ENTERPRISE POTTERY
650 New York Avenue
Trenton
Mercer County
New Jersey

HAER No. NJ-105

HAER
NJ
11-TRET,
39-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORDS
National Park Service
Northeast Region
Philadelphia Support Office
U.S. Custom House
200 Chestnut Street
Philadelphia, P.A. 19106

HISTORIC AMERICAN ENGINEERING RECORD

ENTERPRISE POTTERY

HAER No. NJ-105

HAER NJ 11-TRET, 39-

Location: 650 New York Avenue
Trenton, Mercer County, New Jersey

UTMs: 18.521655.4453980; 18.521660.4453900;
18.521600.4453840; 18.521575.4453920
Quad: Trenton East, NJ-PA, 1:24:000

Dates of Construction: Ca. 1880; ca. 1900; later additions

Architect: Unknown

Present Owners: Robert J. and Marjorie J. Pierce
420 Paxson Avenue
Hamilton Township, New Jersey 08690

Present Use: Storage and vehicular repair

Significance: The Enterprise Pottery buildings are significant as remnants of a nineteenth and early twentietb century sanitary pottery complex. During the late nineteenth and early twentieth century, Trenton was the nation's largest producer of pottery toilets, sinks, tubs, urinals, and other sanitary ware. Enterprise, one of more than a dozen sanitary potteries in existence in Trenton during this period, was reportedly tbe first purpose-built industrial pottery in the United States specifically set up to manufacture sanitary earthenware.

During the twentieth century, many of the buildings of Trenton's pottery works bave been demolished. As a result, the remaining buildings of the Enterprise Pottery are rare architectural survivals from an industry on wbich Trenton built its reputation as a nationally important manufacturing center during the American Industrial Revolution.

Project Information: A cultural resources investigation for the proposed U.S. Route 1 Southbound exit to New York Avenue resulted in the identification of the former Enterprise Pottery as a contributing component of the Delaware and Raritan Canal Historic District. This district is listed in the New Jersey Register of Historic Places. Although the proposed action would not involve demolition of the existing buildings, it would have an adverse effect on the historic district. To mitigate the adverse effect, an agreement was reached between the New Jersey Department of Transportation and the New Jersey Department of Environmental Protection, stipulating that the two existing buildings of the former Enterprise Pottery be recorded to standards of the Historic American Engineering Record.

Preparers of Documentation: Richard Meyer/Project Manager
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DESCRIPTION OF PROPERTY AND SETTING

The former Enterprise Pottery property is located in an industrial section of northeast Trenton, Mercer County, New Jersey (Figures 1 and 2). The bulk of the site is flat with upward slopes at the north and south edges. Portions of the site are bounded by a chain link fence topped with barbed wire. The site adjoins New York Avenue on the north, the Trenton Expressway (U.S. Route 1) right-of-way on the south, and warehouse properties on the east and west. An asphalt and gravel driveway provides access to the property from New York Avenue.

An undated [possibly 1933] map (Figure 3) of the pottery, located in an assessment file for the property, illustrates the layout of its buildings during the later years of its operation by the Trenton Potteries Company. A group of interconnected masonry buildings occupied much of the site. These interconnected buildings contained nine kilns and housed a boiler and engine shop (Building 33), press shops (buildings 44 and 45A), a mixing room (Building 44A), a slip house (Building 45), a biscuit kiln sbed (Building 46), a green room (buildings 46A and 46B), a dipping room (Building 46C), gloss kiln sbeds (buildings 47, 47A and 47C), biscuit storage (Building 47B), a kiln shed (Building 47D), sagger shops (buildings 47E and 47F), gloss ware rooms (buildings 48 and 48A), and a packing room (Building 48B). Four other detached buildings were also located on the property. The straw house, wagon shed, and storage shed building (buildings 40, 40A and 48B) were located along New York Avenue at the northern edge of the property. A box storage building (Building 41) was located south of the straw house, while a carpenter shop (Building 42) and clay bins (Building 42A) were located east of the large manufacturing complex.

By 1941, many of these buildings had been demolished. An appraiser's report included in the assessment file indicates that the straw house, wagon shed, and storage shed buildings (buildings 40, 40A and 40B) were still standing as was the slip house and press shop (buildings 45, 45A and 44). In addition, the boiler and engine house (Building 43) and the mixing room (Building 44A), both of which adjoined buildings 45, 45A, and 44, were extant.

