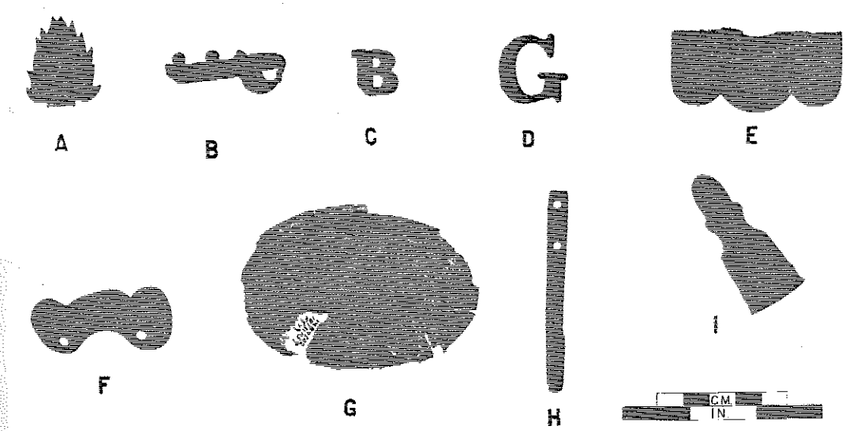

PLATE 15

PLATE 16: Military buttons

A. S-type, Line Eagle Device, D on shield (1833-1850); catalogue #28,996; discussion on page 96.
B. S-type, Line Eagle Device, D on shield (1833-1850); catalogue #25,626; discussion on page 96.
C. S-type, Line Eagle Device, D on shield (1840-1861); catalogue #32,042; discussion on page 96.
D. S-type, Line Eagle Device, C on shield (1855-1870); catalogue #31,254; discussion on page 96.
E. S-type, Line Eagle Device, I on shield (1821-1840); catalogue #33,864; discussion on page 96.
F. S-type, Line Eagle Device, I on shield (1840-1855); catalogue #14,878; discussion on page 96.
G. S-type, Line Eagle Device, R on shield (1850-1862); catalogue #18,001; discussion on page 97.
H. S-type, Line Eagle Device, General Service (1855-1884); catalogue #11,860; discussion on page 97.
I. S-type, Line Eagle Device, General Service (1855-1884); catalogue #33,529; discussion on page 97.
J. Stf-type, General Staff (1870-1902); catalogue #26,873; discussion on page 98.

PLATE 17: Metal and bone buttons

Metal Buttons

A. Four-hole sew-through; catalogue #23,005; discussion on page 99.
B. Four-hole sew-through with recessed panel, marked on the reverse side "J--OLMES & CO."; catalogue #22,805; discussion on page 99.
C. Two-hole sew-through; catalogue #17,798; discussion on page 99.
D. Four-hole sew-through with recessed panel, marked on the obverse face "KEY * KEY*"; catalogue #32,516; discussion on page 99.
E. Loop shank, marked on obverse face "WASHINGTON DEE-CEE"; catalogue #2,612; discussion on page 99.
F. Loop shank; catalogue #22,189; discussion on page 99.

Bone Buttons

G. Two-hole sew-through with concave front and convex back; catalogue #33,517; discussion on page 103.
H. Two-hole sew-through; catalogue #9,361; discussion on page 103.
I. Two-hole sew-through with recessed panel; catalogue #34,481; discussion on page 103.
J. Four-hole sew-through with recessed panel; catalogue #20,555; discussion on page 103.
K. One-hole sew-through; catalogue #32,164; discussion on page 103.

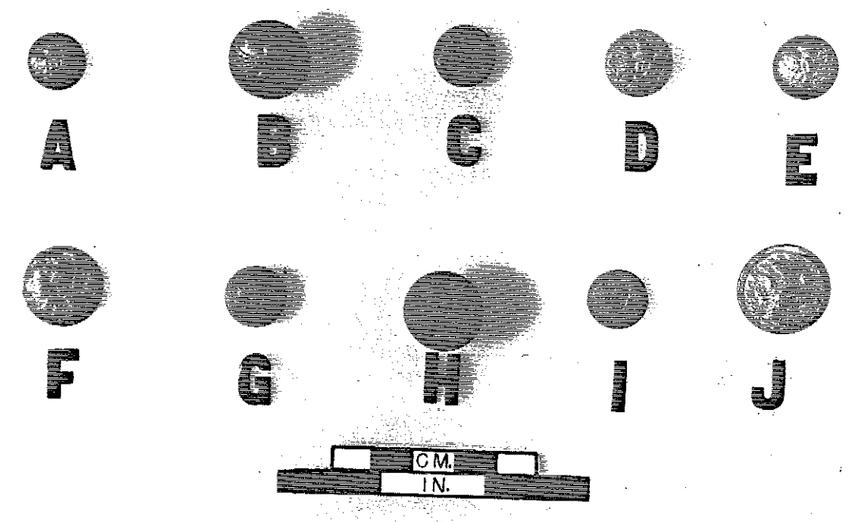

PLATE 16

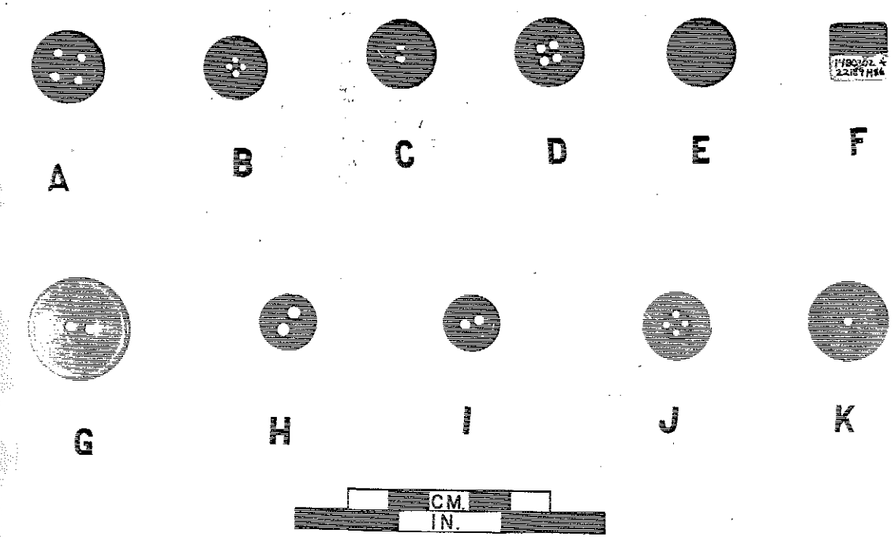

PLATE 17

PLATE 18: Shell buttons and button blank

A. Two-hole sew-through with recessed panel; catalogue #26,721; discussion on page 103.
B. Two-hole sew-through; catalogue #5,206; discussion on page 103.
C. Four-hole sew-through with recessed panel; catalogue #8,693; discussion on page 103.
D. Two-hole sew-through with incising on obverse face; catalogue #35,235; discussion on page 103.
E. Self-shank flat disk; catalogue #2,612; discussion on page 103.
F. Convex front with attached metal shank on back; catalogue #21,642; discussion on page 103.
G. Shell button blank; catalogue #30,999; discussion on page 104.

PLATE 19: Ceramic buttons and studs

A. Four-hole sew-through with recessed panel; catalogue #31,025; discussion on page 106.
B. Four-hole sew-through with recessed panel; catalogue #24,700; discussion on page 106.
C. Two-hole sew-through; catalogue #35,179; discussion on page 106.
D. Four-hole sew-through with recessed panel, green calico; catalogue #27,070; discussion on page 106.
E. Four-hole sew-through with recessed panel, blue calico; catalogue #3,576; discussion on page 106.
F. Four-hole sew-through with recessed panel, green; catalogue #32,707; discussion on page 106.
G. Four-hole sew-through with recessed panel, brown calico; catalogue #21,643; discussion on page 106.
H. Metal shank, convex front with floral relief pattern; catalogue #5,018; discussion on page 107.
I. Metal shank, conical bull's-eye; catalogue #7,920; discussion on page 107.
J. Metal shank, conical front; catalogue #18,003; discussion on page 107.
K. Metal shank, conical front with blue glaze; catalogue #23,844; discussion on page 107.
L. Composite with convex porcelain front and full brass mounting on back; catalogue #6,725; discussion on page 107.
M. White porcelain stud; catalogue #1,500; discussion on page 109.
N. Gold-plated stud, marked "KREMENTZ PLATE"; catalogue #7,161; discussion on page 109.

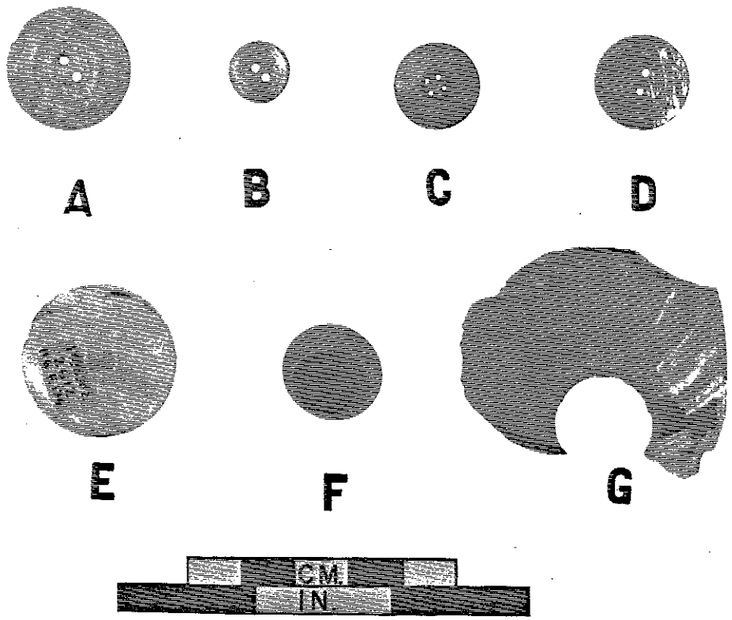

PLATE 18

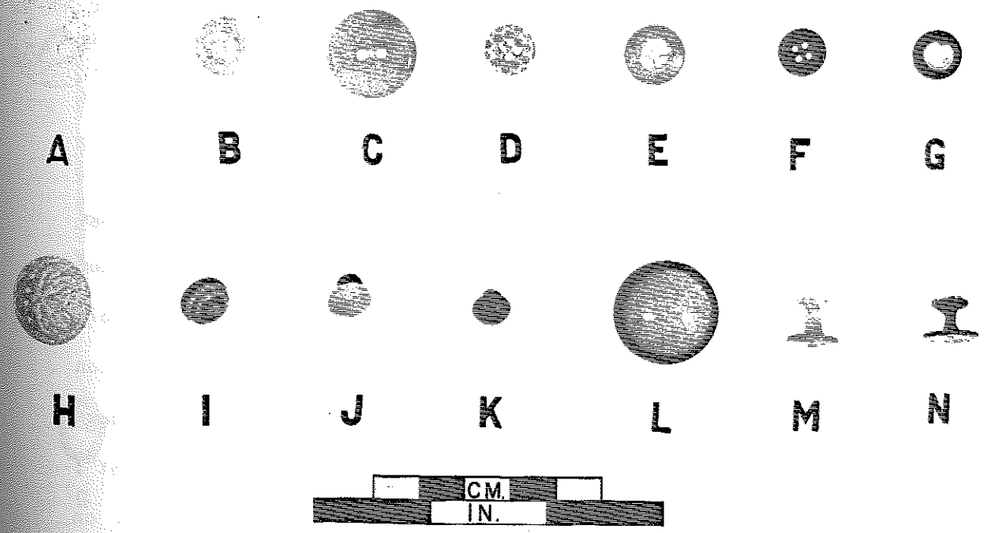

PLATE 19

PLATE 20: Glass, composition and composite buttons

Black Glass Buttons

A. Metal shank, molded floral pattern on obverse face; catalogue #23,235; discussion on page 105.

B. Metal shank, faceted obverse face has iridescence; catalogue #20,199; discussion on page 105.

C. Bridge shank, iridescent concave front face has cabin motif; catalogue #6,634; discussion on page 105.

D. Bridge shank, diamond-shaped with heraldic subject on obverse face; catalogue #24,112; discussion on page 105.

Clear Glass Buttons

E. Metal shank, raised molded floral pattern on obverse face, semitranslucent; catalogue #29,974; discussion on page 105.

Composition Buttons

F. Four-hole sew-through with depressed panel, hard rubber; catalogue #2,612; discussion on page 108.

G. Four-hole sew-through, concave front, hard rubber; catalogue #34,607; discussion on page 108.

H. Two-hole sew-through, hard rubber, marked on reverse face "GOODYEAR'S P=T./1851./N.R. Co."; catalogue #6,514; discussion on page 108.

I. Two-hole sew-through with recessed panel, plastic or celluloid, opaque; catalogue #23,392; discussion on page 109.

Composite Button

J. Self-shank, wooden, oak nut motif; catalogue #4,177; discussion on page 108.

PLATE 21: Button hooks and clothing fasteners

Button hooks

A. Handmade example; catalogue #7,622; discussion on page 109.

B. Commercial example; catalogue #5,344; discussion on page 110.

Fasteners

C. Rectangular buckle, brass; catalogue #2,399; discussion on page 110.

D. Rectangular buckle with floral design, two prong, brass; catalogue #7,122; discussion on page 110.

E. Rectangular buckle with rounded front, brass, single prong; catalogue #25,035; discussion on page 112.

F. Brass slide; catalogue #33,985; discussion on page 112.

G. Brass or copper slide; catalogue #7,613; discussion on page 112.

H. Brass buckle with swivel base; catalogue #6,672; discussion on page 112.

I. Hook from a hook and eye corset fastener; catalogue #27,067; discussion on page 112.

J. Eyelet from corset fastener; catalogue #27,438; discussion on page 112.

K. Brass strap fastener; catalogue #7,760; discussion on page 112.

L. Brass thumb fastener, marked on obverse face "DAISY"; catalogue #7,608; discussion on page 113.

M. Brass scarf holder (?); catalogue #23,865; discussion on page 113.

N. Brass scarf holder (?); catalogue #34,727; discussion on page 113.

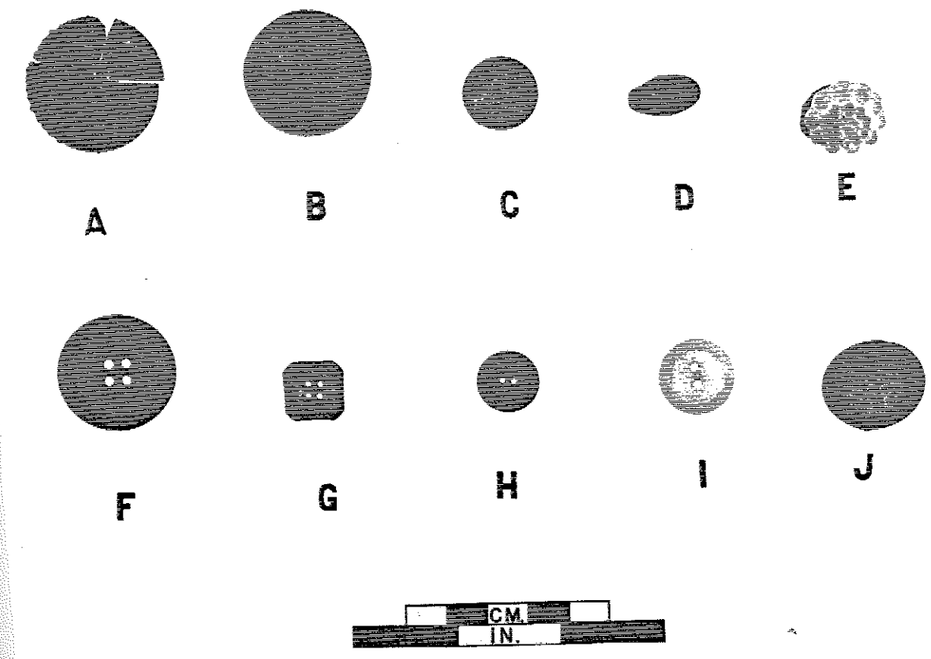

PLATE 20

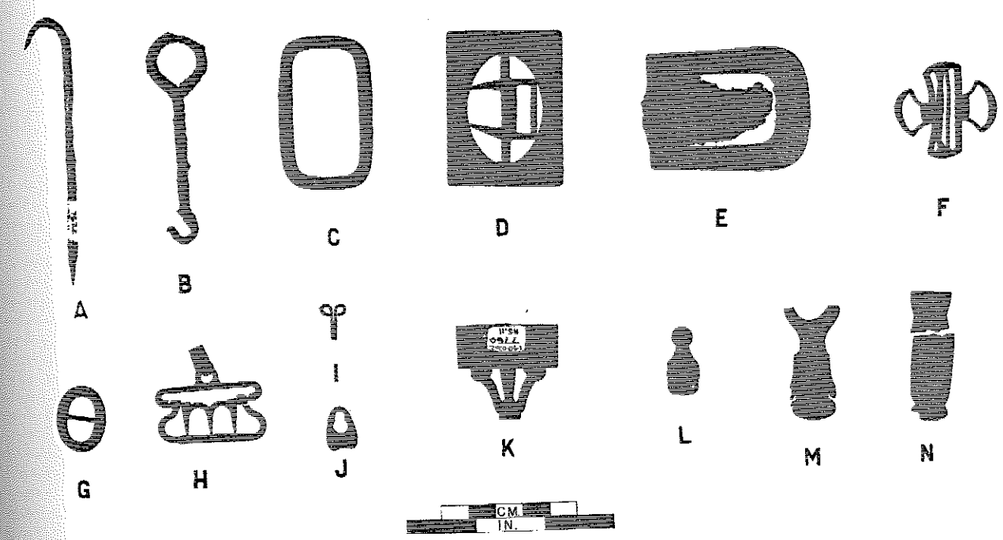

PLATE 21

PLATE 22: Footwear

A. Shoe or boot upper with four brass eyelets; catalogue #35,363; discussion on page 113.
B. Leather sole; catalogue #13,237; discussion on page 113.
C. Leather heel; catalogue #30,270; discussion on page 113.
D. Leather heel; catalogue #33,733; discussion on page 113.
E. Shoe (?) nail with iron core, brass cover; catalogue #28,100; discussion on page 114.
F. Brass heel plate; catalogue #32,252; discussion on page 114.
G. Steel shank from high heel shoe; catalogue #4,295; discussion on page 114.

PLATE 23: U.S. Coins (discussion on pages 115-117)

A. One Cent Large, Braided Hair (1839-1857); catalogue #6,377.
B. One Cent Small, Indian Head (1881); catalogue #237.
C. One Cent Small, Lincoln Head (1919); catalogue #125.
D. One Cent Small, Lincoln Head (1944); catalogue #314.
E. One Cent Small, Lincoln Head (1946); catalogue #35,316.
F. Five Cents, Shield (1868); catalogue #6,388.
G. Five Cents, Liberty Head (1912); catalogue #22,188.
H. Half Dime, Liberty Cap (1829); catalogue #29,195.

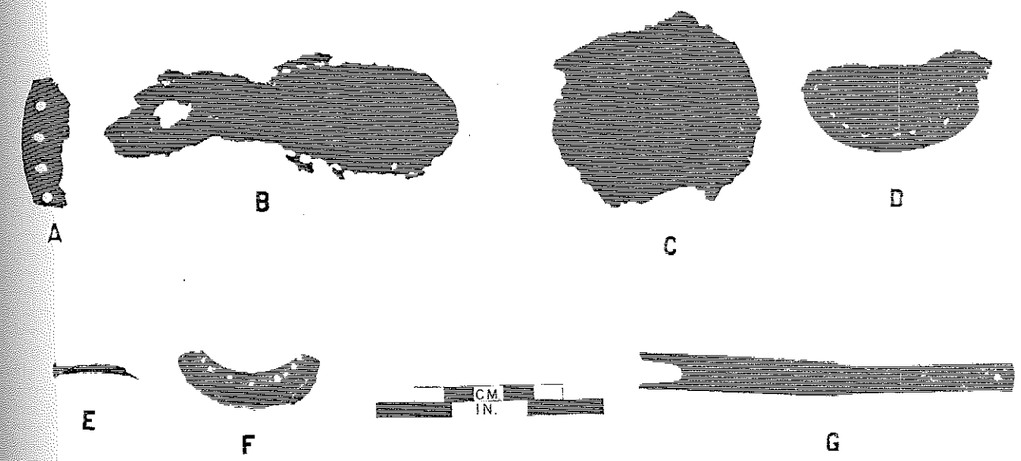

PLATE 22

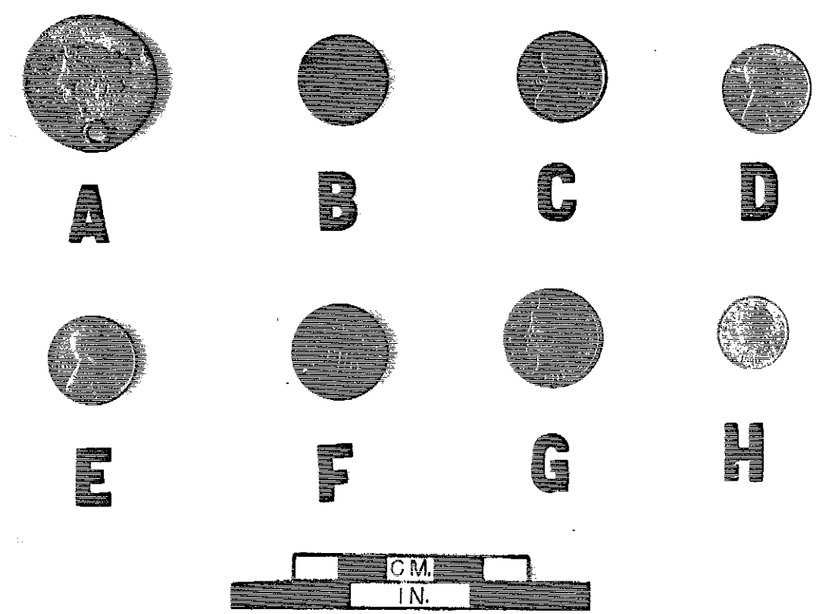

PLATE 23

PLATE 24: U.S. Coins, Foreign Coins, Tokens

U.S. Coins (discussion on pages 115-177)

A. Half Dime, Liberty Seated (1841); catalogue #25,119.
B. Dime, Liberty Cap (1809-1837); catalogue #17,563.
C. Dime, Liberty Seated (1875); catalogue #26,418.
D. Quarter Dollar, Liberty Head (1908); catalogue #17,058.

Foreign Coins (discussion on page 117)

E. Mexican Silver Real (1802); catalogue #24,341.
F. Half Penny, Bank of Upper Canada (1857); catalogue #12,446.

Trade Tokens and Private Coins (discussion on pages 117-119).

G. Counterfeit One Dollar Liberty Head gold coin (1864); catalogue #36,297.
H. Perforated copper trade token, marked on the obverse face "DRUGS/DRY GOODS/GROCERIES/HARDWARE/NOTIONS" and on the reverse face "UNITED WE STAND/DIVIDED WE FALL"; catalogue #36,294.
I. Brass or copper trade token marked on the obverse face "118 E. WALL" and on the reverse face "GOOD FOR 2½ IN TRADE", obverse face also contains motif of an eagle with outspread wings; catalogue #23,573.

PLATE 25: Claim Checks

A. Brass, marked on obverse face "FORT SCOTT OMNIBUS LINE/67/CLAIM CHECK", catalogue #36,844; discussion on page 119.
B. Brass, marked on the obverse face "K.O. Co./77/Mo. R.Ft.S. & G.R./to M.K. & T.R.R."; catalogue #25,120; discussion on page 119.
C. Brass, marked on obverse face "WESTERN/87/HOUSE"; catalogue #34,337; discussion on page 120.
D. Brass, marked on obverse face "WHAT/39/CHEER"; catalogue #18,834; discussion on page 120.
E. Brass, marked on obverse face "2/2"; catalogue #16,350; discussion on page 121.
F. Brass, marked on obverse face "09" or "60"; catalogue #36,293; discussion on page 121.