The property presently contains two buildings: a two story, rectangular, brick, gabled roof straw house and a five story T-shaped, gabled roof, brick manufacturing building, designated on the plot plan (Figure 2) as buildings 45, 45A, and 44. A truck scale is situated to the south of the straw house. Attached to the manufacturing building is a single story, gabled block, formerly used as a boiler and engine bouse, and presently used as storage space. This single story block is presently considered part of the larger manufacturing building. The remainder of the site is divided between overgrown areas and gravel lots used for parking and to store truck trailers.

BACKGROUND HISTORY

The Development of the Pottery Industry in Trenton

During the eighteenth and early nineteenth centuries, Trenton's potters were primarily independent craftspeople who fabricated goods for the local population. These potters relied on the ample clay deposits along Princeton Avenue and along Pond Run east of the city (Denker 1984:57).

The first pottery manufactured in Trenton was coarse red earthenware made from this local clay. Among the city's early potters were James Rhodes, whose "pot-works" in the Bloomsbury section was for sale in 1787; John Morton who had an "earthen-ware manufactory" on the Pennington Road outside Trenton before 1828; and Jacob Haster and Sons who offered "earthenware of the best quality" in 1828. Other early Trenton potters included members of the McCully family. Josepb McCully and his nephew of the same name made lead-glazed red earthenware with slip decoration from 1784 until 1849. Jobn Stiles McCully, son of the younger Joseph, continued the business from 1849 until 1868 (Denker 1984:57).

These early Trenton potters concentrated on the production of functional pottery that lacked tbe fineness of Englisb earthenware. The center of English fine pottery production was Staffordshire, and it was there that techniques for production of modem molded earthenware were developed. Trenton's pottery industry began to successfully compete with the established European potteries when potters, who learned their trade in Staffordshire, began to settle in New Jersey (Denker 1984:58, 60).

In 1852, Charles Hattersley, an English-born cutlery maker who later worked in a Greenpoint, Long Island porcelain works, traveled around the eastern and central United States, searching for a suitable location for a pottery. After visiting sites in New York, Connecticut, New Jersey, Pennsylvania, Delaware and Ohio, be arrived at the conclusion that Trenton was the most desirable site (Anonymous n.d.). He found that the city offered tbe rigbt combination of transportation, raw materials, inexpensive land, and nearby markets to support a commercial pottery (Stem 1994:11, 13).

Railroads, rivers, and canals offered efficient transportation from Trenton to much of the rest of New Jersey, as well as to the Pbiladelphia and New York metropolitan areas. A large, easily accessible clay deposit extended across the central portion of the state from Raritan Bay to Gloucester County. Other necessary raw materials were available eitber from New Jersey or nearby sections of surrounding states. Outside a compact business, government, and industrial district, much of the Trenton area was ligbtly developed, remaining as farm land or country estates. This land, situated in close proximity to transportation corridors, was well-suited for industrial development.

The first large-scale pottery in Trenton was opened by James Yates, an English-born merchant and William Rhodes, the supervisor of a pottery at Bennington, Vermont. The two bought a site on Perry Street from Charles Parker and erected a building to plans drawn by Hattersley (Anonymous n.d.). The pottery began manufacturing porcelain trim for doors and windows.

Hattersley's attempts to establisb Trenton as a pottery manufacturing center slowly bore fruit. By 1860, the city contained four potteries with a total of 155 workers who produced goods valued at $108,000 (Stern 1994:14). Although few in number, Trenton's potteries were much larger than the average United States pottery, wbicb employed nine workers (Stern 1994:15).

Tbe large potteries were established by experienced European potters. John Taylor and Henry Speeler, English and Swiss born potters, moved to Trenton from East Liverpool, Ohio, another early United States pottery center, in 1852-53. They established a brownware pottery in Trenton on a site selected by Hattersley (Anonymous n.d.). This pottery later made yellow and Rockingham ware, as well as a small amount of white granite (Young

1878:459). Richard Millington, John Astbury, and William Young were English-born potters who bought Hattersley's small Trenton pottery in 1854. These potters were the first in Trenton to fabricate cream-colored ware (Young 1878:460).

The pioneer firms expanded rapidly, selling their smaller plants to new entrepreneurs, building new and larger kilns and workrooms on sites adjacent to the Delaware and Raritan Canal, and adding steam power. To add a cachet to their wares, Trenton firms often used counterfeit Staffordshire marks on their products (Stern 1994:16).

The Civil War proved a boon to the Trenton pottery industry. Currency fluctuations brought about by the wartime shift from gold to paper currency made imports more expensive than domestic goods. Seizing the opportunity to provide less expensive alternatives to imported ware, Trenton's potters improved their product lines and focused on desirable wbiteware rather than on lower grades (Stern 1994:16)

The competitive advantage of United States potteries was increased by government trade policy. Congress raised duties on plain imported whiteware from the prewar level of 25 percent to 35 percent in 1862 and 40 percent in 1864. By the end of the war, Trenton's 12 potteries were capturing increasingly large shares of the United States market. In 1870, the city contained 14 potteries that employed 990 workers, an average of 71 workers per firm (Stern 1994:17).

In 1871, Trenton historian John O. Raum noted:

> Tbe pottery business at the present time is more extensively carried on bere than in any other city of the Union. There is no kind of ware known but is manufactured here, from the most common to the finest variety. White ware, equal in quality and finish to any ware in tbis country or Europe, handsomely gilded, with the name of the owners, or with any design fancy may dictate, is manufactured here (Raum 1871:249).

By 1878, Trenton boasted 57 pottery kilns, substantially more than any other United States city (Young 1878:463). By May 1880, 14 potteries were located in Trenton, and seven potteries were located in the adjacent community of Millham (U.S. Census 1880). Tbe largest of these potteries was the Etruria Pottery Company, baving $180,000 in invested capital and 200 employees. During the year ended in May 1880, this pottery produced goods valued at $180,000. In the 1879-1880 year, Trenton potteries represented a total of $1,450,000 in invested capital and employed a total of 2,062 workers. Millham's potteries represented approximately $400,000 in invested capital and employed 771 workers (U.S. Census 1880).

Some of the city's potteries were owned by skilled potters. Others were formed by local capitalists who hired skilled potters as managers. Some potteries were started by speculators wbo remained in the industry for only a short time, erecting the factory and then selling it to other entrepreneurs. The direct profits from production represented only a small portion of the financial lure for some of these investors. They also purchased or owned land near the potteries, started land companies, and sold and rented lots and bouses to employees of the potteries (Stern 1986:170-174).

Pottery employees were drawn from many sources. Skilled workers migrated to Trenton from other American potteries or from Europe. Other workers grew up with the industry in Trenton, entering employment as young helpers, learning the trade, and becoming journeymen (Stern 1986:258-259). Still others followed their father's trade. The latter was the predominant means of entry in skilled positions such as moldmakers and throwers (Stern 1986:271). Most of the workers in Trenton's potteries prior to 1890 were white, Christian, and of Western European origin or descent (Stern 1986:259).

Pottery employees were predominantly male, although by 1890, women held almost a quarter of all pottery jobs. The pottery industry was the largest employer of women in Trenton at the turn of the twentieth century. Most of

these women were young and unmarried (Stern 1986:274-275). Not all jobs were open to them. While women worked as dippers and printers in other pottery centers, in 1900 only one woman printer was listed in the census, and no women dippers were listed. Women were largely excluded from most skilled positions in Trenton potteries (Stern 1986:276).

The workforce in the potteries was predominantly young. The operatives' mean age ranged from 23 to 28 during the nineteenth century. In 1870, 28 percent of Trenton's pottery workers were children, a figure that fell to only four percent by 1890. As the industry matured and child labor laws were enacted and enforced, the average age of the workforce increased (Stern 1986:277-280).

At the end of the nineteenth century, some of Trenton's potteries sought to solidify and expand their market share by diversification. Ott and Brewer developed a line of art pottery, including statuettes and busts. Other makers diversified into kiln furniture, druggists' stoneware, doorknobs, and porcelain telegraph insulators. By far the most lucrative new product line proved to be sanitary pottery.

Trenton and the Sanitary Pottery Market

Modern urban plumbing and sanitation in the United States had its genesis in the development of public water systems. Among the first major public water systems was New York's, begun with the completion of Croton Aqueduct in 1842. This aqueduct brought water to Manhattan Island from the Croton River in Westchester County, New York (Lupton and Miller 1992:22).