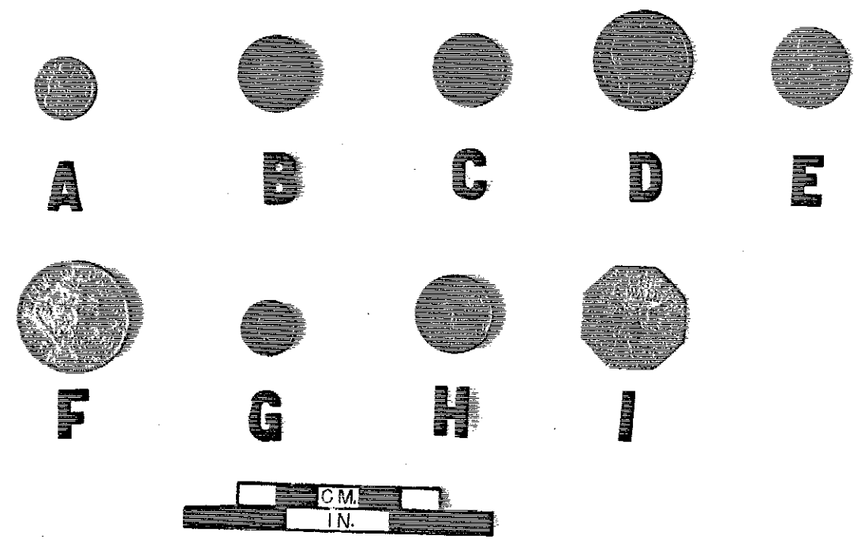

PLATE 24

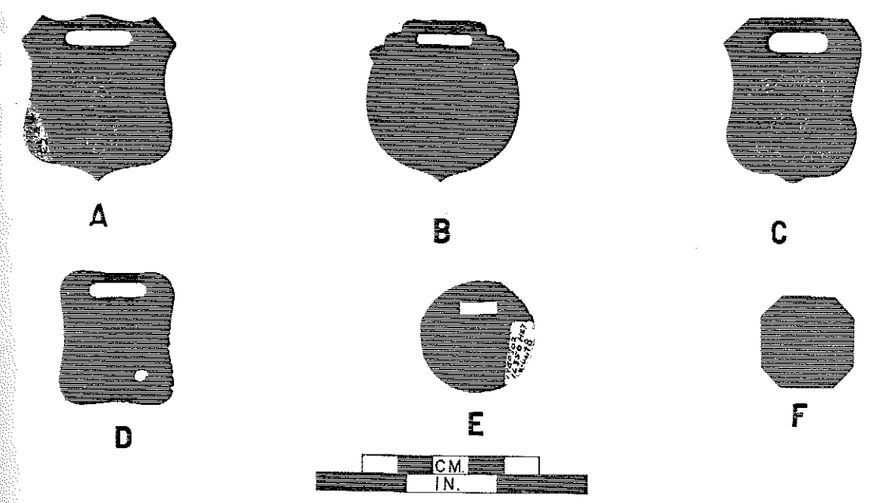

PLATE 25

PLATE 26: Scale Fragment and Gaming Pieces

A. Plate from a spring balance, brass, marked on the obverse face "SALTER'S/IMPROVED/SPRING BALANCE/WARRANTED"; catalogue #12,447; discussion on page 121.
B. Wooden checker with hardwood center; catalogue #28,207; discussion on page 121.
C. Black plastic poker chip; catalogue #23,234; discussion on page 121.
D. Bone poker chip; catalogue #36,789; discussion on page 121.
E. Red plastic tiddlywink; catalogue #34,597; discussion on page 122.
F. Handmade bone die; catalogue #36,301; discussion on page 122.

PLATE 27: Paper playing cards (discussion on pages 122 and 123)

Samuel Hart (1849-1871 manufacturing range) cards

A. Red back
B. Blue back
C. Ace of spades
D-F Court cards
G-J "Number" cards

Other Decks, makers not identified

K. King of spades
L. Jack of diamonds
M. Jack of spades

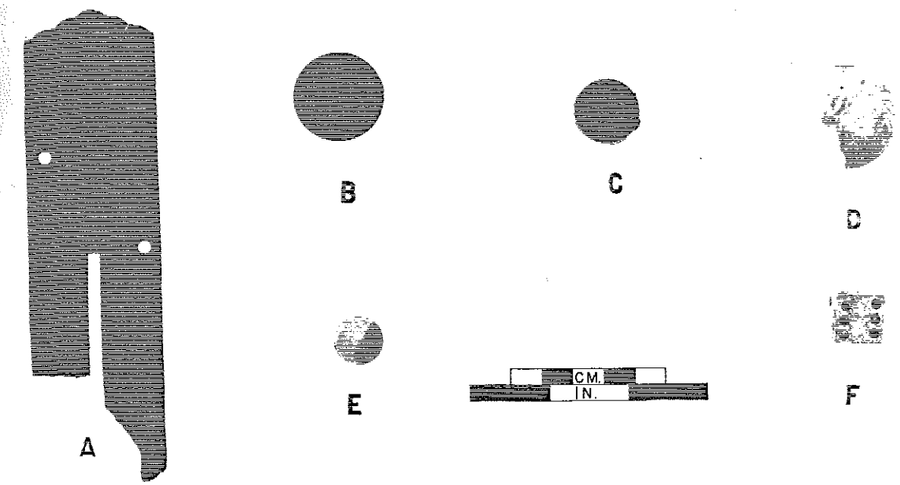

PLATE 26

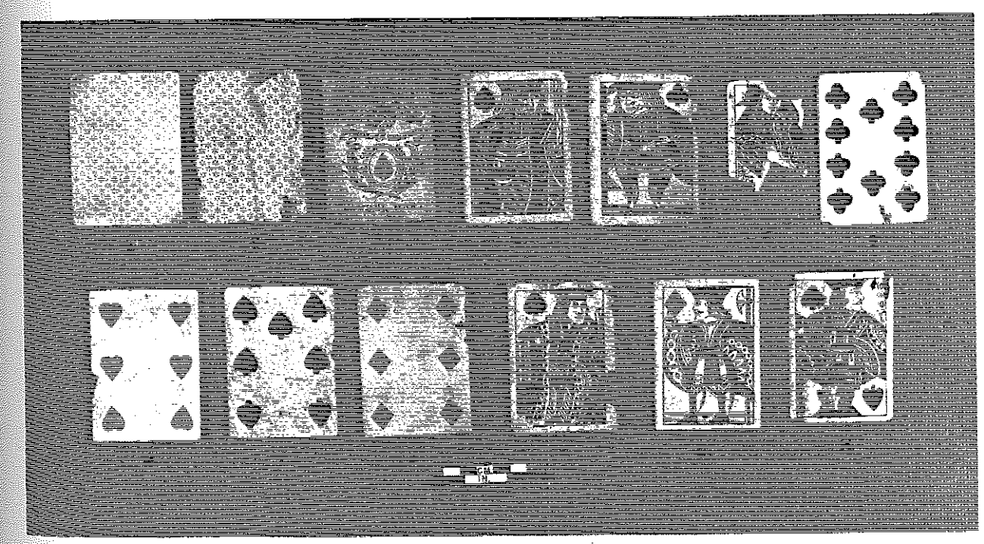

PLATE 27

PLATE 28: Ceramic Doll Parts and Figurines

A. Solid porcelain doll; catalogue #5,326; discussion on page 124.
B. Solid porcelain doll, "Frozen Charlotte", marked on reverse "340/6"; catalogue #7,432; discussion on page 126.
C. Solid ceramic figurine; catalogue #5,048; discussion on page 126.
D. Solid ceramic doll with articulated arms missing; catalogue #2,187; discussion on page 126.
E. Solid glazed china ceramic head; catalogue #9,634; discussion on page 126.
F. Hollow bisque ceramic doll head, marked on the reverse side "No. 2½/S"; catalogue #3,784; discussion on page 126.
G. Hollow bisque ceramic doll head; catalogue #3,383; discussion on page 127.
H. Solid porcelain doll head and torso with articulated arms and legs missing, marked on the reverse side "LWCo/NIPPON"; catalogue #2,534; discussion on page 127.
I. Solid porcelain doll arm with attachment groove; catalogue #20,262; discussion on page 128.
J. Solid porcelain doll arm with attachment groove, unglazed; catalogue #23,154; discussion on page 128.
K. Unglazed solid porcelain leg with pierced self-loop on inside of leg; catalogue #1,988; discussion on page 128.
L. Unglazed hollow porcelain arm, marked on the inside "2/0"; catalogue #2,628; discussion on page 128.
M. Glazed hollow porcelain leg with high heel buttoned-up shoe; catalogue #8,311; discussion on page 128.
N. Hollow porcelain button-up shoe; catalogue #6,296; discussion on page 128.
O. Lower half of hollow porcelain doll body; catalogue #3,445; discussion on page 128.

PLATE 29: Miniature Dishes (discussion on page 129)

A. Brown glazed pitcher; catalogue #5,611.
B. Plate section with underglaze painted design; catalogue #6,217.
C. Glazed coffee mug; catalogue #2,184.
D. Glazed tea cup; catalogue #7,558.
E. Glazed saucer; catalogue #11,800.
F. Glazed and painted tea cup, marked on the base "MADE IN JAPAN"; catalogue #3,839.
G. Glazed and painted saucer, marked on the base "MADE IN JAPAN"; catalogue #3,840.
H. Milk glass two-handled cup or bowl; catalogue #9,639.
I. Metal pitcher; catalogue #3,445.

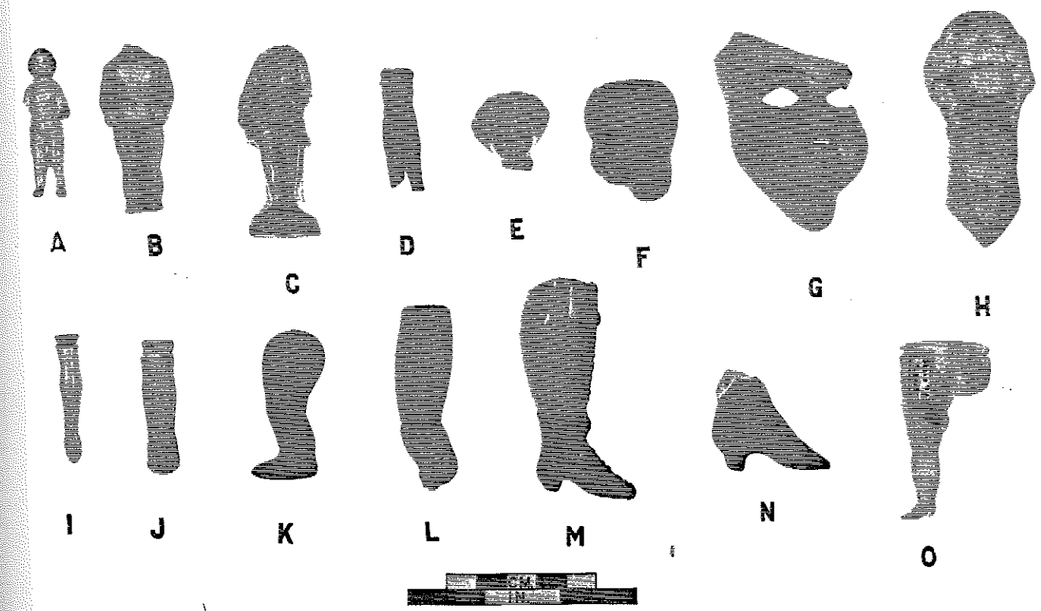

PLATE 28

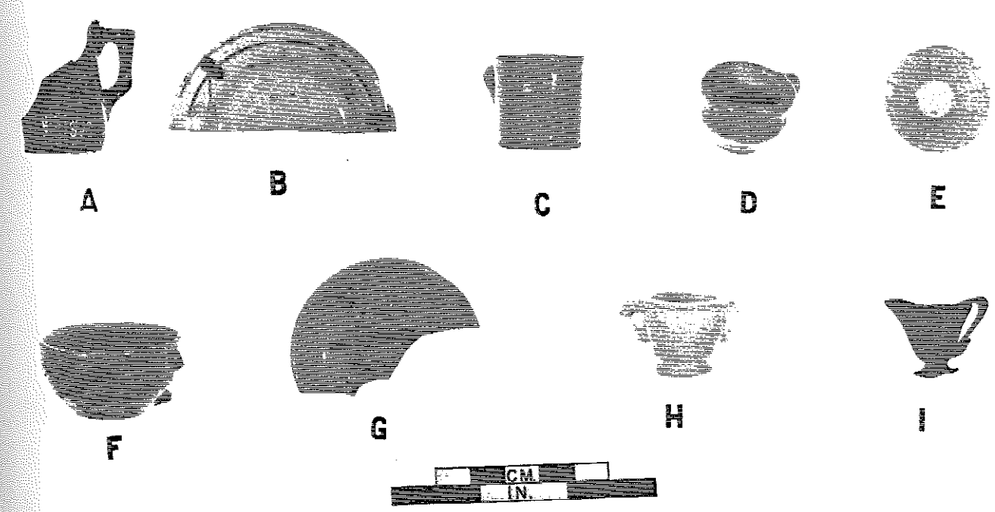

PLATE 29

PLATE 30: Miscellaneous Toys

A. Cast iron cart; catalogue #10,590; discussion on page 130.
B. Iron sheep or goat; catalogue #5,725; discussion on page 130.
C. Cast lead bird whistle (?); catalogue #3,552; discussion on page 130.
D. Pewter whistle; catalogue #36,637; discussion on page 131.
E. Miniature brace and bit; catalogue #14,093; discussion on page 131.
F. Plastic duck; catalogue #31,625; discussion on page 131.
G. Loose brass bell; catalogue #2,613; discussion on page 131.
H. Conical hollow bell (?); catalogue #35,180; discussion on page 131.
I. Open brass bell; catalogue #1,977; discussion on page 132.

PLATE 31: Stone, Clay and Crockery Marbles (discussion on page 132)

Stone Marbles
A. Calcareous stone marble; catalogue #29,249.
B. Calcareous stone marble; catalogue #29,359.
C. Agate marble; catalogue #3,982.
D. Tigereye marble; catalogue #32,732.
E. Onyx marble; catalogue #16,774.

Clay Marbles
F. Plain clay; catalogue #33,331.
G. Plain clay; catalogue #32,988.
H. Painted clay; catalogue #32,248.

Crockery Marbles
I. Brown crockery marble; catalogue #35,228.
J. Blue crockery marble; catalogue #34,148.

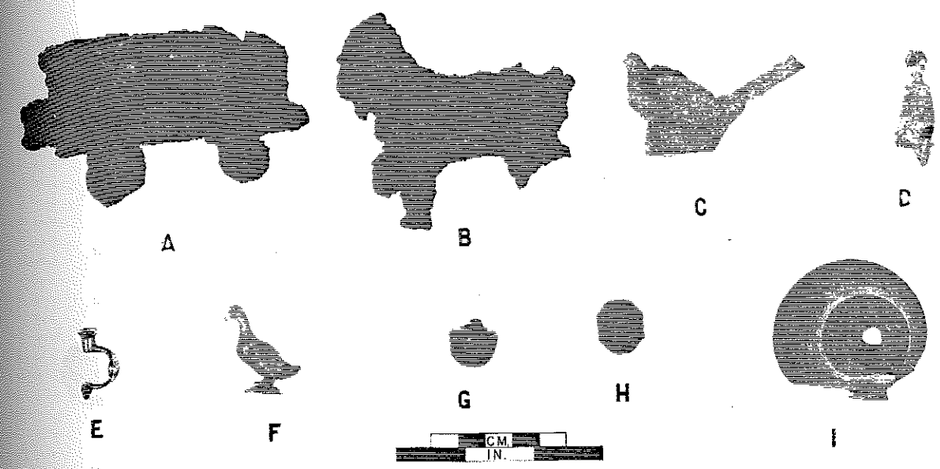

PLATE 30

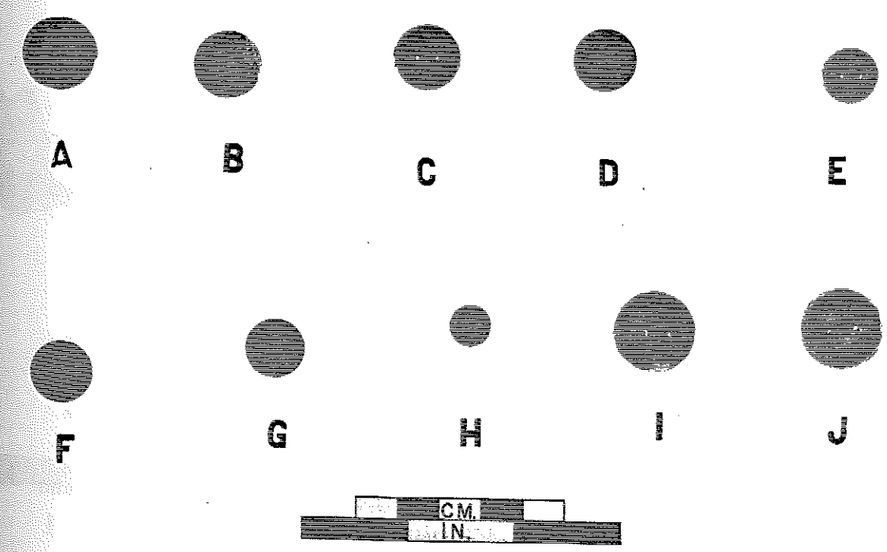

PLATE 31

PLATE 32: Porcelain and Glass Marbles (discussion on pages 134-135)

Porcelain Marbles

A. Glazed, decorated porcelain marble; catalogue #34,149.
B. Glazed, undecorated porcelain marble; catalogue #11,734.
C. Unglazed, decorated porcelain marble; catalogue #29,569.
D. Unglazed, undecorated porcelain marble; catalogue #27,804.

Glass Marbles

E. Handmade glass marble; catalogue #35,303.
F. Handmade glass marble; catalogue #7,808.
G. Early machine-made glass marble; catalogue #287.
H. Early machine-made glass marble; catalogue #32,029.
I. Modern machine-made glass marble; catalogue #35,212.
J. Modern machine-made glass marble; catalogue #35,570.

PLATE 33: White Long Stem Clay Pipes

A. White clay pipe with zoomorphic (eagle) figure; discussion on page 135.
B. White clay pipe bowl with female figure; catalogue #7,508; discussion on page 135.
C. White clay pipe bowl with "TD" marking; catalogue #30,844; discussion on page 135.
D. White clay pipe bowl with "TD" marking; catalogue #33,833; discussion on page 135.
E. White clay pipe stem marked "HENDERSON" on one side and "MONTREAL" on the other side; catalogue #22,972; discussion on page 135.
F. White clay pipe stem marked "HENDERSON" on one side and "MONTREAL" on the other side; catalogue #19,127; discussion on page 135.
G. White clay pipe stem marked "...SGOW" on one side and "MURA..." on the other side; catalogue #31,002; discussion on page 135.
H. White clay pipe stem marked "PETER" on one side and "DORNI" on the other side; catalogue #5,327; discussion on page 137.

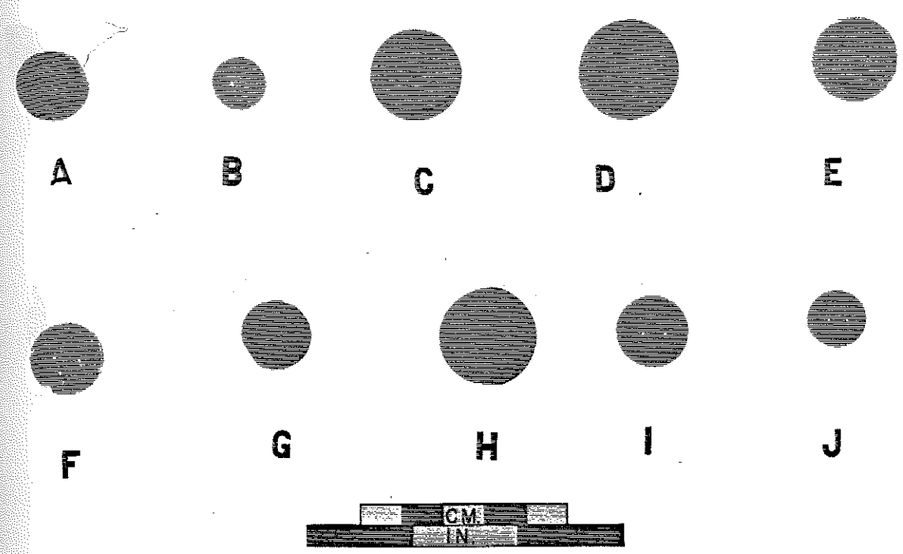

PLATE 32

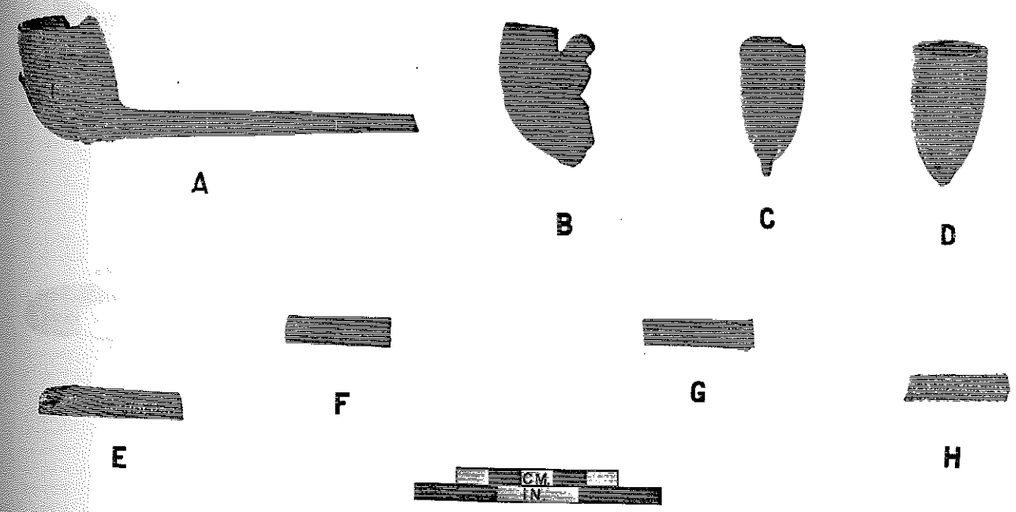

PLATE 33

PLATE 34: Short-Stemmed Clay Elbow Pipes, Briar Pipe and Hard Rubber Pipe Stems (discussion on pages 137-138)

Short-Stemmed Clay Elbow Pipes

A. Brown slip glaze on exterior; catalogue #19,325.
B. Glazed example with fluting; catalogue #17,708.
C. Unglazed example with depiction of a male (Sultan's) head; catalogue #27,460.
D. Glazed example with depiction of a bearded male head.
E. Glazed example with depiction of an elaborately coiffed female head; catalogue #32,165.
F. Unglazed example with fluting and anthropomorphic figure; catalogue #20,684.

Briar Pipe

G. Briar pipe with hard rubber stem, stem is marked "CHESTERFIELD" and above this is a three-leaf clover which has a letter "B/N/B" in each of the leaf elements; catalogue #33,854.

Hard Rubber Pipe Stems

H. Hard rubber pipe stem, screw-in type; catalogue #8,557.
I. Hard rubber pipe stem, push-in type; catalogue #15,405.

PLATE 35: Folding Knives

A. All-steel knife in the shape of a running dog; catalogue #329; discussion on page 138.
B. Swell-end jack, single blade, wood scales, brass liners; catalogue #7,125; discussion on page 139.
C. Two-bladed, single-ended, bone handle scales or slabs, steel liner, brass shield inset into one of the bone scales; catalogue #6,394; discussion on page 139.
D. Two-bladed, double-ended, shell scales, steel liners; catalogue #5,936; discussion on page 139.
E. Multibladed "boy scout" knife, wood scales, iron liners; catalogue #17,351; discussion on page 140.

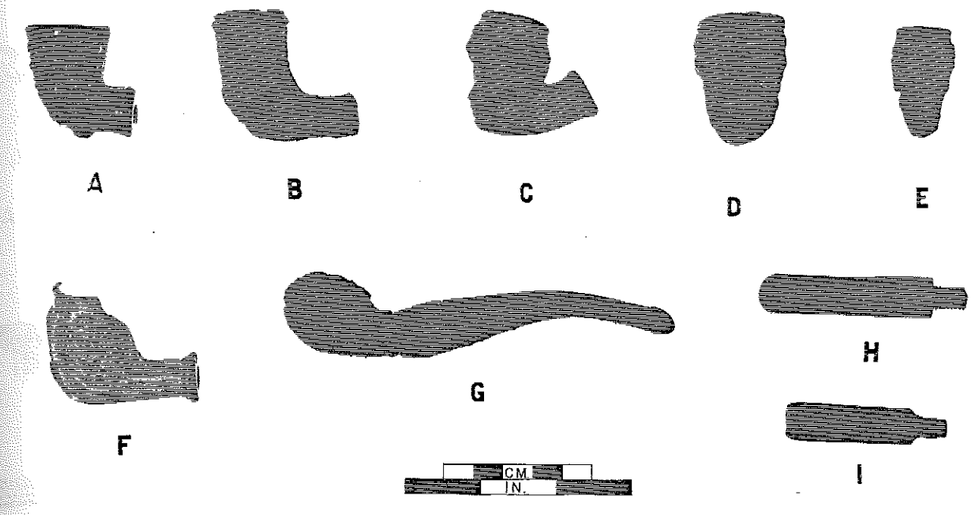

PLATE 34

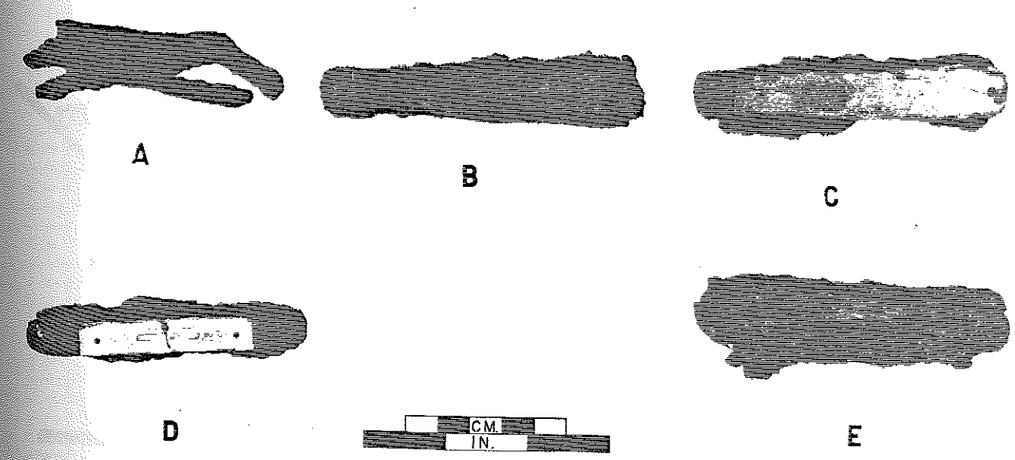

PLATE 35

PLATE 36: Combs, Toothbrush Handle, Dental Hygiene, Bone Handled Brushes

A. Fine-toothed bone comb, double-sided; catalogue #31,024; discussion on page 140.
B. Coarse-toothed bone comb, single-sided; catalogue #5,168; discussion on page 142.
C. Brass comb; single-sided; catalogue #31,067; discussion on page 142.
D. Hard rubber comb, fine-toothed, double-sided, stamp on one face reads "IR COMB Co/GOODYEAR 1851"; catalogue #3,047; discussion on page 142.
E. Hard rubber comb, fine-toothed, long-handled, single-sided, marked on one face "I.R. COMB Co."; catalogue #35,562; discussion on page 142.
F. Bone toothbrush handle, marked on the obverse face "EXTRA FINE PARIS"; catalogue #18,253; discussion on page 143.
G. Lid of a ceramic toothpaste container, black transfer print on top marked "ORIENTAL TOOTH PASTE/FOR/CLEANSING BEAUTIFYING/AND PRESERVING THE TEETH & GUMS/By Appointment/PREPARED BY/JEWSBURY AND BROWN/ARDWICH GREEN/MANCHESTER ENGLAND"; catalogue #4,131; discussion on page 143.
H. Bone brush handle; catalogue #5,942; discussion on page 143.
I. Bone brush handle; catalogue #23,106; discussion on page 143.

PLATE 37: Eyeglasses, Musical Instruments, Wallet or Purse Frames, Tintype Frame

A. Cooper eyeglass frame with lenses; catalogue #36,314; discussion on page 144.
B. Brass harmonica plate, catalogue #6,141; discussion on page 145.
C. Brass wallet frame; catalogue #23,600; discussion on page 145.
D. Brass purse frame; catalogue #6,139; discussion on page 145.
E. Brass tintype frame; catalogue #19,406; discussion on page 145.

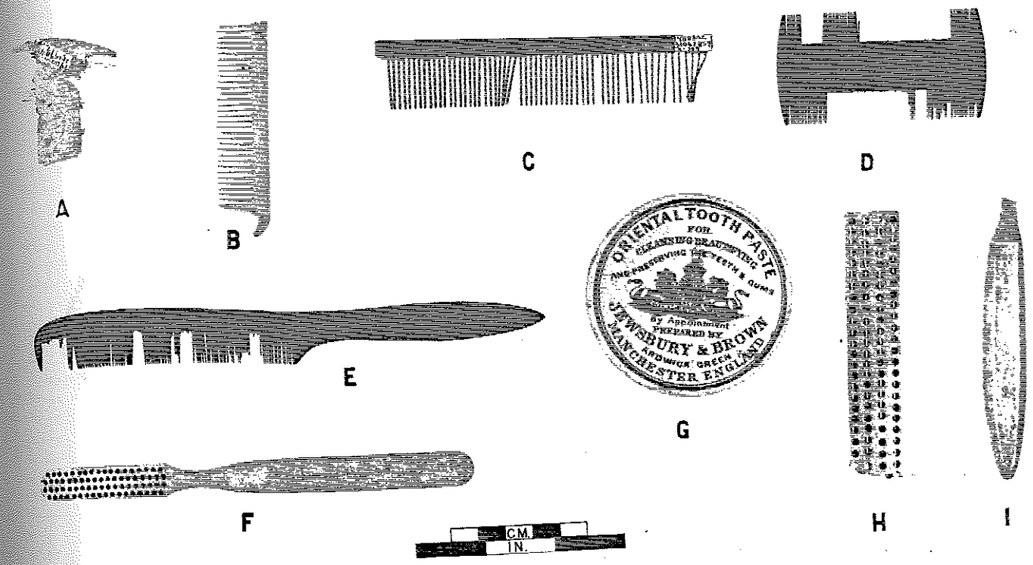

PLATE 36

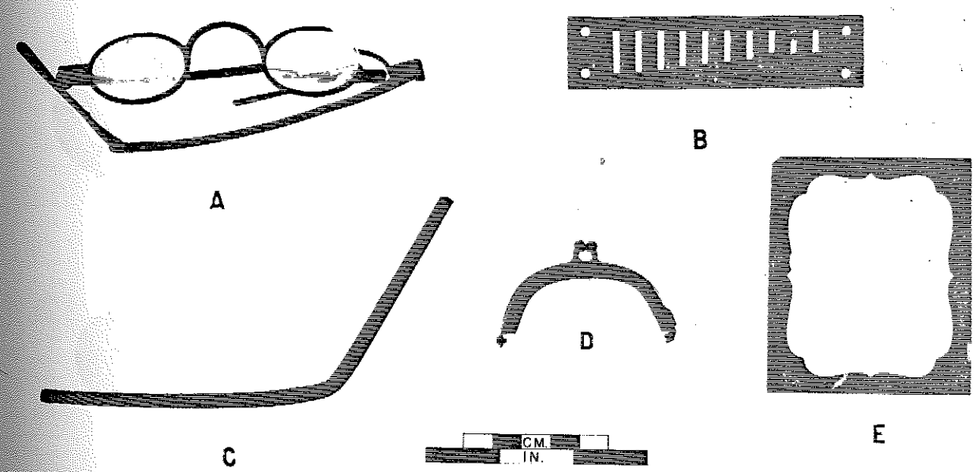

PLATE 37

PLATE 38: Watch Parts and Ornamental Chains (discussion on pages 145-146)

A. Stamped silver bezel from a pocket watch; catalogue #6,085.
B. Pocket watch pillar plate, catalogue #27,426.
C. Pocket watch, internal plate, catalogue #34,501.
D. Close-curb, brass link locket chain; catalogue #4,180.
E. Close-curb, brass link pocket watch chain; catalogue #34,000.
F. Ornamental sword chain; catalogue #8,801.

PLATE 39: Jewelry

A. Brass locket; catalogue #7,731; discussion on page 147.
B. Locket front plate with cutout of female face; catalogue #3,915; discussion on page 147.
C. Gold wedding band marked on the inside "14A"; catalogue #36,304; discussion on page 147.
D. Brass broach with inset shell; catalogue #116; discussion on page 148.
E. Brass or copper broach in the shape of a cross; catalogue #20,504; discussion on page 148.
F. Brass medallion; catalogue #36,309; discussion on page 148.
G. Cast pewter necklace with faceted glass insets; catalogue #5,374; discussion on page 148.
H. Ornamental brass stickpin; catalogue #7,431; discussion on page 149.
I. Brass belt buckle; catalogue #8,056; discussion on page 149.
J. Plastic belt buckle, catalogue #20,373; discussion on page 149.

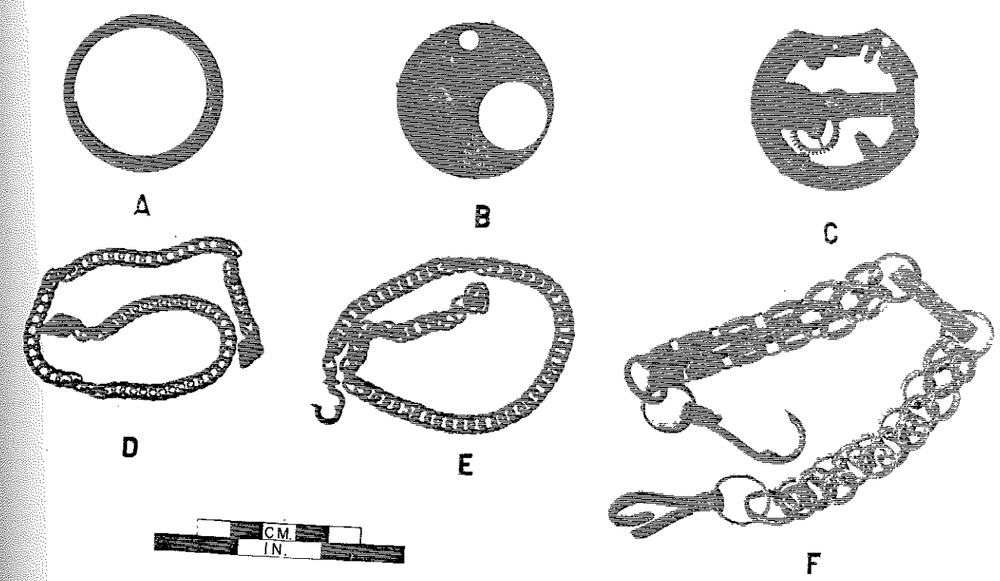

PLATE 38

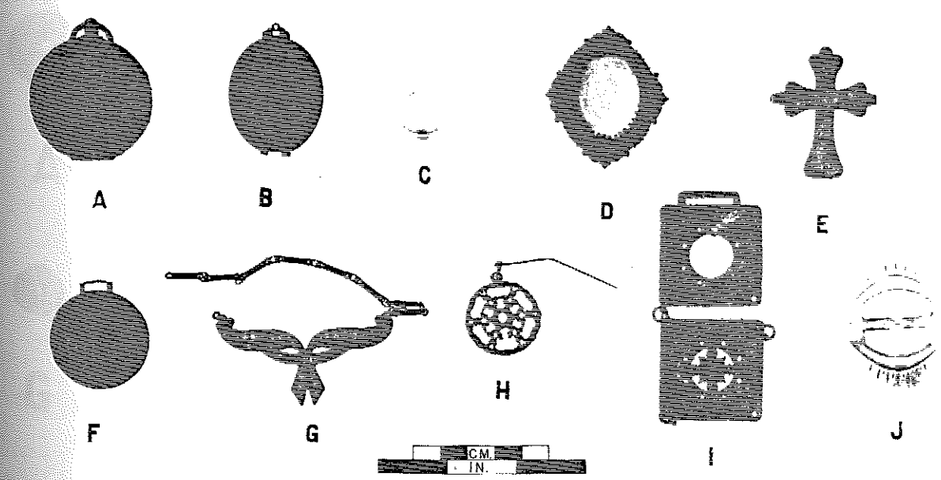

PLATE 39

PLATE 40: Jewelry

A. Leaf-shaped shell ornament; discussion on page 150; catalogue #24,865.
B. T-shaped shell ornament; discussion on page 150; catalogue #32,390.
C. Pointed shell ornament; discussion on page 150; catalogue #5,138.
D. Flat brass octagon; discussion on page 150; catalogue #7,732.
E. Metal back with faceted black glass; discussion on page 150; catalogue #6,582.
F. Cut gem stone; discussion on page 150; catalogue #13,674.
G. Hard rubber hairpin; discussion on page 151; catalogue #7,743.
H. Bone finial; discussion on page 151; catalogue #36,336.
I. Bone cylinder; discussion on page 151; catalogue #21,180.
J. Bone tube; discussion on page 151; catalogue #18,552.
K. Cut raptor talon; discussion on page 151; catalogue #7,969.

PLATE 41: Glass Beads (discussion on pages 151-154)

A. Opaque blue sphere; catalogue #24,704.
B. Polished blue sphere; catalogue #31,626.
C. Polished white sphere; catalogue #17,986.
D. Opaque green sphere; catalogue #14,355.
E. Opaque black sphere; catalogue #26,822.
F. Pale yellow sphere; catalogue #24,705.
G. Faceted black; catalogue #29,985.
H. Faceted blue; catalogue #29,984.
I. Faceted blue with white core; catalogue #23,283.
J. Annular black; catalogue #32,066.
K. Red ovoid; catalogue #34,610.
L. White tubular; catalogue #23,214.

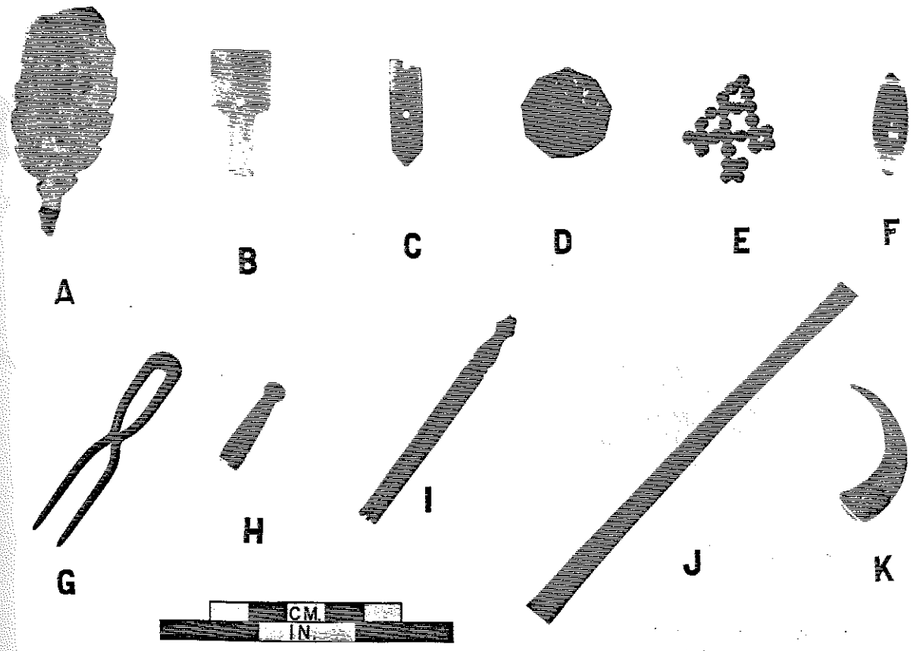

PLATE 40

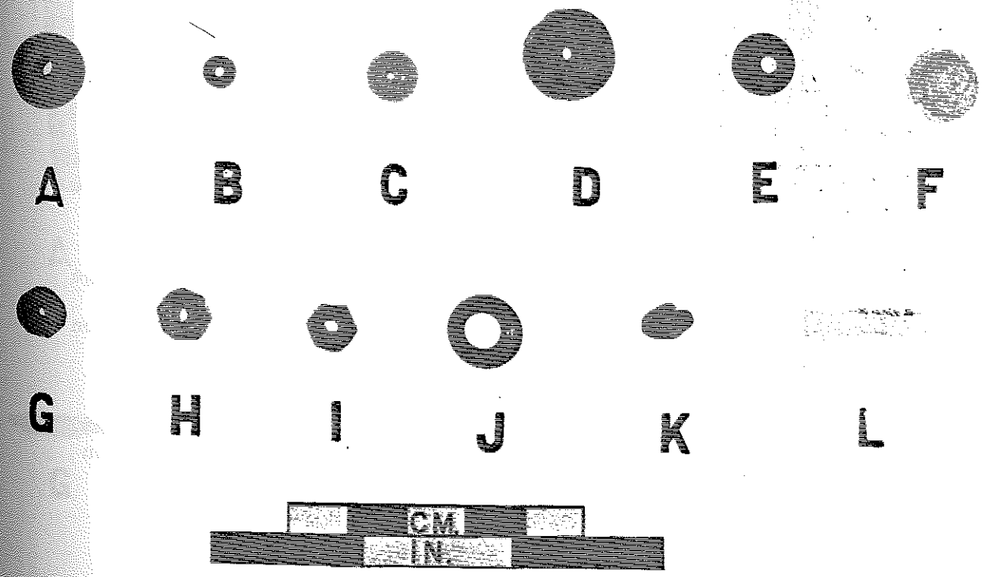

PLATE 41

PLATE 42: Thimble, Syringes, Rubber Tube, Sad Iron Handle, Trivet

A. Brass thimble; catalogue #25,618; discussion on page 154.
B. Large syringe of hard rubber; catalogue #3,013; discussion on page 154.
C. Small syringe of hard rubber; catalogue #4,430; discussion on page 155.
D. Rubber tube; catalogue #34,594; discussion on page 155.
E. Sad iron handle; catalogue #4,358; discussion on page 155.
F. Trivet; catalogue #5,061; discussion on page 156.

PLATE 43: Writing Implements

A. Metal lead pencil; catalogue #29,767; discussion on page 156.
B. Long slate pencil; catalogue #24,864; discussion on page 156.
C. Short slate pencil; catalogue #20,683; discussion on page 156.
D. Carbon rod with worn tip; catalogue #30,450; discussion on page 156.
E. Yellow-colored chalk; found in HS8; discussion on page 158.
F. Square graphite lead; catalogue #17,410; discussion on page 158.
G. Mechanical pencil section; catalogue #35,388; discussion on page 158.
H. Metal pen point; found in HS8; discussion on page 158.
I. Slate board section; catalogue #18,482; discussion on page 158.

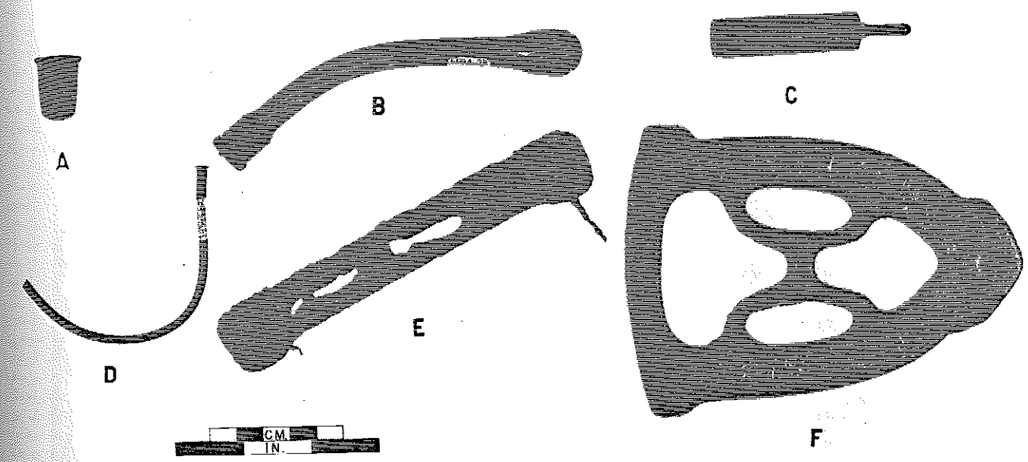

PLATE 42

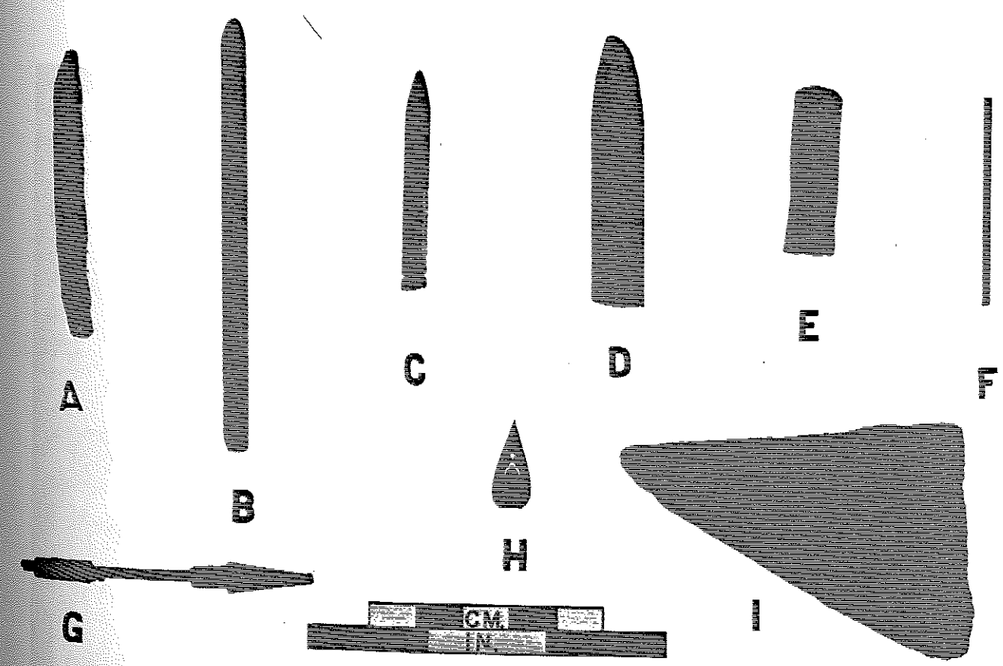

PLATE 43

PLATE 44: Written composition from HS8 "Beware of evil companions for they corrupt good manners"; discussion on page 160.

PLATE 45: Newspaper cartoon from HS8; intentionally clipped and perforated at the corners for hanging; discussion on page 163.