To provide for the disposal of human wastes from homes, the water closet was developed in the 1860s. The closet flushed wastes through pipes to either a public sewer or cesspool (Handlin 1979:459). By the time of the Civil War, water closets were used in substantial numbers of wealthier households throughout the United States (Lupton and Miller 1992:22). But in 1870, it was still estimated that half of the families in rural portions of the United States lacked any sort of toilet facilities. Many houses, especially in cities, had commodes for liquid waste, but even in some of the best homes, it was still necessary to use an outdoor toilet (Handlin 1979:459).

Beginning in the 1870s, plumbing services began to be widely installed in American homes (Handlin 1979:455) as large integrated sewer construction began in many major United States cities (Lupton and Miller 1992:22). As Bayles wrote, by 1879, water closets "have...become the conveniences of nearly all the population of sewer-drained cities." In rural areas, Bayles continued, "their use is limited, except in houses of the better class owned or occupied by people accustomed to the conveniences of town" (Bayles 1879:85).

The installation of indoor plumbing was supported by housing reform organizations in major cities, such as New York. That city's Dwelling Reform Association had as its objective the "provision of better, more commodious and more wholesome homes for the neglected poor...crowded into foul and dirty tenements" (Bayles 1879:10). Still, one writer estimated that in 1882, about 95 percent of the inhabitants of New York were still dependent on outhouses and commodes. It was not until the middle of the 1880s that the water closet began to come into general use in the poorer sections of that city (Maddock 1962:239).

Waterclosets and related household fixtures such as sinks and bathtubs were primarily made of pottery. Together these wares were termed "sanitary pottery." Trenton was in the forefront of sanitary pottery manufacture in the United States. The city's first sanitary pottery manufacturing operation was begun in the 1870s at the instigation of English-born Thomas Maddock.

In 1847, Maddock arrived in New York from Longport, England. He worked initially as a porcelain decorator, the profession for which he was trained. Maddock and countryman William Leigh established the first china decorating business in the United States (Maddock 1962:207). He later decided that sanitary pottery was a facet of the pottery industry with substantial potential for growth (Denker 1984:64).

In 1873, he formed a partnership with the Trenton firm of Millington and Astbury. The company, which became Millington, Astbury and Maddock, had been in existence since 1859. After joining the partnership, Maddock sought to develop an effective method of manufacturing sanitary ware in the United States (Maddock 1962:210).

His first task was to devise a formula for the composition of the clay used to form the body of the ware. He found that too much flint produced cracks, while too much feldspar resulted in a glassy finish that bent and warped in the kiln. The ball clays of the Woodbridge, New Jersey area, commonly used in Trenton pottery manufacture, did not provide a sufficiently heavy body (Myers 1945:176-177). By trial and error, he developed a successful formula.

His second task was to develop techniques for firing large pieces. Workers had to be trained to handle the pottery. Kilnmen had to be instructed in placing the pottery in the kiln and in firing the large vessels. Techniques for glazing the large clumsy shapes had to be developed (Myers 1945:177). By 1874, Maddock had perfected these techniques, and his factory had produced samples of sanitary ware of sufficient quality to be offered for sale (Maddock 1962:211).

Maddock then sought to develop a market for the new product. He brought samples of bis new products to jobbers in New York and Brooklyn (Myers 1945:177). After six months of trying, be received his first order, from Miller and Coates of New York (Maddock 1962:212). After Maddock's initial breakthrough, sanitary pottery rapidly became one of the mainstays of the Trenton pottery industry.

According to Ellen and Bert Decker, during the 1880s all American ceramic bathroom fixtures were made in Trenton (Denker 1984:65). Maddocks's firm was joined in sanitary pottery manufacture by the Trenton Pottery Works, which began manufacturing sanitary ware in 1883; the Enterprise Pottery Company, organized in 1879; the Crescent Pottery, organized in 1883; and the Delaware Pottery Company, organized in 1884 (Maddock 1962:245). By the end of the century, Trenton's products had generally supplanted imported sanitary porcelain in the United States market (Denker 1984:65).

The *Crockery and Glass Journal* estimated in 1893 that imports represented only 10 percent of the total American sanitary pottery sales. This low percentage could be attributed in part to the size and weight of these items, factors that made them expensive to import (Stern 1986:574-575).

Trenton's dominance of the United States sanitary pottery market was protected by both labor and management decisions. Joumeymen sanitary pressers promoted Trenton's monopoly by discouraging their members from migrating to other regions (Stern 1986:575). The sanitary pottery firms formed an association in 1891 with the aims of raising prices and standardizing sizes (Stern 1986:577).