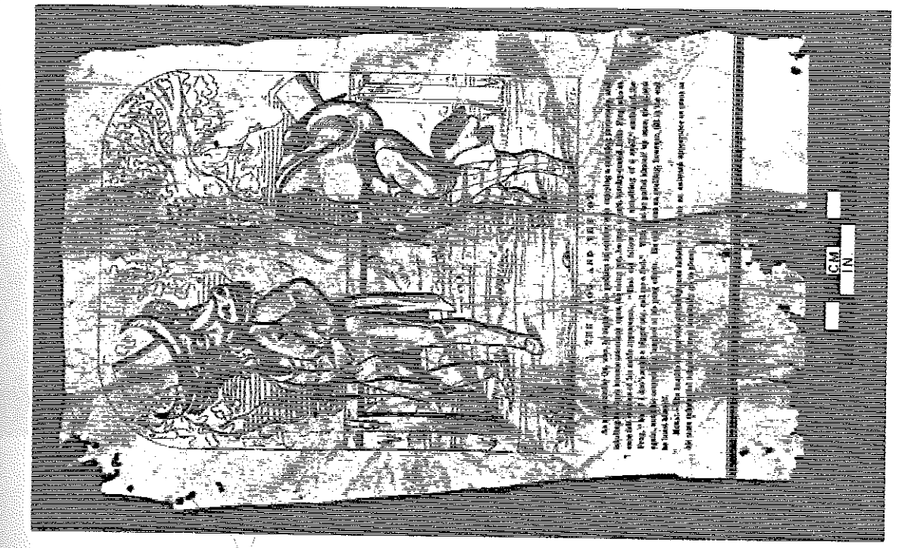

PLATE 45

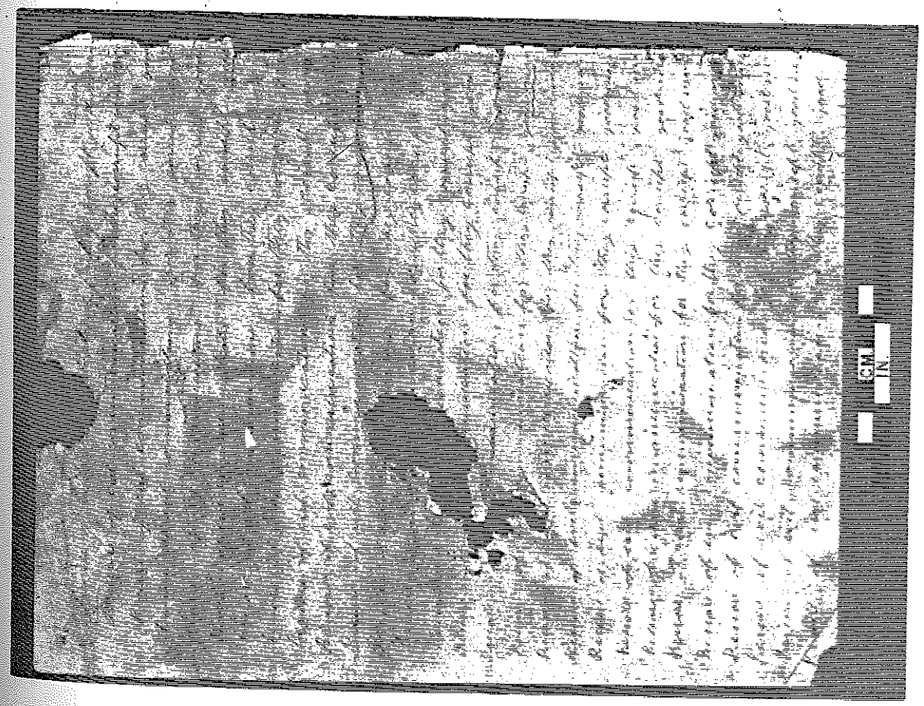

PLATE 44

PLATE 46: Advertising Handbill, Manufacturer's Label, Blank Checks from HS8.

A. Advertising handbill; discussion on page 161.
B. Manufacturer's label; discussion on page 161.
C. Blank checks; discussion on page 161.

PLATE 47: Nonalcoholic Beverage Bottles

A. Soda, marked "C.H. BACHMANN/FT. SCOTT/KANS"; catalogue #12,663; discussion on page 168.
B. Juice, marked "WELCHES/GRAPE JUICE"; catalogue #2,989; discussion on page 169.
C. Mineral water, marked "J J TODD/FORT SCOTT/KAN"; catalogue #3,542; discussion on page 169.
D. Mineral water; catalogue #36,315; discussion on page 170.

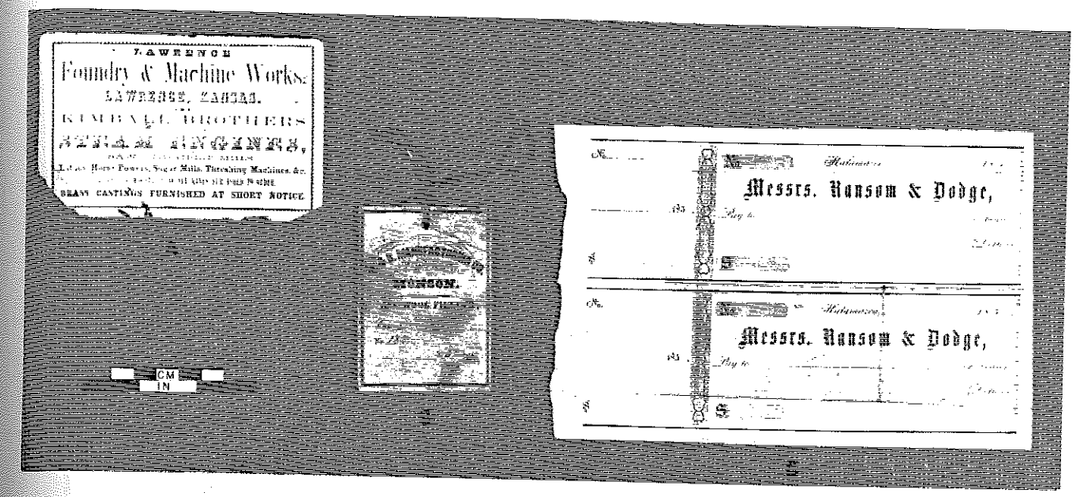

PLATE 46

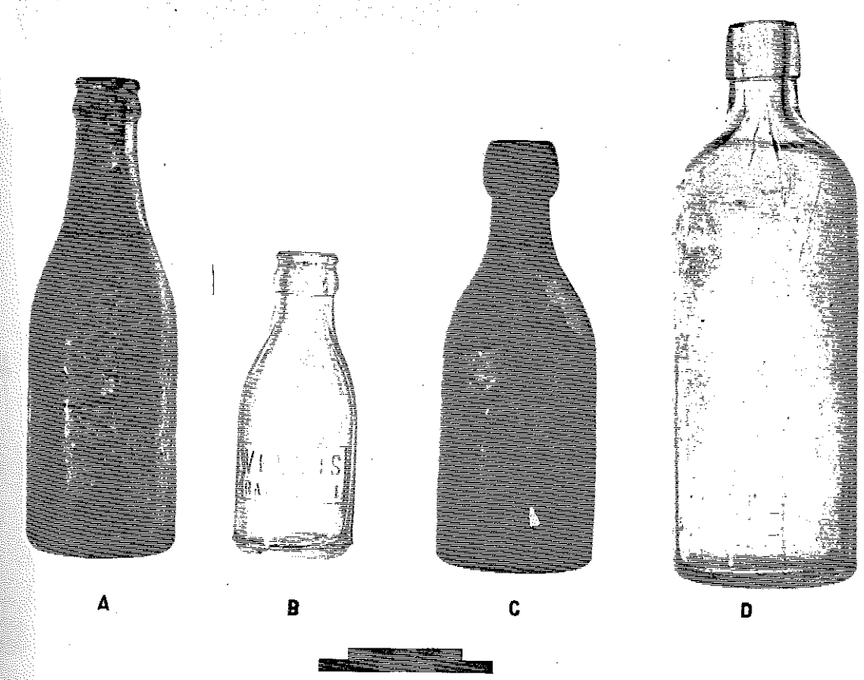

PLATE 47

PLATE 48: Alcoholic Beverage Bottles

A. Aqua beer; catalogue #2,969; discussion on page 171.
B. Amber beer; catalogue #2,991; discussion on page 171.
C. Ale; catalogue #4,326; discussion on page 171.
D. Brandy and/or whiskey; catalogue #4,323; discussion on page 172.
E. Brandy and/or whiskey; catalogue #34,584; discussion on page 172.

PLATE 49: Alcoholic Beverage Bottles

A. Sample whiskey bottle, marked "TAYLOR AND WILLIAMS/ INC/WHISKEY/LOUISVILLE, KY"; catalogue #2,019; discussion on page 172.

B. Pike's Peak flask, marked on the obverse face with a figure of a striding miner and the legend "FOR PIKE'S PEAK"; catalogue #5,063; discussion on page 173.
C. Double-Eagle flask, each side contains the figure of an eagle with outspread wings; catalogue #32,900; discussion on page 173.
D. Picnic Scroll flask, catalogue #22,344; discussion on page 174.

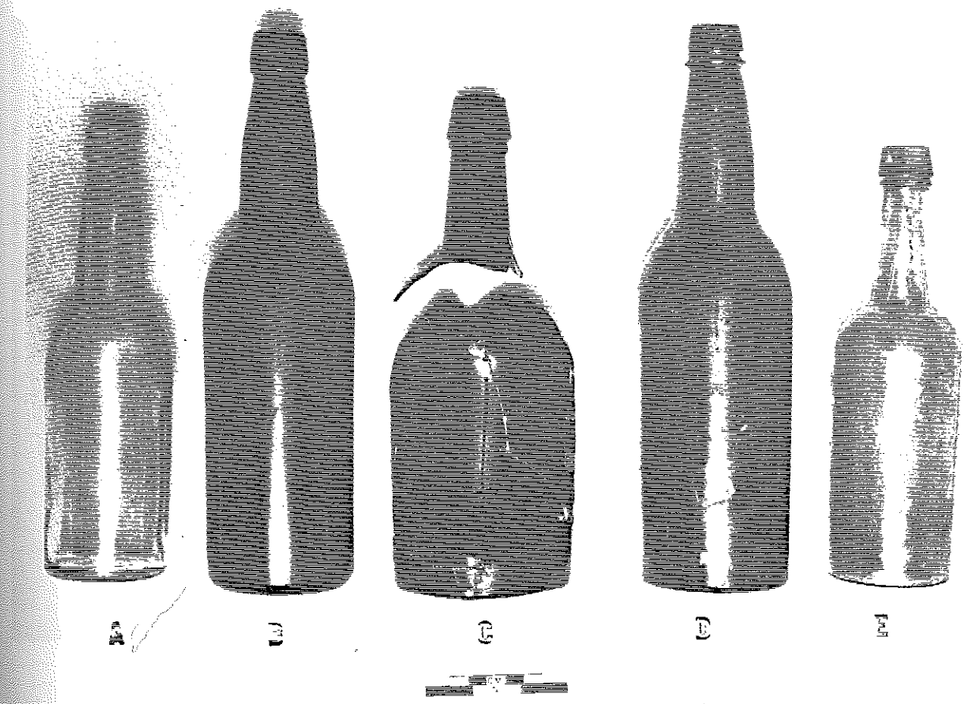

PLATE 48

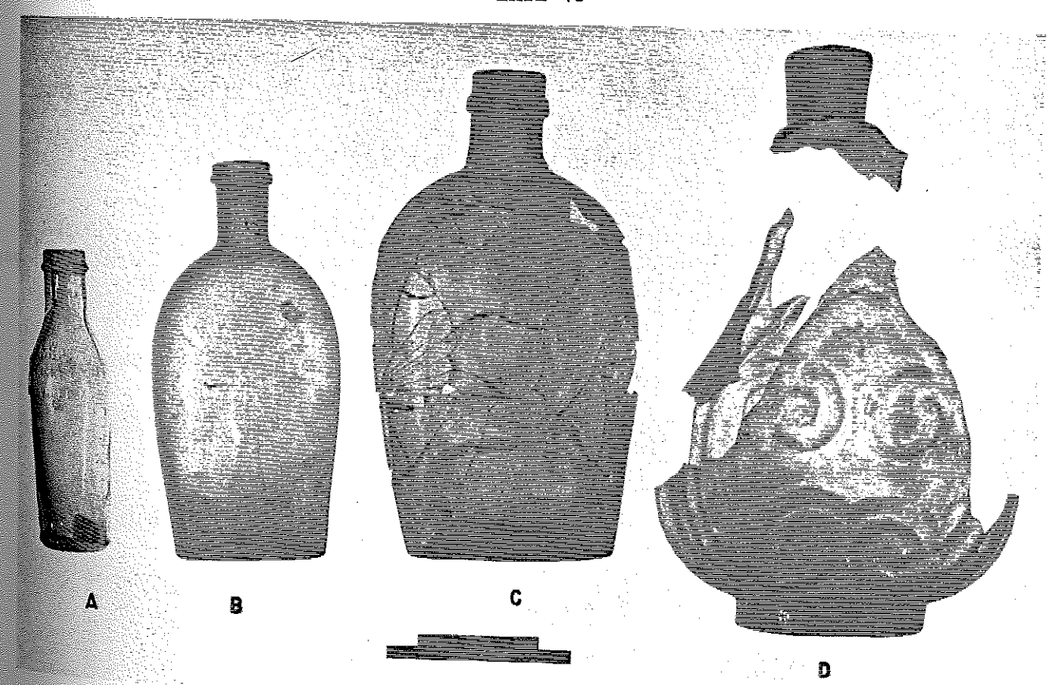

PLATE 49

PLATE 50: Alcoholic Beverage Bottles

A. Union Oval flask, marked "LOUISVILLE, KY GLASS WORKS"; catalogue #5,036; discussion on page 174.
B. Shoofly flask; catalogue #5,023; discussion on page 175.
C. Jo Jo flask; catalogue #3,040; discussion on page 175.
D. Plain Oval; catalogue #952; discussion on page 175.
E. Modified Union Oval; catalogue #3,918; discussion on page 176.

PLATE 51: Patent Medicine Bottles

A. Rectangular bottle, raised letters on narrow side panel, "DR S PITCHERS" on one side and "CASTORIA" on the other; catalogue #32,088; discussion on page 178.
B. Cylindrical bottle, marked "CITRATE OF/MAGNESIA" in two lines of raised letters; catalogue #3,370, discussion on page
C. Twelve-sided bottle, possibly bitters, marked "KORNE-MANN & Co." in vertical raised letters on one panel; catalogue #5,033; discussion on page 179.
D. Rectangular bottle, three recessed panels and one flat panel, three lines of raised letters occur, one on each recessed panel "Dr. J.W. BULL'S/COUGH SYRUP/BAL-TIMORE"; discussion on page 179.

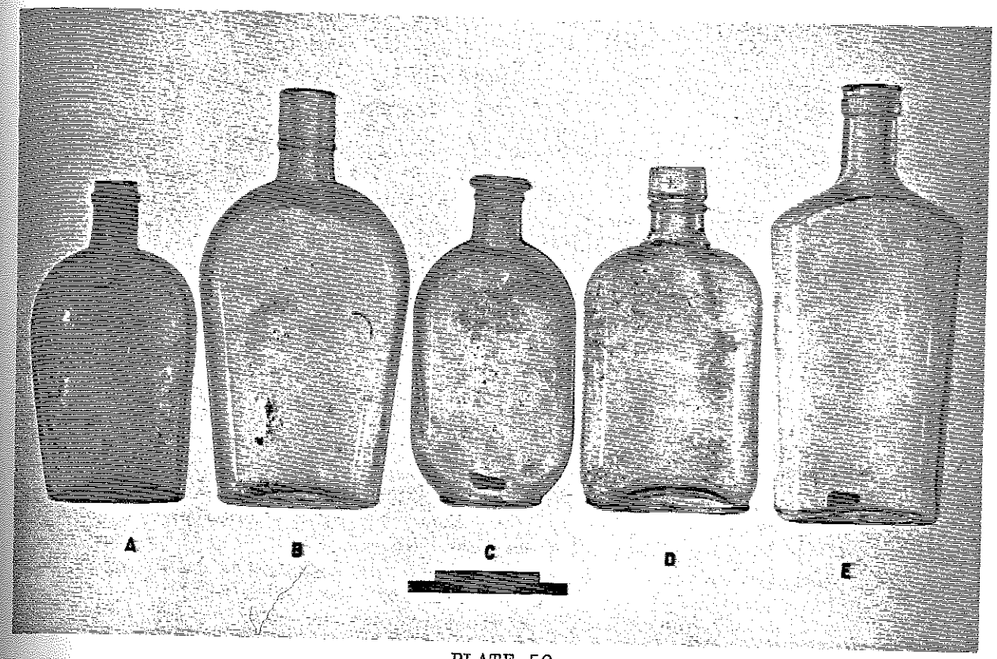

PLATE 50

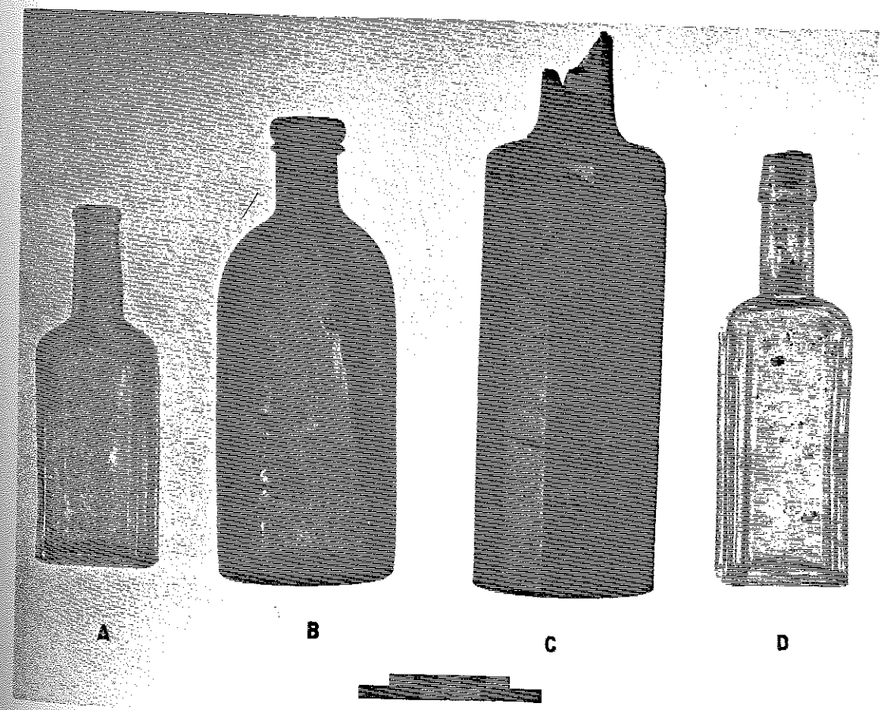

PLATE 51

PLATE 52: Patent Medicine Bottles

A. Cylindrical bottle, marked with five vertical rows of raised letters "SAMPLE BOTTLE/DR. KILMER'S/SWAMP-ROOT/ KIDNEY CURE/BINGHAMPTON, N.Y."; catalogue #5,370; discussion on page 180.

B. Cylindrical bottle, marked with four lines of raised horizontal letters "BROMO-SELTZER/EMERSON/DRUG CO/ BALTIMORE MD"; catalogue #16,488; discussion on page 181.

C. Square bottle, one flat panel has two vertical lines of raised letters "CORN" and "WARTSKIN"; catalogue #1,058; discussion on page 181.

D. Cylindrical bottle, marked in two horizontal lines of raised letters "CHESEBROUGH MFG. Co./VASELINE"; catalogue #16,819; discussion on page 182.

PLATE 53: Fruit Jars

A. Wax-sealed fruit jar; catalogue #3,571; discussion on page 185.

B. One quart capacity shoulder-sealed fruit jar marked "Mason's/Patent/Nov 30th/1858"; catalogue #3,916; discussion on page 185.

C. One pint capacity shoulder-sealed fruit jar marked "MASON'S/PATENT/NOV. 30th/1858"; catalogue #2,992; discussion on page 185.

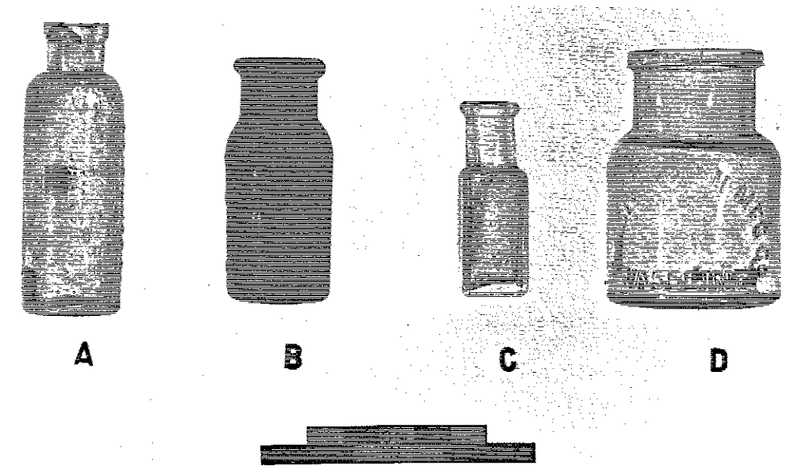

PLATE 52

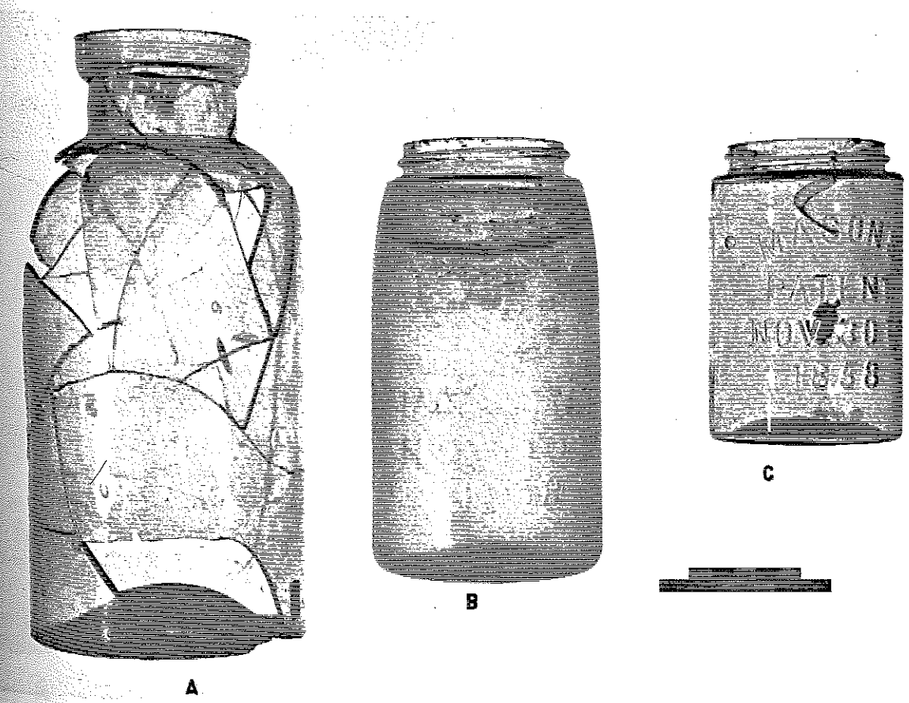

PLATE 53

PLATE 54: Fruit Jar Lids

A. Milk glass liner and zinc cap, liner is marked "BOYD'S/PORCELAIN/LINED"; catalogue #3,605; discussion on page 187.
B. Perforated top; catalogue #11,338; discussion on page 188.
C. Recessed top; catalogue #24,121; discussion on page 188.
D. Lightning fruit jar lid; catalogue #4,085; discussion on page 188.

PLATE 55: Preservative/Pickling Bottles

A. Preservative bottle made in a block mold; catalogue #4,325; discussion on page 189.
B. Square pickle; catalogue #951; discussion on page 190.
C. Cathedral-paneled peppersauce, marked vertically on three panels "WESTERN/SPICE/MILLS"; catalogue #16,427; discussion on page 191.
D. Cathedral-paneled peppersauce; catalogue #11,143; discussion on page 191.
E. Worcestershire sauce bottle, marked "WORCESTERSHIRE SAUCE" and "LEA & PERRINS"; catalogue #5,026; discussion on page 192.
F. Worchestershire sauce bottle, marked "WORCESTERSHIRE SAUCE" and "COURTENAY & CO"; catalogue #9,717; discussion on page 192.