The 1890s also witnessed labor-management conflict in the sanitary potteries. Pressers, who worked in unionized closed sbops, went on strike in 1891 in protest of proposed reductions in piece rates (Stern 1986:580). Approximately 700 to 1,000 workers were affected by the strike. The union's bargaining position was weakened as strikebreakers crossed picket lines, and after a five month strike, the pressers returned. Wage cuts remained, although they were not as deep as originally proposed (Stem 1986:595-596).

Having defeated the pressers' union, manufacturers took increased steps to consolidate market share. The trade association sought to allocate market share of each pottery based on each company's kiln capacity. The sanitary ware industry's first merger followed with the formation of the Trenton Potteries Company (TePeCo) in 1892. This merger combined five companies: the Equitable, Enterprise, Delaware, Crescent and Empire potteries (Stern 1986:600).

Although the capitalists who formed the company sought to consolidate the entire Trenton sanitary pottery industry, a monopoly was not created. The Willet and Maddock families, who both had long histories in the

sanitary trade, refused to sell out (Stern 1986:600). The positive aspects of the merger were commented upon by the *Crockery and Glass Journal*:

> Nothing has ever occurred in the history of Trenton as a pottery town that approaches in importance the organizing of this company, which centralizes and solidifies the interests of five sanitary potteries without becoming in any sense monopolistic (as cited in Stern 1986:602).

By the end of 1892, increased competition from other potteries clouded TePeCo's earnings picture. The firm accused its competitors of price cutting. An 1893 financial depression forced further price cutting, and by 1895 prices had fallen 60 percent from their 1892 levels (Stern 1986:604-605). This price decline was due in substantial part to a decline in new residential construction that led to a decline in demand. It was also due in part to the entry of new sanitary ware firms. Twenty-two firms were established between 1890 and 1900. Of these, six were located outside of the Trenton area (Stern 1986:608-609).

In 1899, Trenton produced 86 percent of the nation's output of sanitary pottery (Stern 1994:128). The city remained the nation's largest pottery center because sanitary ware production had increased dramatically (Stern 1994:125). However, in the first decade of the twentieth century, Trenton's share of the general ware market slipped as a result of labor agreements and antiquated production technology.

In his history of the Trenton pottery industry, Stern describes the pottery industry in the city during the first decade of the twentieth century:

> Half a century after Trenton's pottery industry began, its potteries remained unmechanized, batch-oriented facilities bearing little resemblance to the mechanized, mass production factories of the new public corporations. Pottery manufacture remained an intimate process based on personal control in most shops; workers knew their bosses and vice versa. By 1909 thirty-four Trenton clayshops employed 5,030 wage earners, an increase of 15 percent from 1899, but still only 148 per company. Eleven of fourteen sanitary firms listed in one 1915 guide employed under 250 works, and one employed only 15 workers. The industry giant, Trenton Potteries Company, claimed 850 workers in five potteries, but this meant only 170 on average per plant. John A. Campbell, Tepeco president, knew many employees by name, and the Maddocks maintained decidedly paternalistic relations with their workers (Stern 1994:125).

In the early twentieth century, the New Jersey Bureau of Labor and Industries reported favorably on Trenton's sanitary potteries. They were described as "fine places to work, being almost without exception large roomy buildings, with clean open floors and numerous windows. The floors are kept clean, the sweeping being done thoroughly at night, so that there is never a large accumulation of clay" (Stern 1994:125-126).

Stern noted that sanitary pottery manufacturing depended more on skilled workmen than did the manufacturing of general pottery. About half the workforce of the typical sanitary pottery consisted of pressers. Most of the pottery was produced by hand-pressing in plaster molds. Pressers crafted water closets, tanks and lavatories by working clay into molds and bonding these pieces together with clay strips known as "gooey." Kilnwork was the second largest craft of the sanitary pottery industry. Teams of journeymen led by setters-out placed water closets, bowls, tanks, and lavatories in kilns by first carrying empty saggers up ladders. The ware was then lifted and placed in saggers, which in turn were placed in the kiln in vertical stacks, known as bungs (Stern 1994:127).

Trenton's sanitary pottery market share declined as potteries were established in Indiana, Illinois, West Virginia, Pennsylvania, California, and Canada. These new firms enjoyed cost advantages in serving western markets. Between 1909 and 1912, the city's market share declined from 67 percent to 57 percent (Stern 1994:128-129).