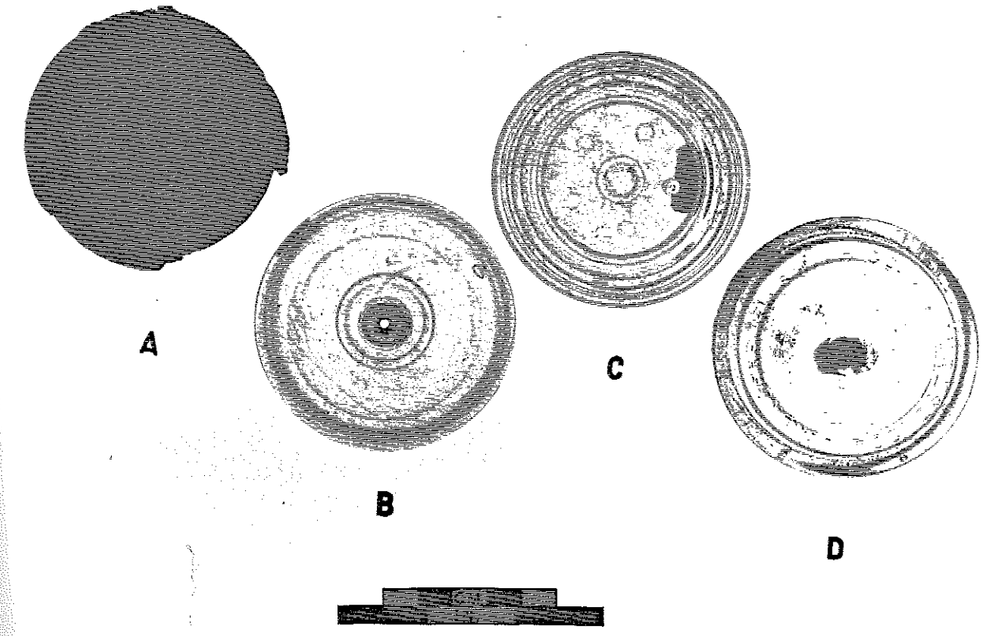

PLATE 54

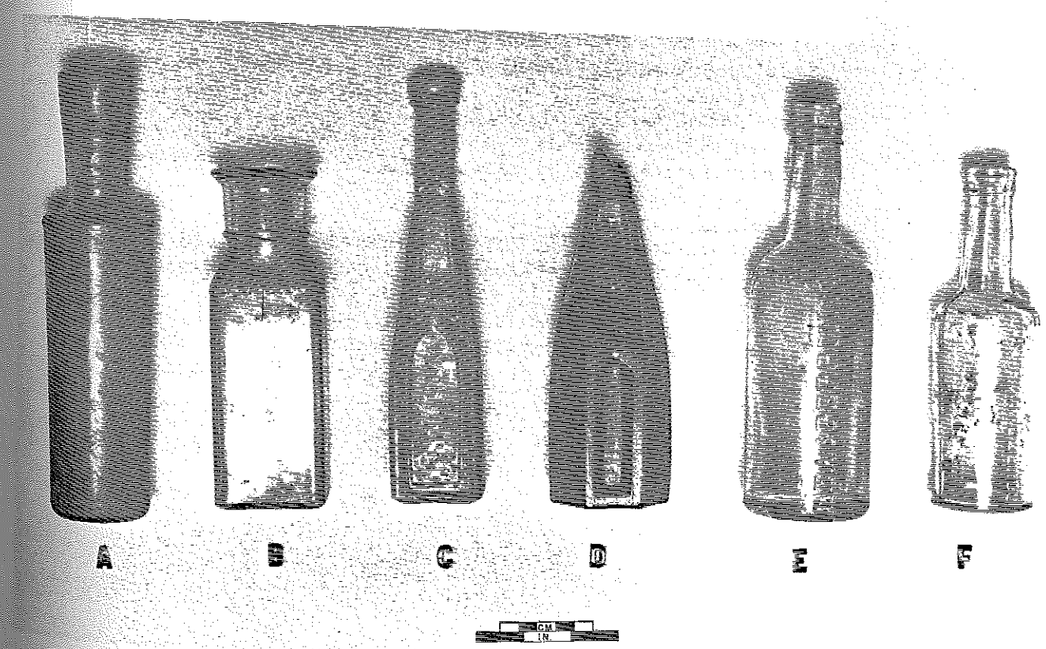

PLATE 55

PLATE 56: Large Demijohn; discussion on page 193.

PLATE 57: Chemical and Prescription Bottles

A. Graduated medicine bottle; catalogue #4,103; discussion on page 193.
B. Prescription bottle, marked "CLARENCE E. HALL/PRESCRIPTION/DRUGGIST"; catalogue #7,259; discussion on page 194.
C. Prescription bottle, marked "D. HOGEBOOM/DRUGGIST/PITTSBURG, KAN"; catalogue #764; discussion on page 195.
D. Chemical bottle, marked "THE OAKLAND CHEMICAL COMPANY* *"; catalogue #2,980; discussion on page 195.

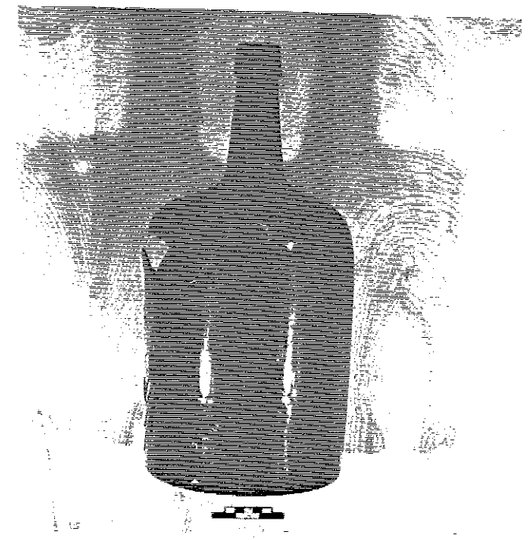

PLATE 56

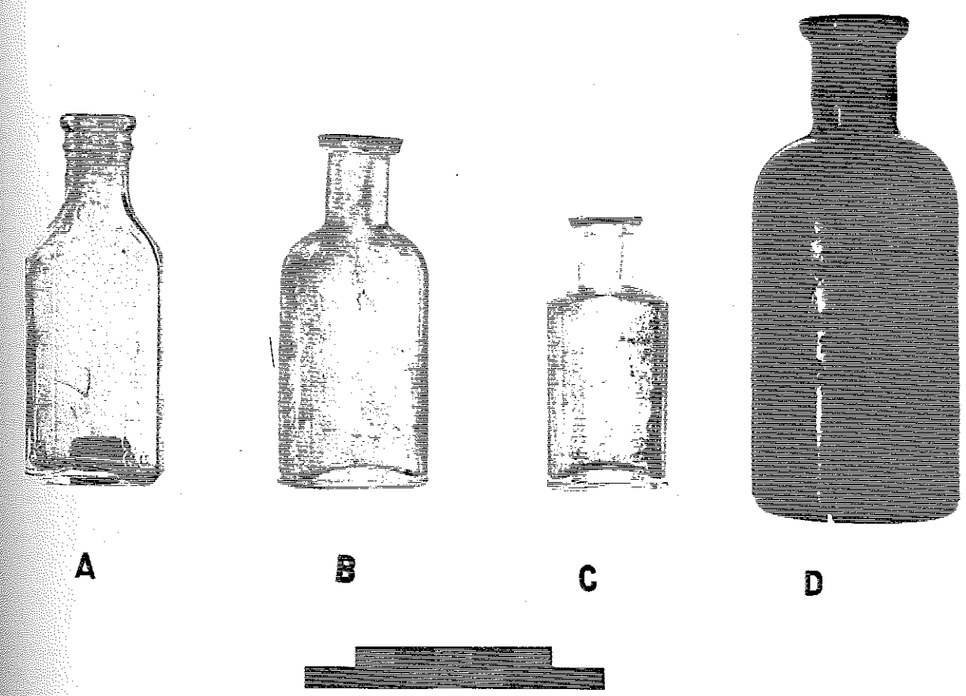

PLATE 57

PLATE 58: Ink, Household, and Hygiene Bottles

A. Conical ink; catalogue #5,034; discussion on page 195.
B. Square ink; catalogue #16,997; discussion on page 195.
C. Oval bottle, marked on the obverse face "HUSBANDS/ LAUNDRY/BLUE"; catalogue #3,393; discussion on page 196.
D. Rectangular bottle, marked on the one sunken panel "C. DAMSCHINSKY/LIQUID HAIR DYE/NEW YORK"; catalogue #2,367; discussion on page 197.

PLATE 59: Household, Hygiene, and Veterinary Bottles

A. Union Oval bottle, marked on flattened side panel "AMERICAN ARISTO TYPE CO."; catalogue #16,996; discussion on page 197.
B. Rectangular bottle, marked on one panel "Larkin Co/BUFFALO"; catalogue #3,050; discussion on page 198.
C. Rectangular bottle, marked on one panel "Larkin Co/BUFFALO"; catalogue #2,965; discussion on page 198.
D. Rectangular bottle, marked on one panel "DR. PRICE'S/ DELICIOUS/FLAVORING EXTRACTS"; catalogue #2,970; discussion on page 198.

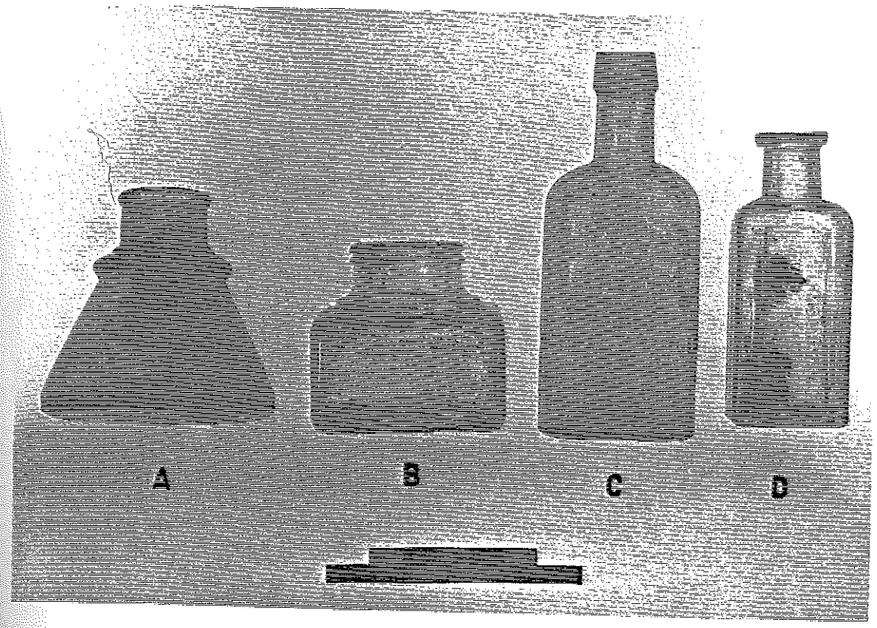

PLATE 58

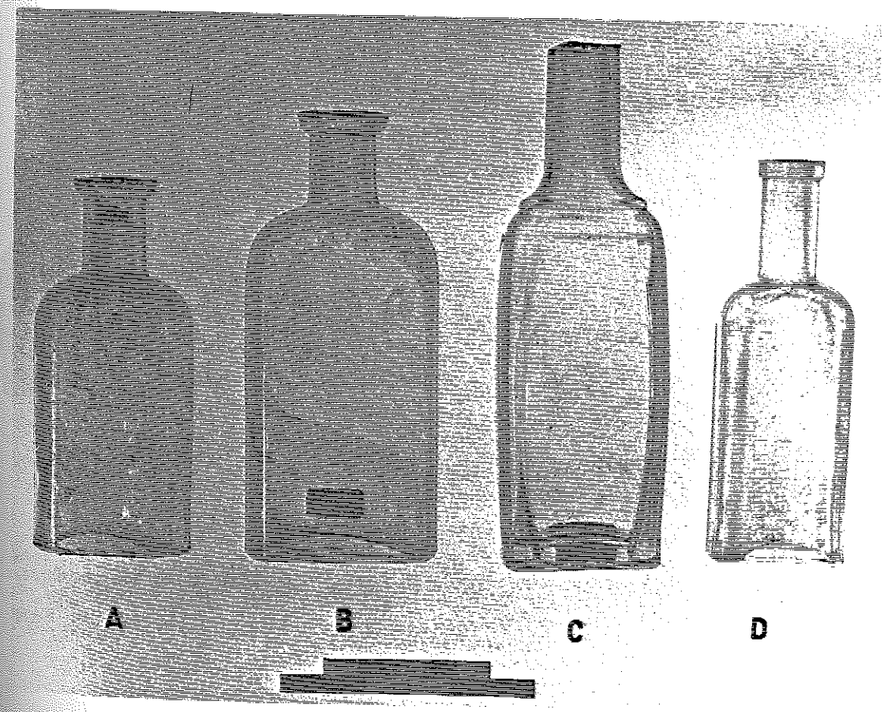

PLATE 59

PLATE 60: Toiletry and Perfume Bottles

A. Cylindrical bottle; catalogue #12,467; discussion on page 199.
B. Rectangular bottle, base marked "CUTEX"; catalogue #4,102; discussion on page 199.
C. Circular bottle with wood screw on cap; catalogue #4,571; discussion on page 199.
D. Four-sided tapered bottle with screw threads on finish; catalogue #35,323; discussion page 199.
E. Barrel-shaped bottle with screw threads on finish; catalogue #4,308; discussion on page 199.

PLATE 61: Miscellaneous Bottles

A. Square bottle, marked on one panel "BUTLER/CIN", blowpipe pontil mark on base; catalogue #36,299; discussion on page 200.
B. Rectangular bottle, blowpipe pontil mark on base; catalogue #36,300; discussion on page 200.
C. Eight-sided bottle; catalogue #3,387; discussion on page 201.
D. Ten-sided bottle; catalogue #5,258; discussion on page 201.

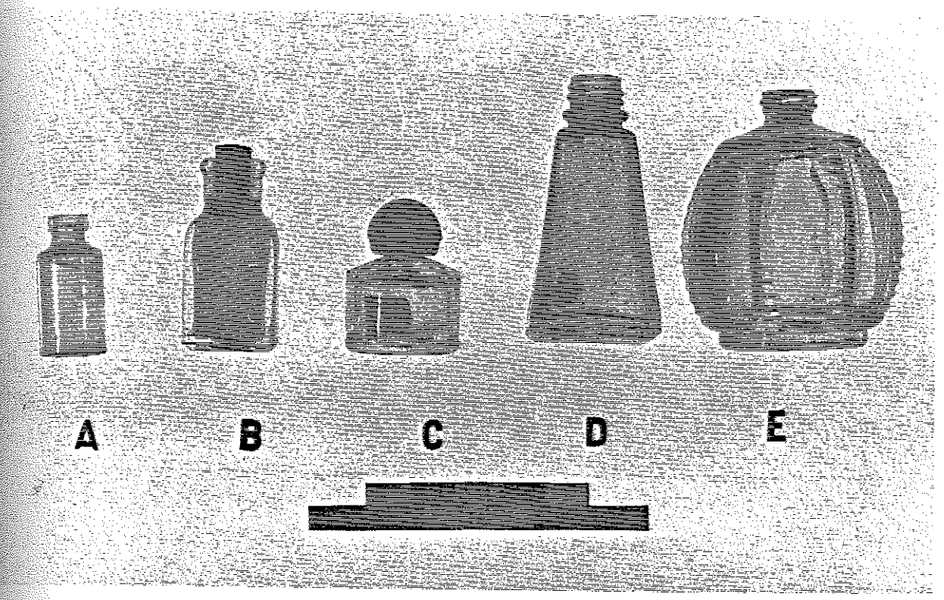

PLATE 60

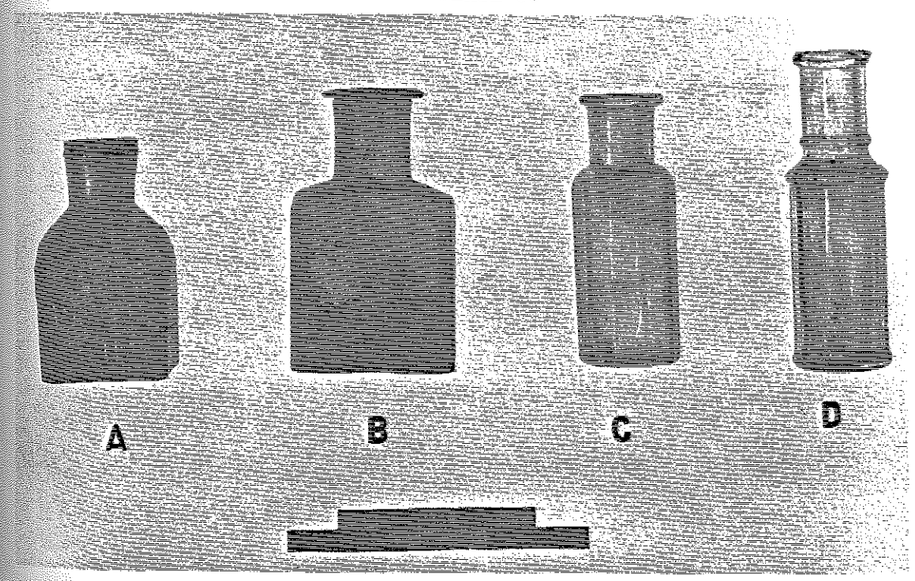

PLATE 61

PLATE 62: Miscellaneous Bottles

A. Square bottle; catalogue #5,031; discussion on page 201.
B. Rectangular bottle; catalogue #16,875; discussion on page 202.
C. Cylindrical widemouth bottle; catalogue #3,400; discussion on page 203.
D. Cylindrical narrow-necked bottle; catalogue #5,027; discussion on page 204.

PLATE 63: Miscellaneous Bottles

A. Cylindrical vial; catalogue #6,375; discussion on page 205.
B. Cylindrical vial; catalogue #3,389; discussion on page 205.
C. Long neck oval bottle; catalogue #5,032; discussion on page 205.
D. Long neck oval bottle; catalogue #2,968; discussion on page 206.
E. Cobalt blue condiment bottle; catalogue #3,595; discussion on page 206.

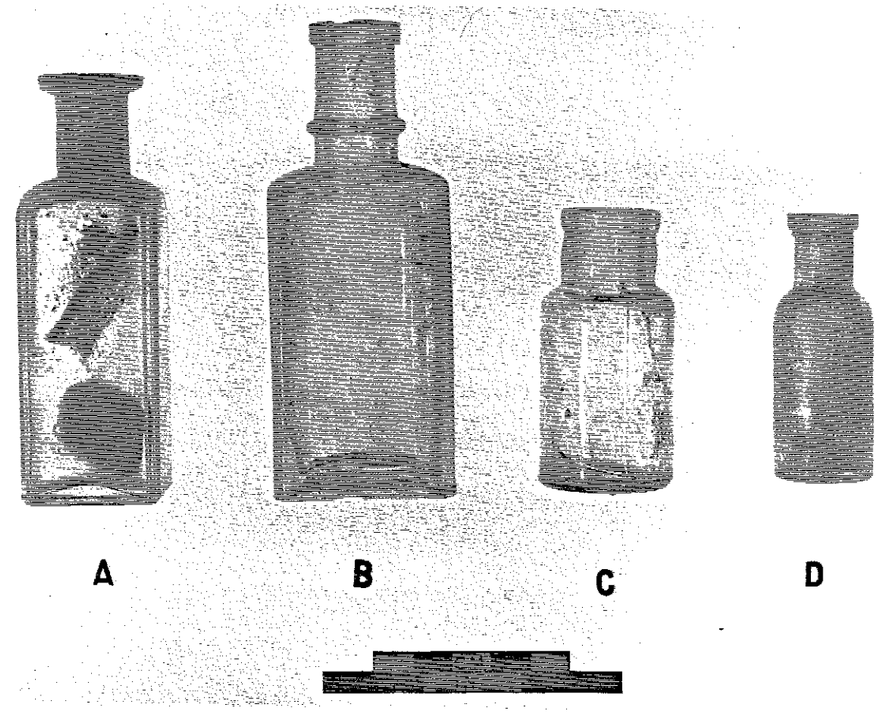

PLATE 62

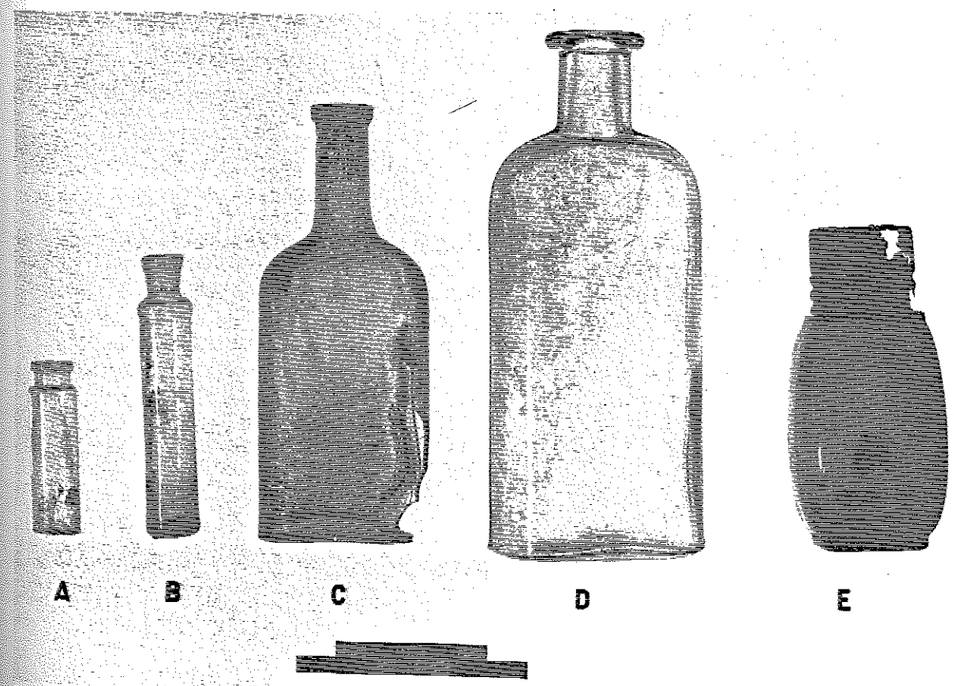

PLATE 63

PLATE 64: Glass Stoppers

A. Green peg stopper; catalogue #12,067; discussion on page 207.
B. Brown peg stopper; catalogue #5,628; discussion on page 207.
C. Ground shaft stopper; catalogue #5,797; discussion on page 207.
D. Ground shaft stopper; catalogue #27,439; discussion on page 207.
E. Ground shaft stopper; catalogue #3,132; discussion on page 207.
F. Ground shaft stopper; catalogue #17,800; discussion on page 207.
G. Eyedropper; catalogue #6,292; discussion on page 209.
H. Test tube; catalogue #845; discussion on page 209.
I. Glass tube; catalogue #8,555; discussion on page 209.
J. Glass rod; catalogue #6,978; discussion on page 209.

PLATE 65: Pressed Glass Tumblers

A. Fluted and tapered tumbler; catalogue #2,983; discussion on page 211.
B. Etched and tapered tumbler; catalogue #3,110; discussion on page 211.
C. Thick-walled, straight-sided tumbler; catalogue #4,769; discussion on page 211.
D. Tapered tumbler with floral impressions; catalogue #4,179; discussion on page 211.

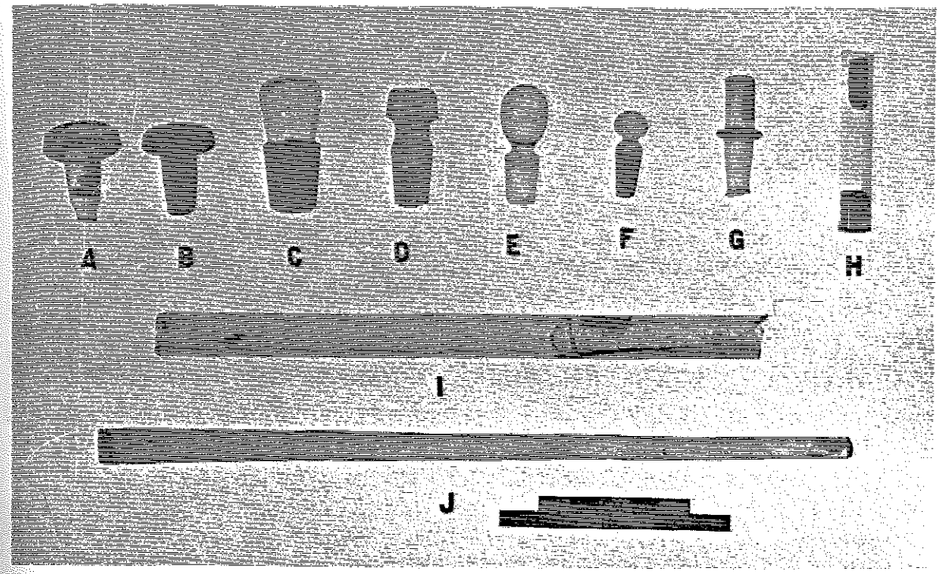

PLATE 64

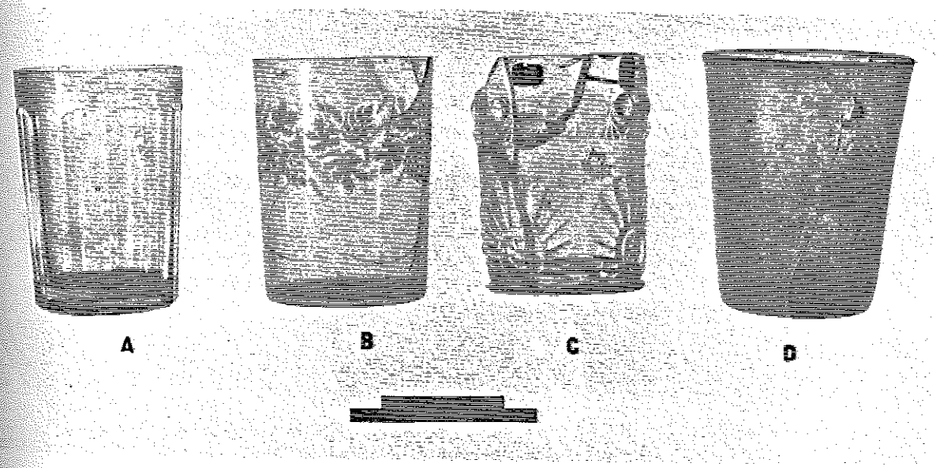

PLATE 65

PLATE 66: Pressed Glass Goblets

A. Plain, clear goblet with thick stem and heavy base; catalogue #5,058; discussion on page 212.
B. Clear goblet with thick stem, heavy base, and molded pattern of psuedofacets on bowl; catalogue #2,984; discussion on page 212.
C. "Moose Eye in Sand" goblet; catalogue #8,218; discussion on page 212.
D. Cylindrical goblet with decoration on the body; catalogue #3,410; discussion on page 213.

PLATE 67: Pressed Glass

A. Bud vase; catalogue #34,614; discussion on page 213.
B. Pitcher section; catalogue #34,396; discussion on page 213.
C. Mold decorated oval dish; catalogue #3,567; discussion on page 214.
D. Mold decorated oval dish; catalogue #4,138; discussion on page 214.
E. Hexagonal, green dish with molded decoration; catalogue #3,816; discussion on page 214.

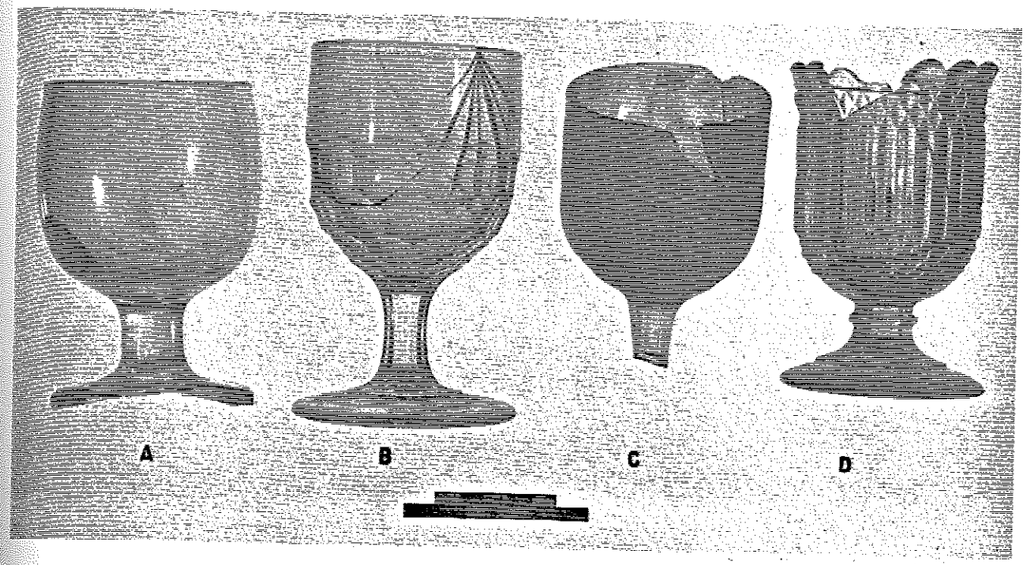

PLATE 66

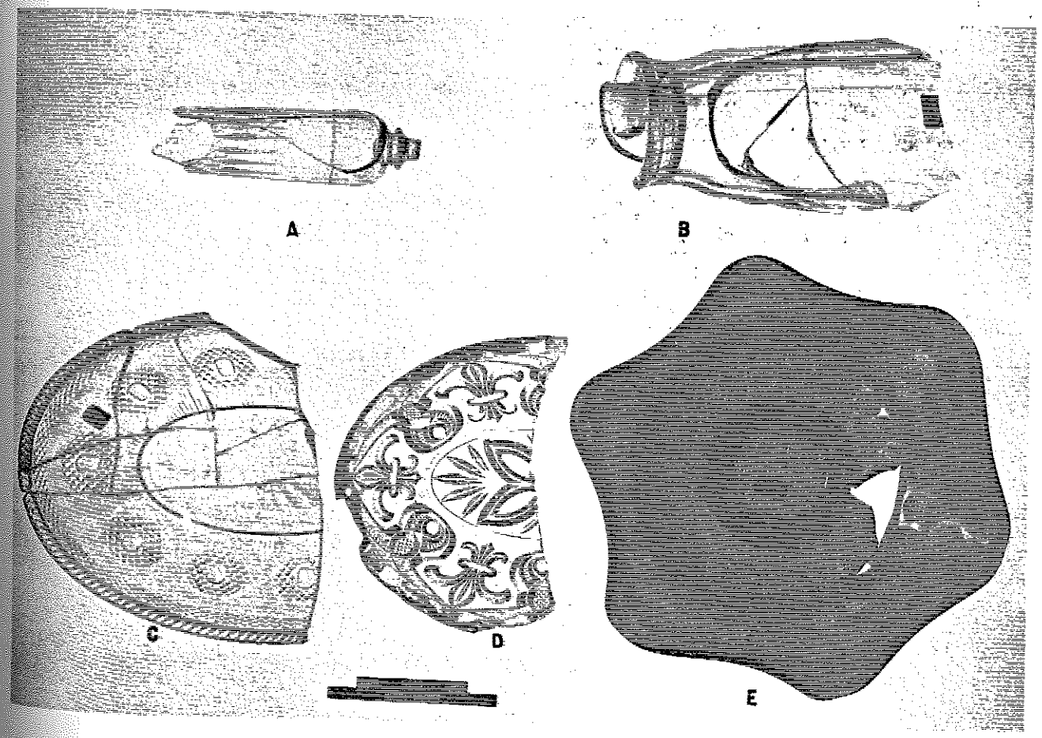

PLATE 67

PLATE 68: Pressed Glass

A. Globular cover; catalogue #3,919; discussion on page 215.
B. Conoidal cover; catalogue #15,430; discussion on page 215.
C. Molded "Three Face" salt shaker; catalogue #1,752; discussion page 216.

PLATE 69: Milk Glass

A. Cylindrical container with lid; catalogue #3,759 and 4,162; discussion on page 217.
B. Lid with finial; catalogue #12,069; discussion on page 217.
C. Cylindrical jar marked "WINTERGREEN"; catalogue #6,996; discussion on page 217.
D. Peg stopper; catalogue #11,236; discussion on page 217.
E. Rectangular dish with gold residue; catalogue #6,061; discussion on page 217.

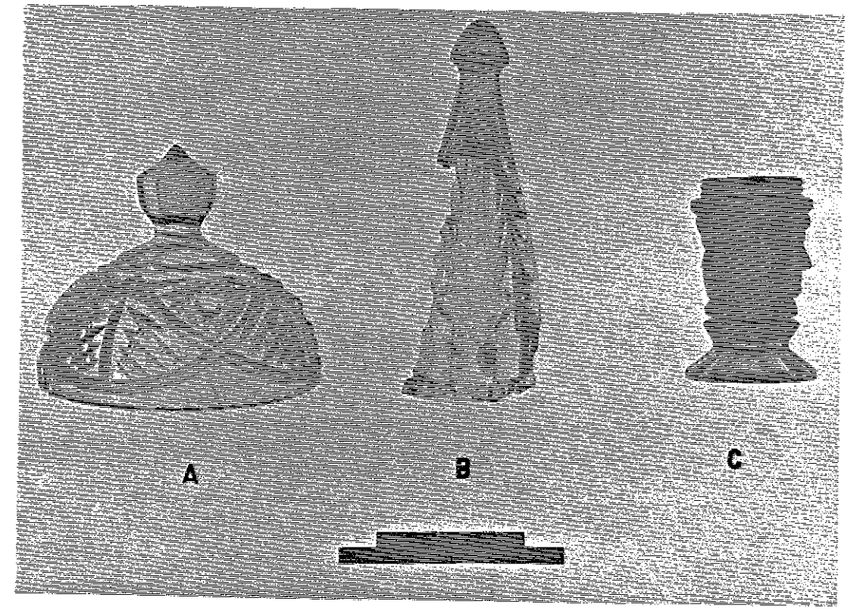

PLATE 68

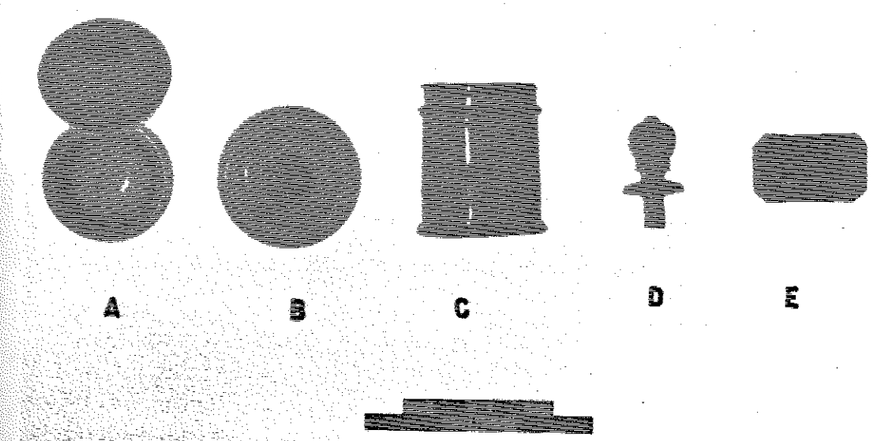

PLATE 69

PLATE 70: Ceramics (discussion on pages 218-238)

A. Oval ironstone plate, impressed on reverse side "GREENWOOD CHINA/Trenton, N.J.", mark date 1870 to 1876; catalogue #s 9,390 9,391 9,394 10,290 and 10,626.

B. Oval ironstone plate, same mark as "A"; catalogue #s 9,204 and 9,457.

C. Oval ironstone dish, printed on reverse side "ANTHONY SHAW, BURSLEM/SHEDD & TURNER/STONE CHINA", mark date 1860 to 1890; catalogue #22,789.

D. Oval ironstone dish, printed on reverse side "STONE CHINA/EDWARD PEARSON/COBRIDGE", date of operation 1853 to 1873; catalogue #3,368.

E. Oval ironstone dish, indecipherable impressed mark on reverse side; catalogue #7,453.

F. Oval ironstone dish; unmarked; catalogue #s 9,946 10,249 and 12,269.

G. Round ironstone dish, same mark as "A"; catalogue #10,132.

PLATE 71: Ceramics (discussion on pages 218 to 238)

A. Round ironstone plate, impressed with Diamond Registration mark, mark date September 2, 1846; catalogue #s 7,049 and 8,103.

B. Round ironstone plate, printed on reverse side "IRONSTONE CHINA/J. & G. MEAKIN", mark date circa 1890+; catalogue #s 3,412 3,418 3,437 3,461 3,438 3,456 3,369 3,449 3,450 3,451 and 3,442.

C. Round ironstone plate, printed on reverse side "IRONSTONE CHINA/J. & G. MEAKIN", mark date 1851 to 1891; catalogue #s 7,649 and 7,933.

D. Round ironstone bowl, printed on reverse side "ANTHONY SHAW, BURSLEM/SHEDD & TURNER/STONE CHINA", impressed on reverse side "A. SHAW/WARRANTED", mark date 1860 to 1882; catalogue #s 3,414 3,421 3,439 3,441 and 3,452.

E. Round ironstone saucer, printed on reverse side "ROYAL IRONSTONE CHINA/ALFRED MEAKIN, ENGLAND", mark date 1891 to 1896; catalogue #2,998.

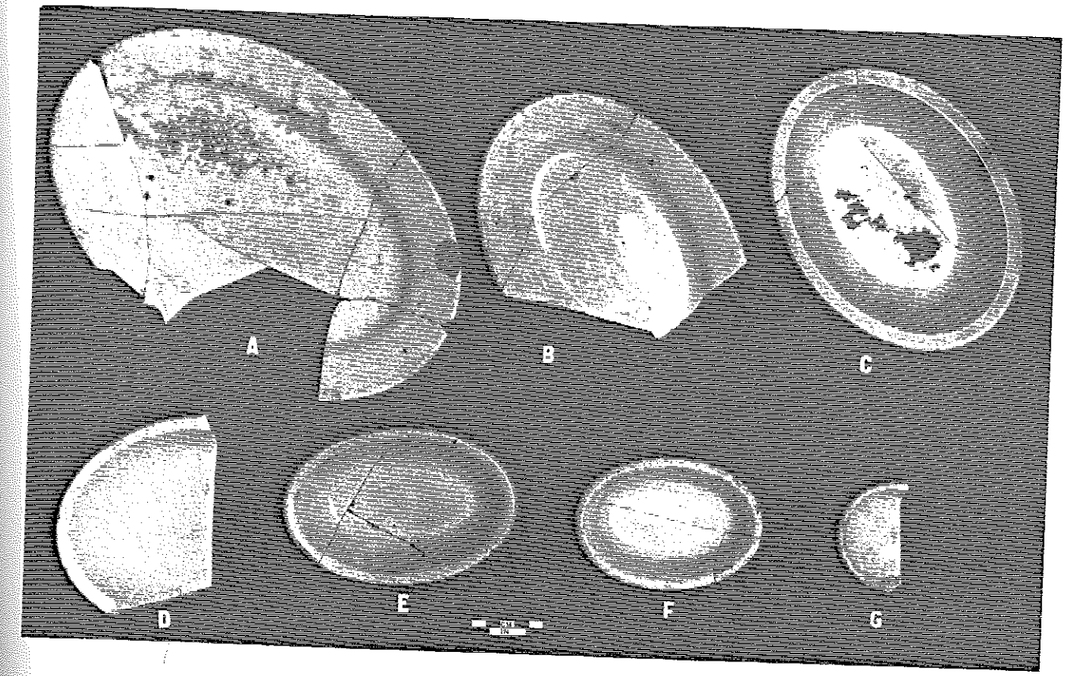

PLATE 70

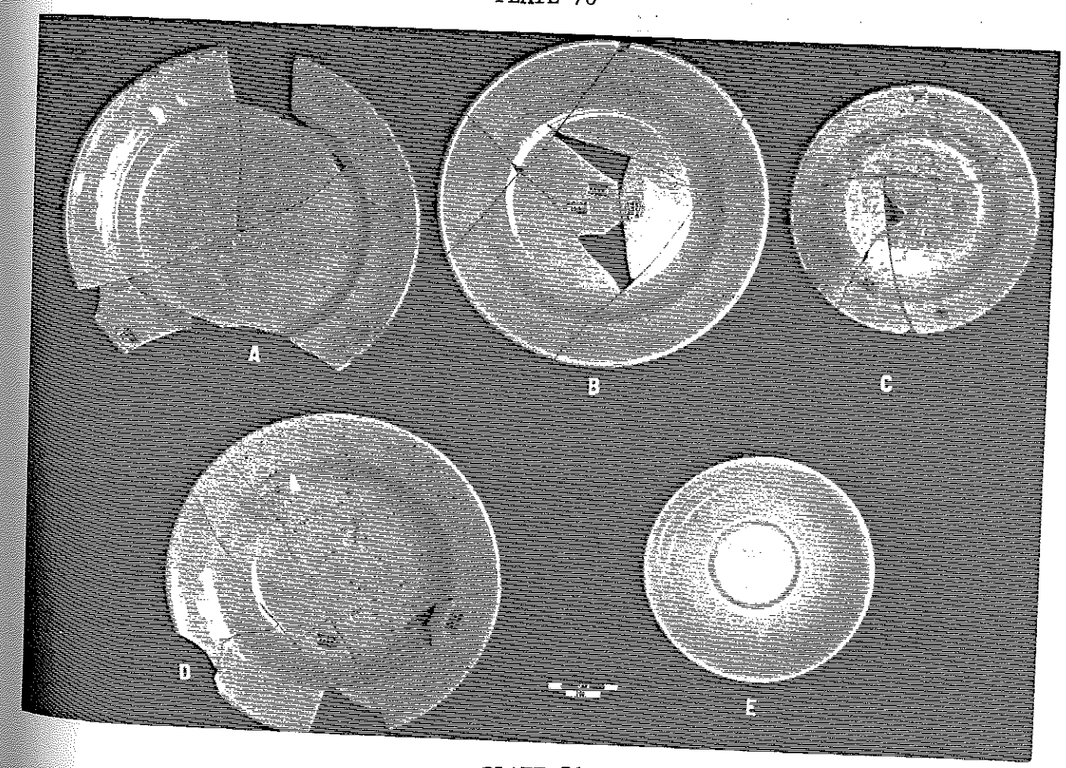

PLATE 71

PLATE 72: Ceramics (discussion on pages 218 to 238)

A. Handleless ironstone cup, no mark; catalogue #12,071.
B. Handleless ironstone cup with floral pattern in relief on outside, no mark; catalogue #3,398.
C. Handleless ironstone cup, no mark; catalogue #2,995.
D. Handleless ironstone cup with floral pattern in relief on outside, no mark; catalogue #s 6,882 7,621 6,874 6,875 6,948 7,893 7,226 7,576 and 7,894.
E. Handleless ironstone cup, no mark; catalogue #3,397.
F. Ironstone soup bowl, no mark; catalogue #s 9,305 9,455 12,081 12,083 and 11,089.

PLATE 73: Ceramics (discussion on pages 218 to 238)

A. Round ironstone plate, printed on reverse side "ROYAL/ SEMI-PORCELAIN/JOHNSON BROS/ENGLAND", mark date circa 1900; catalogue #s 3,000 3,003 and 3,757.
B. Round ironstone plate, printed on reverse side "JOHN-SON BROS/ENGLAND", mark date circa 1900; catalogue #3,760.
C. Ironstone saucer, printed on reverse side "ROYAL SEMI-PORCELAIN/JOHNSON BROS/ENGLAND", mark date circa 1900; catalogue #3,010.
D. Ironstone handled cup, no mark; catalogue #s 3,129 and 3,803

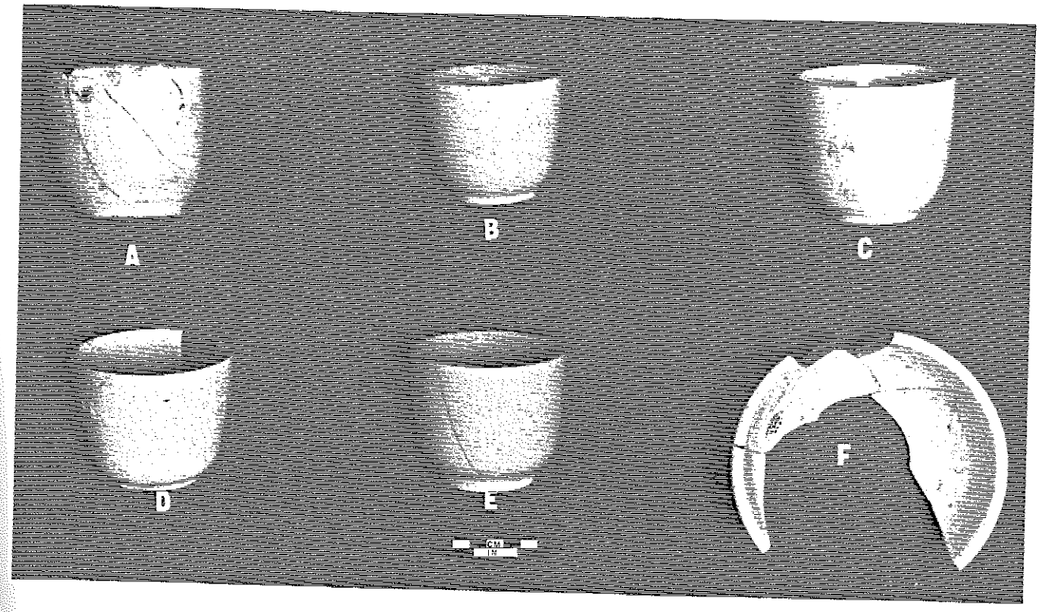

PLATE 72

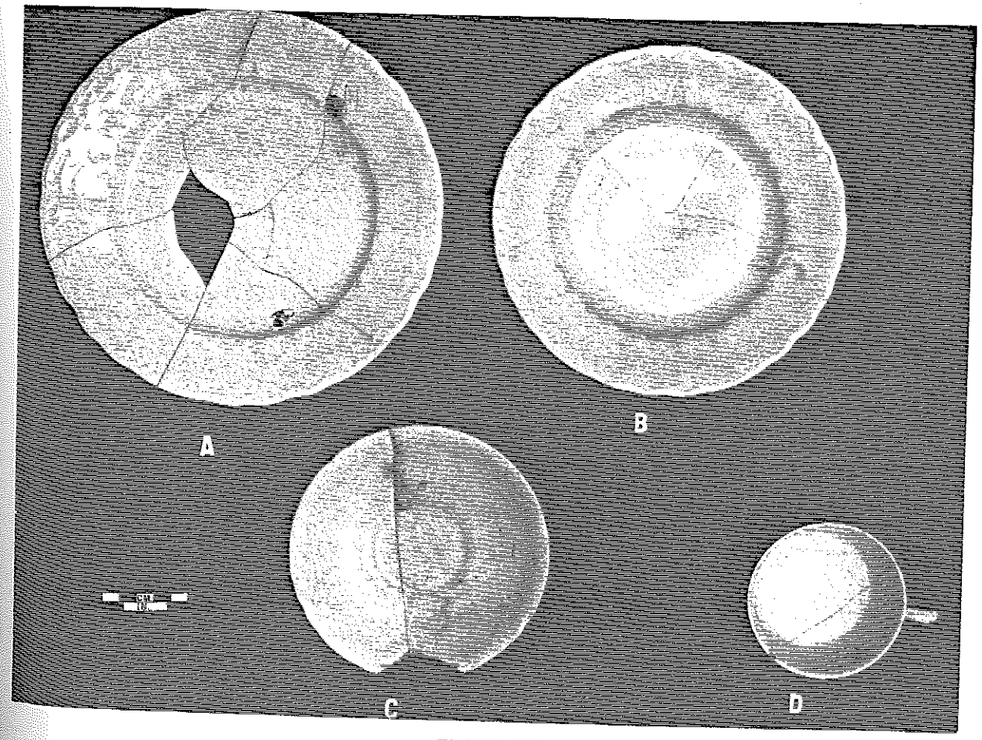

PLATE 73

PLATE 74: Ceramics (discussion on pages 218 to 238)

A. Handleless ironstone cup, no mark; catalogue #22,340.
B. Handled porcelain cup with transfer print design, marked on reverse side on base (printed) "MADE IN GERMANY", no date; catalogue #3,125.
C. Handled ironstone cup, printed on reverse side on base "1/HUDSON/SEMIPORCELAIN/MELLOR TAYLOR & CO/ENGLAND", dates of operation 1880 to 1904; catalogue #3,127.
D. Handled porcelain cup with transfer print floral design on both inside and outside, printed on reverse side on base "LEONARD/VIENNA/AUSTRIA", no information on date of manufacture but presumably circa 1900; catalogue #s 3,005 and 3,799.
E. Porcelain saucer with transfer print design on obverse face, companion to "B" as described above; catalogue #s 3,663 3,747 and 3,974.
F. Ironstone saucer with transfer print design on obverse face, no mark; catalogue #3,776.

PLATE 75: Ceramics (discussion on pages 218 to 238)

A. Porcelain bowl with molded design and with both transfer print and hand-painted designs, no mark; catalogue #3,986.
B. Ironstone bowl with blue transfer print design on obverse face and with printed mark on reverse side "ASIATIC PHEASANTS/T. HUGHES & SONS/ENGLAND", mark date 1895 to 1910; catalogue #3,783.
C. Porcelain bowl with transfer print design and with gold paint on rim, no mark; catalogue #3,008.
D. Ironstone plate, transfer print, calendar plate marked on obverse face "Compliments of/Armstrong Hardware/Ft. Scott". Armstrong Hardware listed in 1909 city directory for Fort Scott (R.L. Polk & Co. 1909:20), calendar probably dates to 1911, no maker's mark on plate; catalogue #37,603.
E. Porcelain saucer, companion to "C" and "F"; catalogue #3,150.
F. Porcelain cup, companion to "C" and "E"; catalogue #3,126.
G. Ironstone plate with transfer print, printed on reverse side "HOMER LAUGHLIN/HUDSON", mark date 1885 to 1889; catalogue #4,808.