Even as its market share declined, the city's sanitary pottery industry tried a number of different ways to consolidate its share. The Sanitary Potters' Association, an industry group, developed price-fixing techniques, estimating probable monthly sales and parceling the sales among members taking into account factors, including kiln space, capital, type of product, and "time in business" (Stem 1994:130). Other attempts included a short lived Potteries' Selling Company, a coordinated industry response to patent disputes (Stem 1994:131), and a policy of selling only to legitimate jobbers and plumbing goods manufacturers (Stem 1994:132).

Business practices perceived as monopolistic came under increased scrutiny. The Sherman Anti-Trust Act gave the federal government authority to take action against perceived monopolistic practices. In August 1922, a federal grand jury brought indictments against the association for violations of the act, and in April 1923, the association was convicted on two counts. This prosecution hastened the demise of Trenton as a sanitary pottery center (Maddock 1962:322).

The sanitary pottery industry's main competition came from the manufacturers of enameled cast-iron plumbing fixtures. These fixtures were made by companies, such as J. L. Mott of New York, Standard Sanitary of Pittsburgh, and the Kohler Company of Wisconsin. Beginning about 1920, the enameled cast-iron companies bought potteries and soon gained control of the entire plumbing fixture industry (Denker 1984:66).

According to Crumbler, this shift in control can be attributed in part to the antiquated corporate structures of many of the potteries in Trenton. Most of the potteries were family-owned and lacked the technical expertise, financial acumen, and financial resources to introduce new technology. This left the potteries vulnerable to takeover by modern corporations (Crumbler 1989:89).

Crumbler cited as an example the Standard Sanitary Company of Pittsburgh, which originally was a producer of enameled iron plumbing fixtures. Company officials decided that their product line could not compete with vitreous china sanitary ware, a product that was being specified in increasing amounts by architects. Sanitary, which had been formed in 1900 by a merger of several firms, expanded furtber by buying up smaller companies, consolidating their production in its three major plants, and scrapping and selling assets of purchased companies (Crumbler 1989:89).

The Kohler Company acquired the Cochran-Dugan Company of Trenton in 1925. It subsequently built a pottery plant in Kohler, Wisconsin, moved the Trenton machinery to that plant, and sold the Trenton land to the Pennsylvania Railroad (Crumbler 1989:90). The Crane Company of Chicago, owned by friends of Trenton Potteries president John A. Campbell, purchased the latter company in 1924 (Crumbler 1989:90) and continued company operations in Trenton. The American Radiator and Standard Sanitary Company purchased the Maddock brothers pottery (Denker 1984:66), and production was moved to a newly constructed plant located outside Trenton (Crumbler 1989:109).

The Manufacture of Pottery

Each Trenton commercial pottery in operation during the late nineteenth and early twentieth centuries included several production buildings or a large building with several wings. Larger potteries included separate buildings for specific tasks. These buildings were connected by covered passageways to protect ware as it moved from one area to another (Stem 1986:191-192).

Pottery consisted of three essential components: the plastic, the flux or solvent, and the inert nonplastic or filler. The exact composition of eacb component differed according to the use to whicb the resultant vessel was put. Each component had one essential element: clay for plasticity; feldspar for flux; and flint for filler (Stern 1986:195).

Clay, a hydrous aluminum silicate, provided the primary material of pottery. In making large pieces of pottery, such as plumbing fixtures, it was necessary to include in the body mix a proportion of china clay and a greater

proportion of ball clay. Ball clay was very plastic and high in strength, while china clay was clearer and finer in consistency than ball clay. Initially, clay used in Trenton pottery-making was obtained from a belt that extended across New Jersey from Raritan Bay in the northeast to Gloucester County in the southwest. The best known portion of this clay deposit was a kaolin deposit in Middlesex County that produced approximately 265,000 tons of clay in the 1870s (Nichols 1878:90-91). Later, clay was also obtained from Delaware and Pennsylvania and imported from England (Stern 1986:158, 161). The clay was generally stored in bins or masonry or frame structures at the pottery (Figure 4).