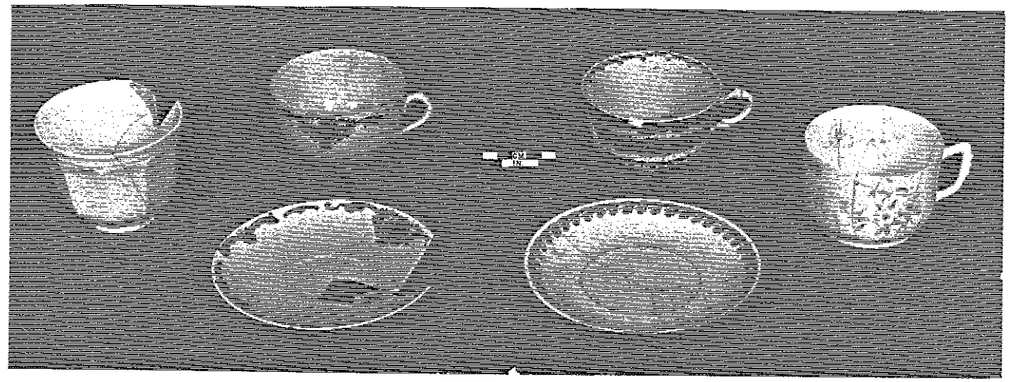

PLATE 74

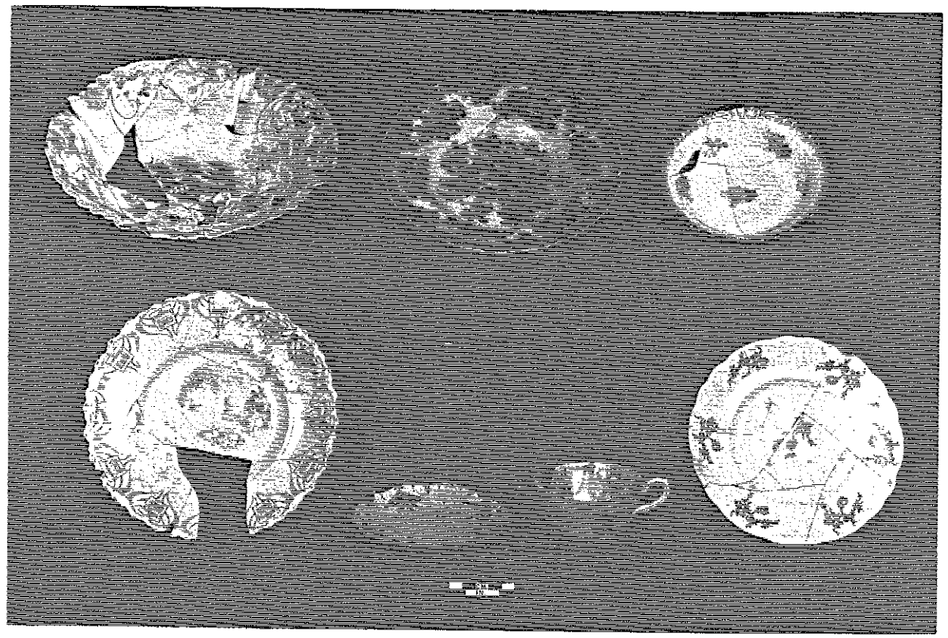

PLATE 75

PLATE 76: Ceramics (discussion on pages 218 to 238)

A. Ironstone handled pitcher, no mark; catalogue #7,705.
B. Ironstone handled pitcher, impressed "PORCELAIN/ OPAQUE/WEDGWOOD" on reverse side of base, dates of operation 1841 to 1860; catalogue #s too many to list but include 13,559 on rim section and 13,178 on handle, specimen recovered from HS8.
C. Porcelain handled pitcher with transfer print design, artist's mark on reverse side of base (printed) "367/T6/88 A", may be specific commercial mold number such as are commonly found on porcelain doll parts; catalogue #2,963.

PLATE 77: Ceramics (discussion on pages 218 to 238)

A. Earthenware amphora, hand-painted, no maker's mark; catalogue #3,951.
B. Porcelain handled candle holder, transfer print design, no mark; catalogue #3,155.
C. Porcelain bud vase, hand-painted, impressed on reverse side of base "680", this may be a specific commercial mold number; catalogue #s 3,294 3,295 3,291 3,430, etc.

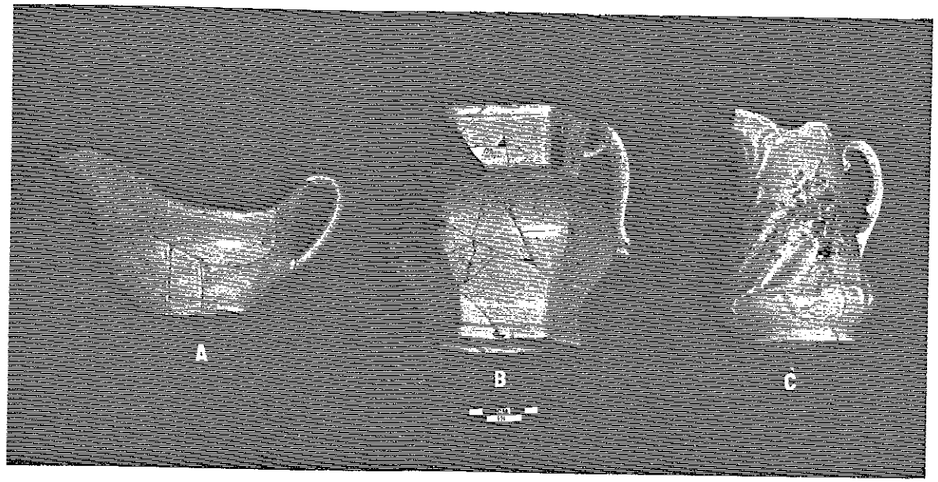

PLATE 76

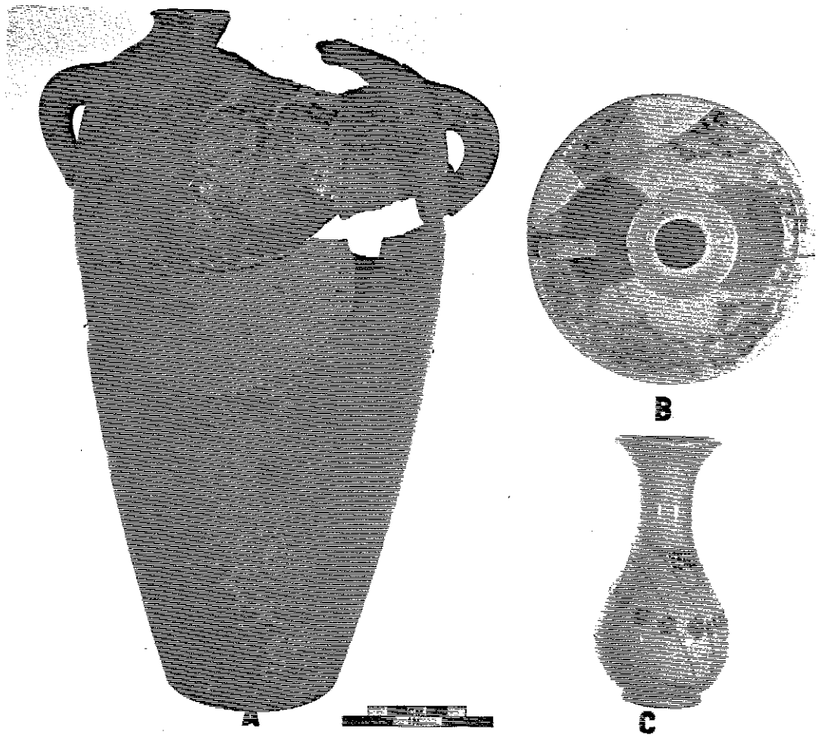

PLATE 77

PLATE 78: Ceramics (discussion on pages 218 to 238)

A. Earthenware (majolica) chamber pot with handle, yellow glaze with white and blue banding, no mark; catalogue #3,403.
B. Earthenware (majolica) chamber pot which originally had a handle that is now missing, yellow glaze with white and brown banding, no mark; catalogue #3,424.
C. Ironstone chamber pot, handled, printed on reverse side of base "STONE CHINA WARRANTED/ANTHONY SHAW, BURSLEM", mark date 1860 to 1882; catalogue #s 3,490 3,443 819 3,537 3,431 3,279 3,422 3,280 3,434 1,033 and 3,541. Specimen white in color.
D. Ironstone chamber pot lid, no mark; catalogue #3,144.
E. White porcelain chamber pot with handle missing, no mark; catalogue #s 3,540 and 3,453.

PLATE 79: Ceramics (discussion on pages 218 to 238)

A. Earthenware jug section missing neck, rim, and handle, brown slip glaze present on both interior and exterior but largely missing from exterior of base, no mark; catalogue #35,020.
B. Handled earthenware jug, brown slip glaze on exterior and extends part of the way down the interior of the neck, no mark; catalogue #6,967.
C. Stoneware, section of a milk skimming bowl with salt glaze present on exterior of rim and brown slip glaze present on exterior body and on interior (suggesting stacking of the wares during firing in a salt glaze kiln); catalogue #7,939.
D. Stoneware, section of rim of a milk skimming bowl which has overall brown slip glaze except for top of rim and underside of rim which are unglazed and indicate stacking of several similar bowls inside each other during firing in a salt glaze kiln; catalogue #5,039.
E. Stoneware, section of neck and rim of a pitcher, cream-colored slip glaze on exterior and interior; catalogue #7,220.

PLATE 78

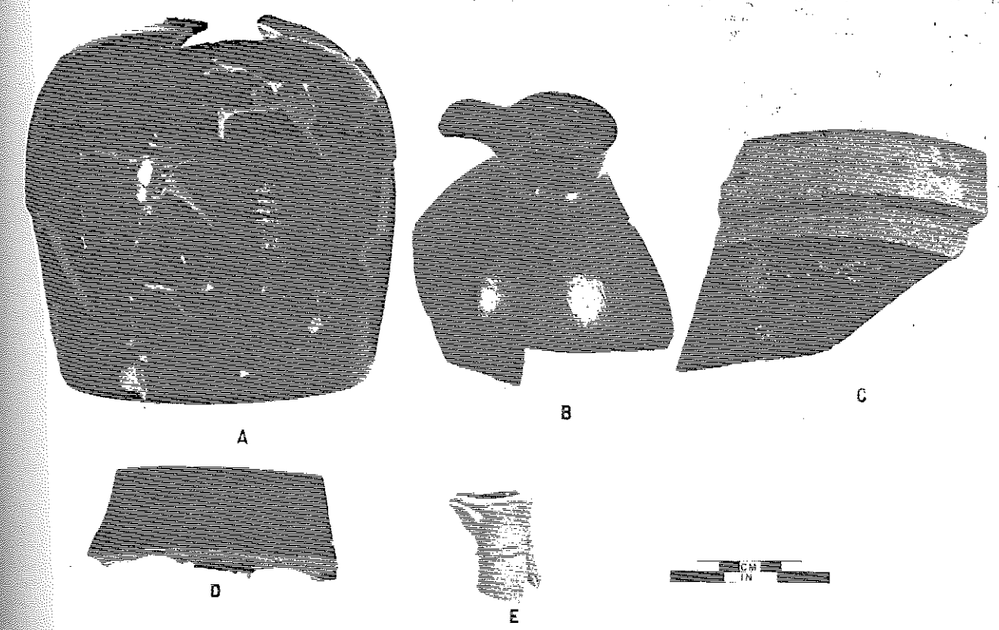

PLATE 79

PLATE 80: Ceramics (discussion on pages 218 to 238)
Five gallon earthenware crock with brown slip glaze overall except on the top of the rim and in the space where the "5" occurs; catalogue #5,412.

PLATE 81: Metal Containers

A. Coal hod; catalogue #4,153; discussion on page 238.
B. Teakettle; catalogue #3,953; discussion on page 238.
C. Sauce pan; catalogue #3,952; discussion on page 240.
D. Sauce pan; catalogue #3,134; discussion on page 240.

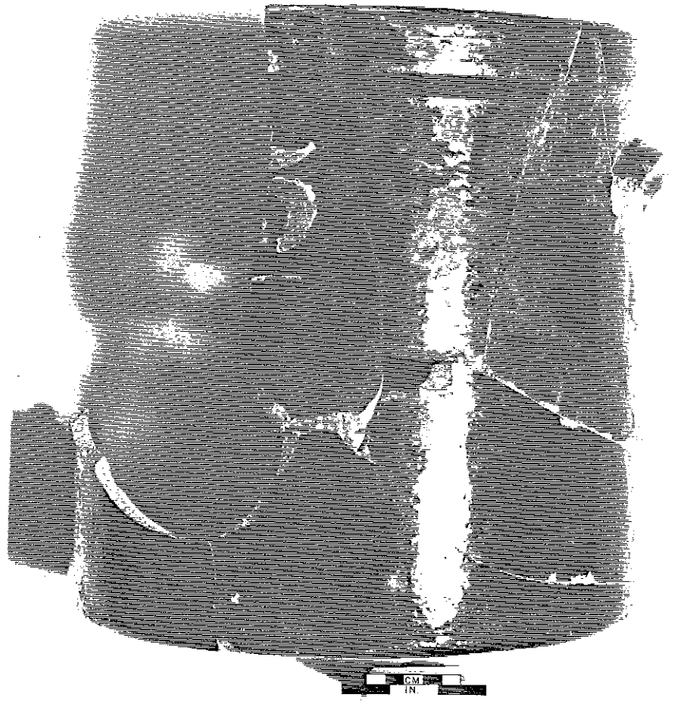

PLATE 80

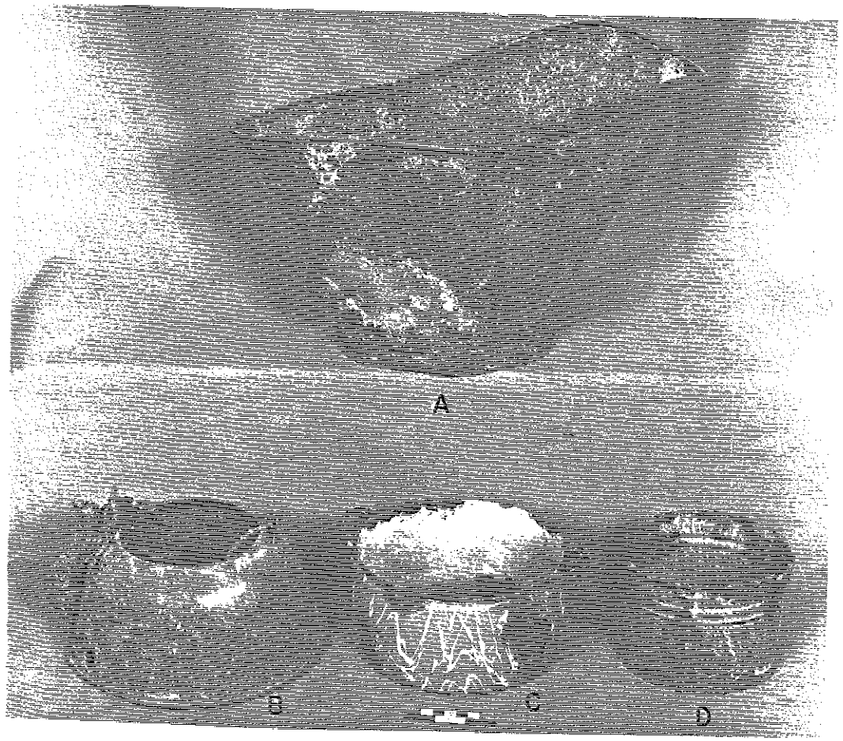

PLATE 81

PLATE 82: Metal Cans and Metal Closures

A. Cylindrical tin can; catalogue #1,023; discussion on page 240.
B. Square tin can; catalogue #7,633; discussion on page 241.
C. Cylindrical tin can with brass shoulder and cap; catalogue #3,860; discussion on page 241.
D. Tubular metal spout; catalogue #5,064; discussion on page 241.
E. Perforated metal cap; catalogue #10,923; discussion on page 241.

PLATE 83: Stove Part, Lid Lifter, Meat and Pot Hooks

A. Cast iron stove part; catalogue #5,062; discussion on page 243.
B. Cast iron lid lifter; catalogue #5,829; discussion on page 243.
C. Pot hook; catalogue #4,315; discussion on page 243.
D. Meat hook; catalogue #25,644; discussion on page 244.

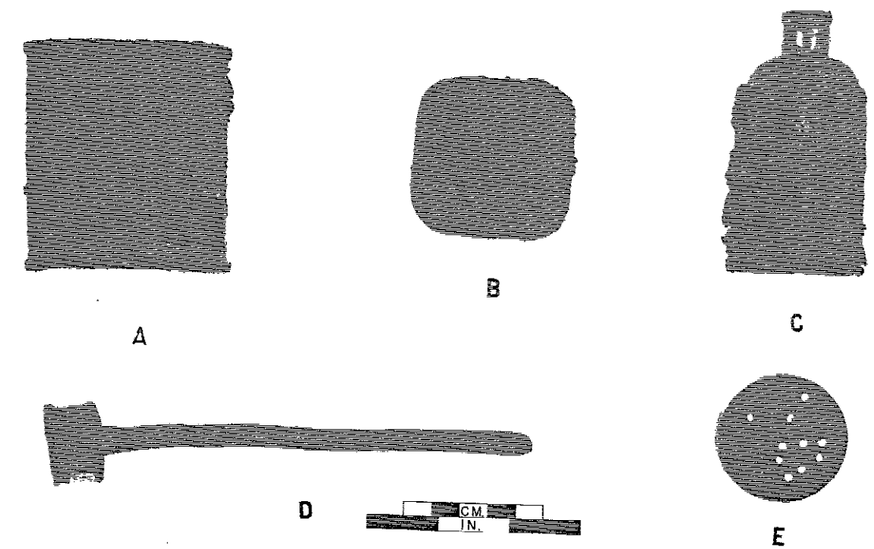

PLATE 82

PLATE 83

PLATE 86: Tools

A. C-clamp; catalogue #4,318; discussion on page 253.
B. Wrench with spud; catalogue #6,698; discussion on page 254.
C. Open end wrench; catalogue #32,031; discussion on page 254.
D. Section of metal rake; catalogue #4,357; discussion on page 255.
E. Mower blade; catalogue #25,541; discussion on page 256.
F. Paint brush in crushed tin can; catalogue #12,590; discussion on page 256.
G. Tip end of branding iron; catalogue #5,588; discussion on page 256.

PLATE 87: Nails and Spikes

A. Large square spike, T-headed, hand-wrought; catalogue #3,052; discussion on page 258.
B. Square cut spike; catalogue #4,557; discussion on page 258.
C. Square spike, hand-wrought; catalogue #26,027; discussion on page 258.
D. Square cut spike; catalogue #7,301; discussion on page 258.
E. Square nail, hand-wrought; catalogue #2,856; discussion on page 258.
F. Square cut nail; catalogue #23,904; discussion on page 258.
G. Square nail with T-head, hand-wrought; catalogue #726; discussion on page 258.
H. Square spike, L-head, hand-wrought (?); catalogue #2,858; discussion on page 258.
I. Square cut nail, T-head, iron core with nonferrous metal covering; catalogue #28,907; discussion on page 258.

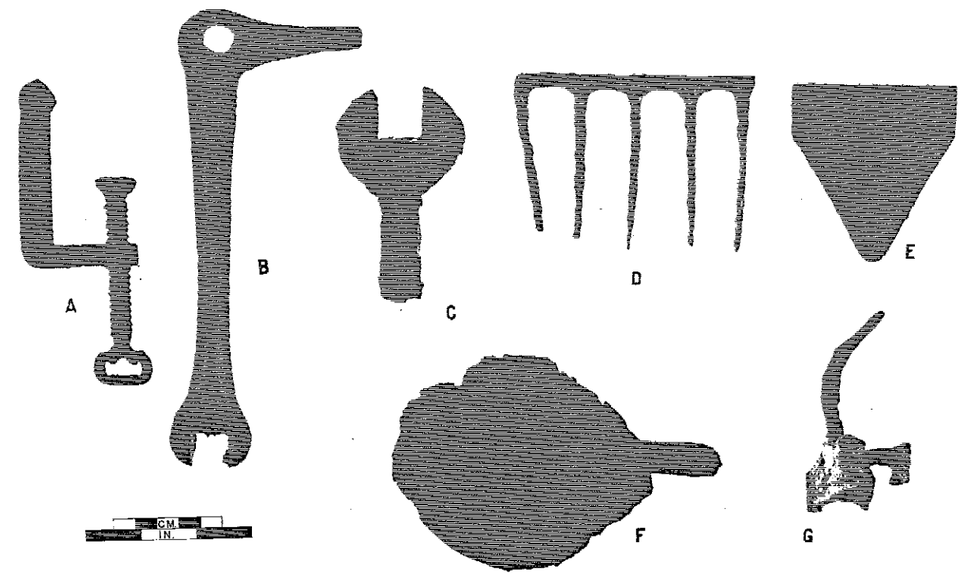

PLATE 86

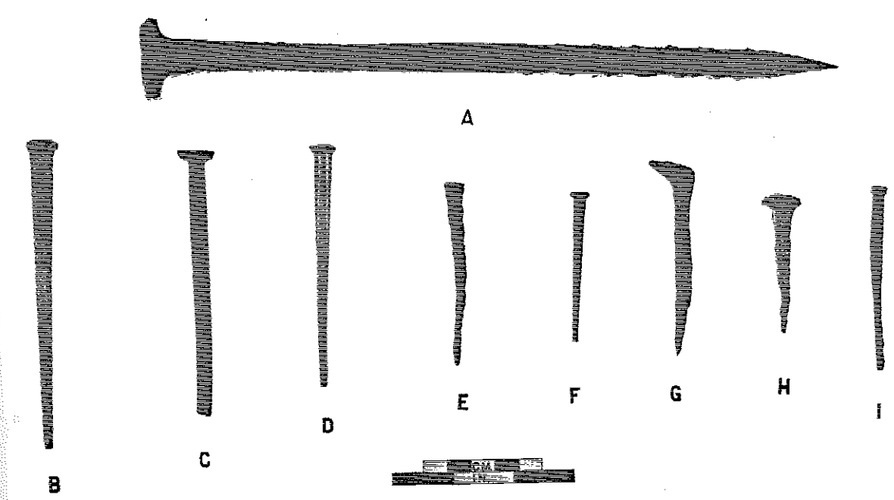

PLATE 87

PLATE 88: Building and Construction Hardware

A. Iron staple; catalogue #25,634; discussion on page 258.
B. Iron staple; catalogue #23,357; discussion on page 258.
C. Iron washer; catalogue #25,121; discussion on page 259.
D. Copper or brass washer; catalogue #7,748; discussion on page 259.
E. Nut and bolt; catalogue #2,726; discussion on page 259.
F. Twisted iron wire; catalogue #28,274; discussion on page 260.
G. Spring; catalogue #36,505; discussion on page 260.
H. Chain; catalogue #26,071; discussion on page 261.
I. Chain; catalogue #2,857; discussion on page 261.

PLATE 89: Hinges

A. Double-ended strap hinge; catalogue #25,122; discussion on page 261.
B. T-hinge; catalogue #5,542; discussion on page 261.
C. Butt hinge; catalogue #24,265; discussion on page 261.
D. Cabinet butt hinge; catalogue #25,882; discussion on page 261.
E. Hinge pin; catalogue #26,110; discussion on page 262.
F. Brass pin; catalogue #12,789; discussion on page 262.
G. Pintle hinge; catalogue #25,158; discussion on page 262.
H. Pintle hinge; catalogue #4,704; discussion on page 262.
I. Shutter hinge; catalogue #2,524; discussion on page 262.
J. Cupboard or window catch; catalogue #34,462; discussion on page 262.

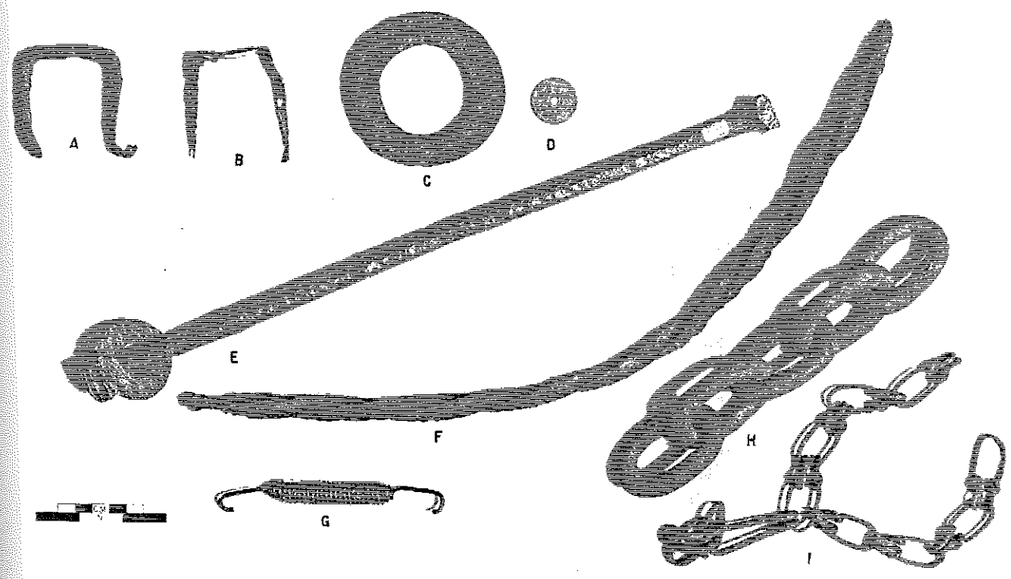

PLATE 88

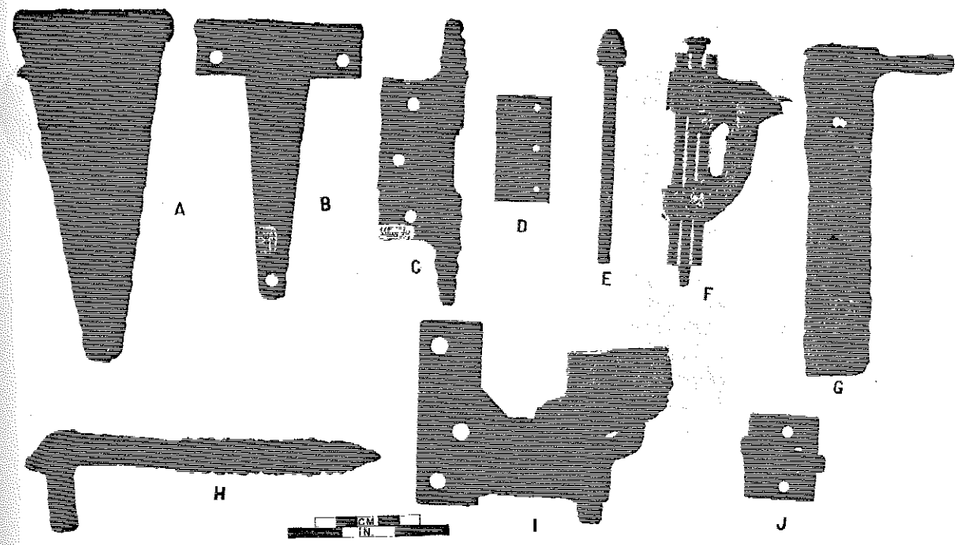

PLATE 89

PLATE 90: Handles and Pulls from Chests and Drawers

A. Brass handle; catalogue #35,353; discussion on page 263.
B. Iron handle; catalogue #4,145; discussion on page 263.
C. Flush type handle; catalogue #6,950; discussion on page 263.
D. Glass pull; catalogue #2,719; discussion on page 264.
E. Ceramic pull; catalogue #3,709; discussion on page 264.
F. Harness hook; catalogue #25,643; discussion on page 264.
G. Coat hook; catalogue #28,753; discussion on page 264.
H. Ceramic caster; catalogue #5,016; discussion on page 264.
I. Caster frame; catalogue #9,338; discussion on page 264.

PLATE 91: Locks and Lock Parts

A. Padlock, marked on obverse face "EXCELSIOR 6 LEVER"; catalogue #5,735; discussion on page 265.
B. Padlock; catalogue #36,408; discussion on page 265.
C. Rimlock; catalogue #26,277; discussion on page 266.
D. Rimlock bolt; catalogue 6,792; discussion on page 266.
E. Keyhole escutcheon; catalogue #12,824; discussion on page 266.
F. Keyhole escutcheon; catalogue #10,121; discussion on page 266.
G. Mortise lock bolt; catalogue #5,989; discussion on page 266.
H. Mortise lock strike; catalogue #32,696; discussion on page 267.
I. Mortise lock strike; catalogue #8,807; discussion on page 267.
J. Plate escutcheon; catalogue #5,964; discussion on page 267.
K. Barrel bolt; catalogue #8,035; discussion on page 267.

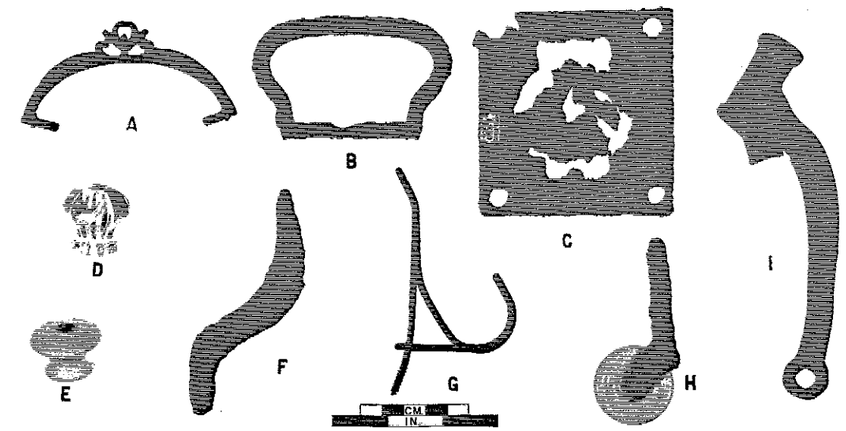

PLATE 90

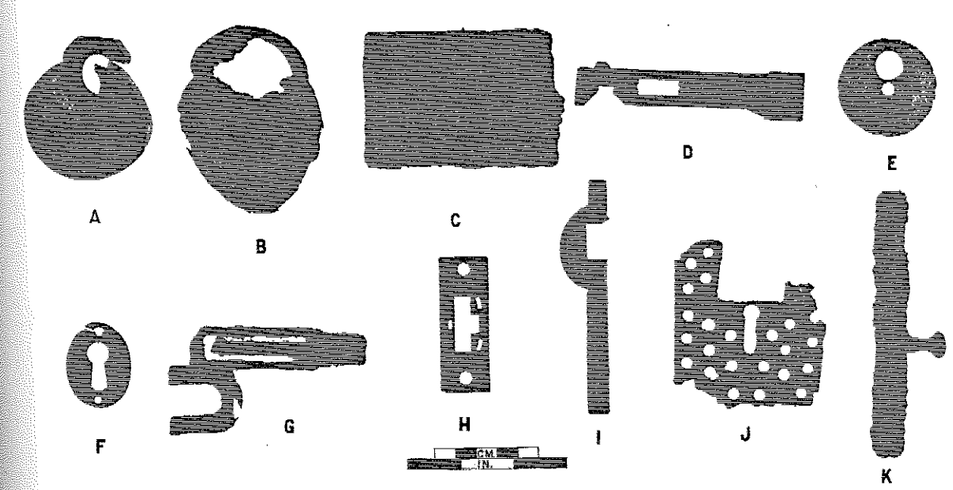

PLATE 91

PLATE 92: Keys, Trunk Hardware, and Roses

A. Brass key; catalogue #14,156; discussion on page 267.
B. Brass key; catalogue #15,564; discussion on page 267.
C. Brass key; catalogue #17,792; discussion on page 267.
D. Iron key; catalogue #25,793; discussion on page 267.
E. Brass clock key; catalogue #17,201; discussion on page 268.
F. Brass drop escutcheon; catalogue #5,059; discussion on page 268.
G. Brass corner plate; catalogue #8,937; discussion on page 269.
H. Door rose; catalogue #23,862; discussion on page 270.

PLATE 93: Building and Construction Hardware

A. Brass sink handle; catalogue #7,796; discussion on page 270.
B. T-handle of iron; catalogue #2,297; discussion on page 270.
C. Gutter hook; catalogue #34,003; discussion on page 270.
D. Section of tongue and groove board; catalogue #17,170; discussion on page 271.
E. Charred wood stake; catalogue #14,172; discussion on page 271.
F. Round wire, eyed stake (picket pin ?); catalogue #14,144; discussion on page 274.
G. Round wire, eyed stake with flat tip; catalogue #5,713; discussion on page 274.
H. Square rod with finial; catalogue #4,319; discussion on page 274.
I. Telegraph key (?); catalogue #12,053; discussion on page 275.
J. Brass object in the shape of a turtle shell; catalogue #23,169; discussion on page 275.

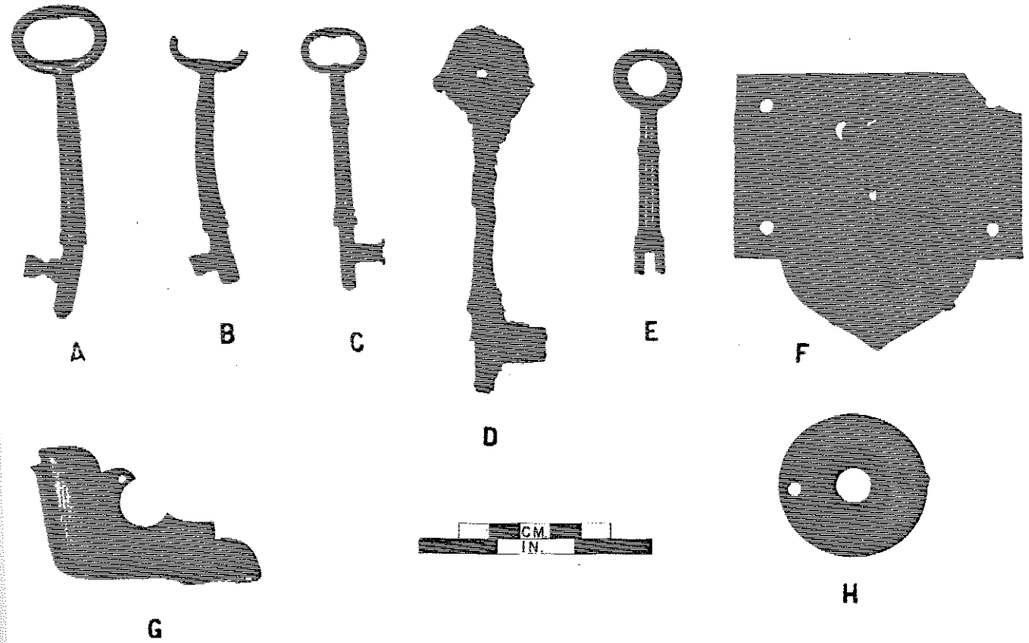

PLATE 92

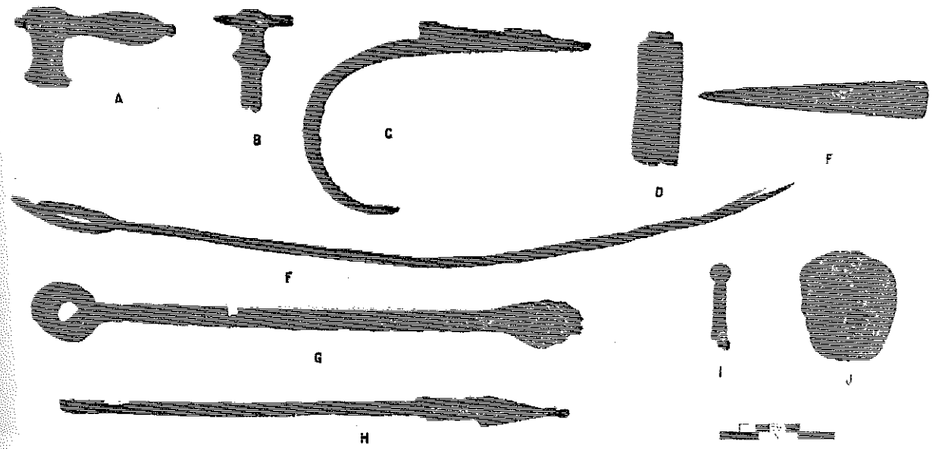

PLATE 93

PLATE 94: Lighting Devices

A. Kerosene lamp burner section; catalogue #25,373; discussion on page 277.
B. Kerosene lamp burner section; catalogue #6,859; discussion on page 277.
C. Kerosene lamp burner section; catalogue #6,860; discussion on page 277.
D. Kerosene lamp burner section; catalogue #8,165; discussion on page 277.
E. Kerosene lamp burner section; catalogue #6,152; discussion on page 277.
F. Bicycle or carriage lamp part; catalogue #5,727; discussion on page 279.
G. L-burner gas cock; catalogue #20,249; discussion on page 280.

PLATE 95: Lighting Devices and Electrical Equipment

A. Glass chimney; catalogue #2,994; discussion on page 279.
B. Glass chimney; catalogue #3,159; discussion on page 279.
C. Glass chimney; catalogue #5,728; discussion on page 279.
D. Glass globe; catalogue #3,152; discussion on page 279.
E. Glass insulator marked "HEMINGRAY No. 12"; catalogue #3,401; discussion no page 281.

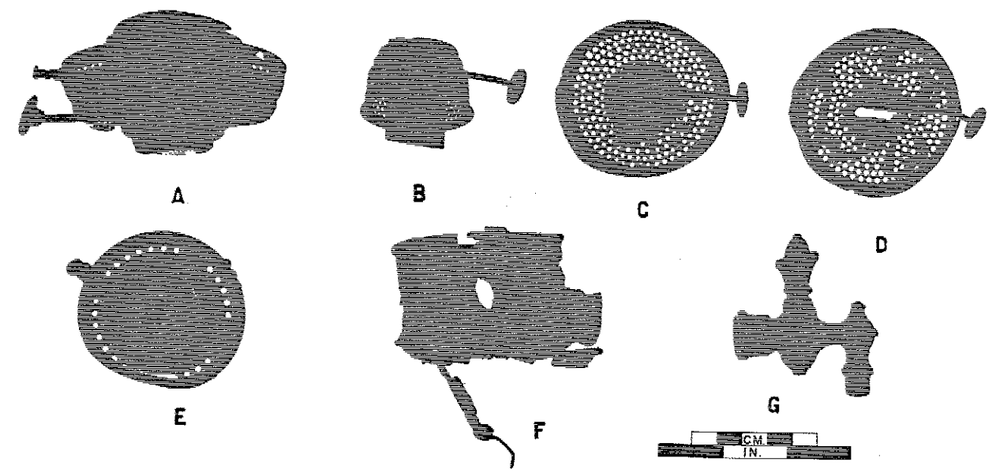

PLATE 94

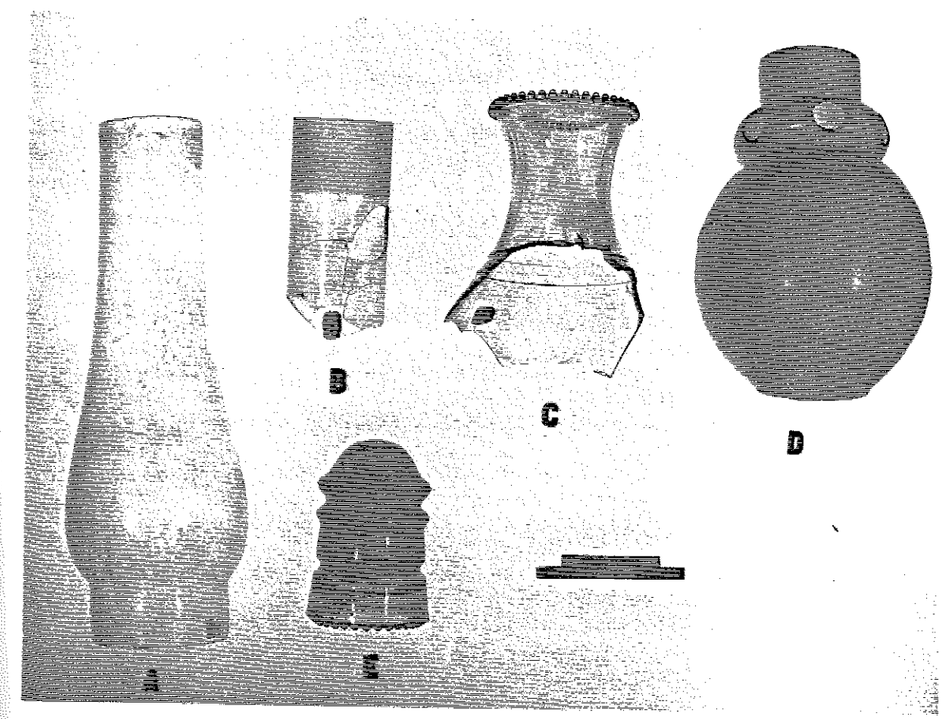

PLATE 95

PLATE 96: Harness, Farrier, and Wagon Parts

A. Ring snaffle bit; catalogue #6,637; discussion on page 283.
B. Medium port, curb, or riding bit; catalogue #13,761; discussion on page 283.
C. Whitman curb bit; catalogue #279; discussion on page 283.
D. Mule port curb bit; catalogue #26,710; discussion on page 284.
E. Cheek piece from a full-cheek driving bit; catalogue #32,511; discussion on page 284.
F. Ladies' stirrup; catalogue #5,944; discussion on page 284.
G. Saddle guard plate; catalogue #33,569; discussion on page 284.
H. Halter ring; catalogue #6,951; discussion on page 285.
I. Harness snap; catalogue #317; discussion on page 285.
J. Brass toggle hook; catalogue #241; discussion on page 285.

PLATE 97: Harness, Farrier, and Wagon Parts

A. Harness backband ring; catalogue #25,640; discussion on page 285.
B. Harness ring; catalogue #2,400; discussion on page 285.
C. Harness ring; catalogue #6,163; discussion on page 286.
D. Roller harness buckle; catalogue #316; discussion on page 286.
E. D harness buckle; catalogue #26,269; discussion on page 286.
F. Rectangular, single-tongue harness buckle; catalogue #232; discussion on page 286.
G. Bar-type harness buckle; catalogue #29,446; discussion on page 286.
H. Steel-driving harness hame; catalogue #5,775; discussion on page 286.
I. Hame knob end; catalogue #2,952; discussion on page 286.
J. Hame hook; catalogue #2,855; discussion on page 287.

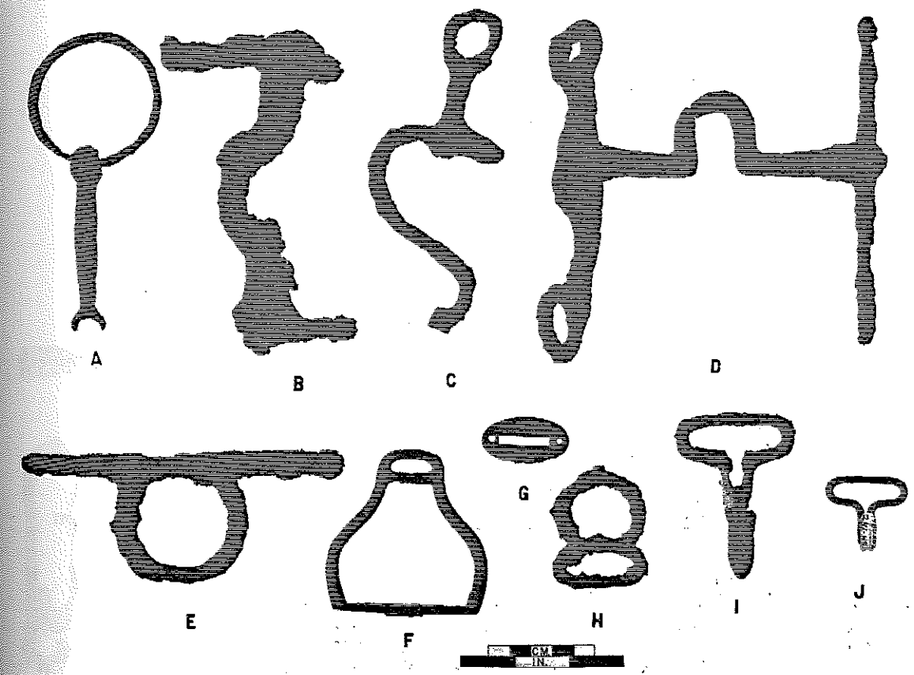

PLATE 96

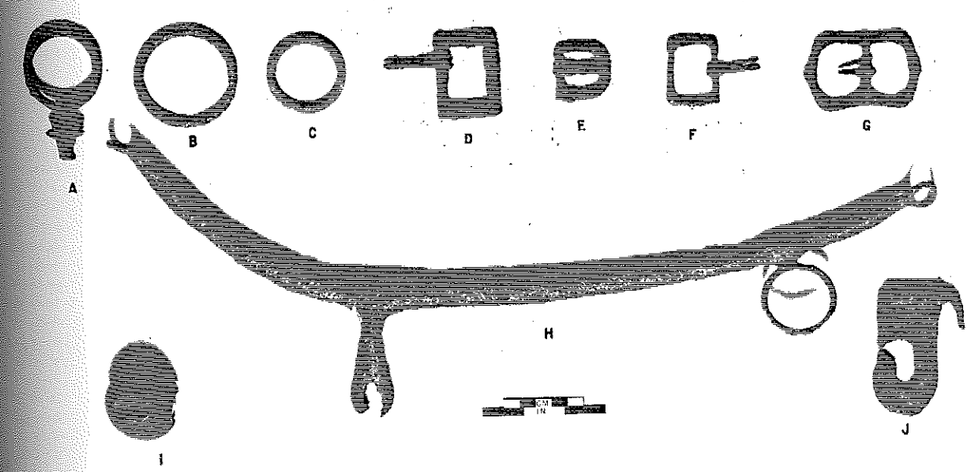

PLATE 97

PLATE 98: Harness, Farrier, and Wagon Parts

A. End ring from tug or trace; catalogue #608; discussion on page 287.
B. Clevis; catalogue #28,013; discussion on page 287.
C. Brake handle; catalogue #5,774; discussion on page 287.
D. Trip latch; catalogue #3,535; discussion on page 287.
E. Hoof pick; catalogue #7,865; discussion on page 288.
F. Horseshoe; catalogue #4,317; discussion on page 288.
G. Muleshoe; catalogue #5,409; discussion on page 288.
H. Muleshoe; catalogue #4,146; discussion on page 288.

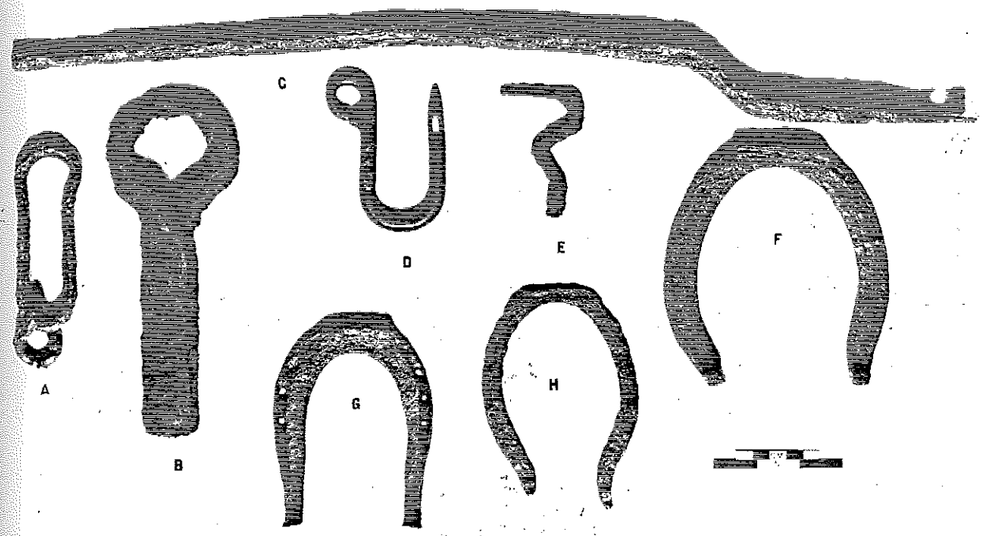

PLATE 98

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