Flint, incorporated in a pulverized state, provided filler material to give a hard, nonbrittle consistency to the fired ware. Feldspar, incorporated in a pulverized state, caused all the ingredients in the mix to fuse together and form a homogenous mass when subjected to high temperatures during firing (Maddock 1962:108-109). Flint and feldspar were purchased from mines and mills in Maryland, Maine, Connecticut, Delaware, and Pennsylvania (Stern 1986:162). The blending of the basic ingredients of the pottery took place in the mixing room (Building 44A in Figure 3). The resulting dry mixture was of a yellowish tint. Oxide of cobalt was often added to change the color from yellowish white to bluish white (Maddock 1910:42).

These materials, as well as the other components of a particular type of pottery, were then combined with water to form a homogeneous mixture. Ingredients were mixed by either a wet or a dry method. In the dry mixing method, the slipmaker mixed dry raw materials together in a large tub or "blunger" (Figure 5). The blunger, measured approximately 10 feet in diameter and six feet deep, was powered by steam. Inside the tub were three cross bars, situated at different heights. A revolving vertical shaft extended up the center of the tub. This shaft had projecting arms, below those fixed in the tub, arranged so that when the shaft was turned the two sets of arms not only stirred the mixture but caused it to turn back upon itself. After about two hours of blunging, the mixing was complete (Maddock 1910:43).

In wet mixing, the slipmaker mixed each separate ingredient with water to a specified liquid weight before combining them (Stern 1986:198). Although ceramicists recommended wet-mixing as the more reliable method, most American ceramics firms relied on dry-mixing until 1915. The latter method required less capital investment (Stern 1986:199). Both mixing processes took place in the slip house or rooms (Building 45 in Figure 3), a facility often equipped with sealed scales to protect the firm's formula (Stern 1986:197-198).

The mixture that resulted from either process was drawn off into a trough in which a large magnet was placed. This magnet drew out any iron particles from the fluid clay, particles that would stain the ware with brown spots (Maddock 1910:44). The trough extended along the head of a frame on which was stretched a silk mesh or lawn (Figure 5) of 140 holes per square inch. This lawn was kept in motion, so that when the clay mixture from the trough passed over it, any coarse particles were retained on the lawn, while the clay mixture dripped through the lawn into a pit beneath. The process took about two hours, and the strained product was known as slip (Maddock 1910:44-45).

The slip was then pumped into agitators or receiving tanks, in which the slip was kept in constant motion to prevent settling. From the receiving tanks, the slip entered the filter press (Figure 6), a machine designed to remove excess water from the mixture. This apparatus was described in a 1910 publication by Thomas Maddock and Sons:

> The "filter press" is a series of iron frames, about two feet square, set vertically, and containing each a canvas bag, fine enough to retain the clay and coarse enough to let water drip through it. Through pipes from the agitator, the slip is pumped into these bags in the frames under hydraulic pressure of sixty to eighty pounds. After about two hours more, the water will have dripped out of the bags, and the clay remaining will have been changed from the fluid to the plastic state. The press is then released, the bags opened, and the sheets of smooth, putty-like clay are rolled up for transportation to the aging cellar (Maddock 1910:45).

In the aging cellar, the clay was kept in darkness and moisture for a period ranging from two weeks (Maddock 1910:45) to a year. The aging allowed for greater evaporation and was supposed to increase the clay's plasticity (Stern 1986:201).

Following aging, additional processing removed residual air bubbles. Bubbles were removed either manually or with machinery. In the manual process, known as wedging, a chunk of clay was cut and divided in half. The two halves were smashed together until all the air was removed. The mechanical alternative, a "pug mill" consisted of large, steam-driven boxes equipped with blunger-like blades to homogenize the clay and remove air from the mix (Figure 7). Many Trenton pottery operators doubted the efficiency of pug mills, and in the early twentieth century, many of the city's potteries still used manual wedging (Stern 1986:202-203).

Pottery vessels were formed by throwing or pressing. Only a small number of sanitary pottery components, such as legs of lavatories, were made by throwing. In throwing, the clay was formed into the desired shape on a potter's wheel (Maddock 1910:49-51).

In pressing, the soft clay was pressed by hand into a mold. This mold was manufactured in two steps. First, a modeler formed an exact sample of the piece to be made using clay (Figure 8). Second, a plaster cast reproduction of the clay model was made (Figure 9) (Maddock 1910:51).

A potter prepared the clay for the presser. He "batted" out a slab of clay, smooth and of even thickness, on his bench. The slab was worked over with a sponge, hard rubber, and a thin steel knife until it was perfectly smooth. The clay was then taken by the presser and pressed and smoothed onto the inside of the mold. The plaster mold absorbed water from the clay, allowing it to be easily removed once forming had been completed (Maddock 1910:53). Beginning in the second decade of the twentieth century, a method of casting sanitary ware was developed that replaced the molding of heavy pieces by hand (Shuman 1958:190).

Prior to the development of casting technology, most items of sanitary pottery required at least several parts, each of which was pressed in its own mold. These parts were stuck together in the form of the original model, using slip and soft wads of clay to seal the joints. To smooth the joints, the surface of the vessel was sponged (Figure 10). The vessel remained in the forming room for a period of four to six weeks. During this time its maker monitored it for cracks or other imperfections. At the end of this time, it was chalk white, indicating that excess moisture had evaporated (Maddock 1910:53, 56, 57).

In some plants, workers took the molded product to dry in the stove room, a facility heated by steam. Following the initial drying, the "green" or unfired ware was taken to the "green room" (Figure 11), a large room fitted with racks to hold the ware (buildings 46A and 46B in Figure 3). In the green room, the pieces were prepared for their first trip to the kiln. This preparation included sorting and inspection (Stern 1986:224), undertaken during a waiting period of about three days (Maddock 1910:57).

Following processing in the green room, the vessel was ready for its first or "biscuit" firing. This initial firing fused the ingredients into a hard body. Saggers, large clay boxes (Figure 12), were used to protect the ware from harmful flames, fumes, and debris in the kilns. These saggers were constructed by taking large slabs of course local clay mixed with grog, or mill-ground broken saggers, and pounding them over a wooden drum mold. The green saggers were dried in a stove room and then fired in biscuit ovens by putting one on top of each stack of filled saggers. Saggers were made in sagger shops (buildings 47E and 47F in Figure 3), while biscuit firing took place in the biscuit kiln shed (Building 46 in Figure 3).

Charles Binns, in his *Story of the Potter*, described the appearance of a pottery kiln. The kiln looked like

> a compromise between a beehive and a champagne bottle.... The oven proper is inside, and consists of a cylindrical chamber about eighteen feet in diameter. The walls are of hardest fire-

> brick built fully two feet thick, and are pierced at regular intervals by the fireplaces or mouths. These, of course, open into the interior of the oven, where the flames and fuel gases are conducted upwards by an enclosing wall called the "bag." The top of the cylinder is domed over and certain outlets are provided for the smoke (As cited in Stern 1986:228).

The biscuit kiln (figures 13 and 14) was heated gradually so as not to unduly stress the pottery. Its temperature rose to 1,500 degrees F in about 24 hours. The increase in temperature then became more rapid, and the kiln achieved a maximum temperature of 2,000 to 2,600 degrees F. During this heating process, kilnmen monitored the kiln through test holes. When sufficient firing was achieved, the contents of the kiln were allowed to cool slowly over a period of about two days (Maddock 1910:61-62).

Kilnmen loaded each oven with 2,000 to 3,000 filled saggers (Figure 15) placed in a special order around the oven. This order reflected the different temperature of each section and the differing temperature needs of each type of vessel (Stern 1986:229). After loading had been completed, the kiln's fitted door was bricked over and covered with plaster. Iron bands were tightened around the shell to prevent the oven from cracking under the fire's pressure (Stern 1986:233).

In larger potteries, a team of laborers removed the fired saggers from the kiln by forming a human chain. After removal from the saggers, the biscuit ware was inspected. The ware was scoured to remove all roughness, and any small cracks that had developed during the initial firing were filled (Figure 16) (Maddock 1910:63). After this process, the ware was designated as first or second quality. The firm mark was stamped on the bottom of the piece. The mark of Enterprise Pottery was simply the name of the company rendered in block letters.

The next step in the manufacturing process was glazing. Each pottery made its own glaze from a combination of flint, feldspar, boracic acid, lead oxide and zinc. These ingredients were melted together to form a glass known as "frit." The frit was then ground with other ingredients, the composition of which depended on the glaze (Stern 1986:237). The glazemaker mixed the milled frit with water in a large tub until it reached a creamy consistency. It was then pumped or ladled through filters into another tub (Figure 17) and carried in buckets to the dipping room (Building 46C in Figure 3).

Smaller pieces of sanitary biscuit ware were immersed in a glaze tub (Figure 18) and were "equally yet thinly coated" (Evans as cited in Stern 1986:239). Larger pieces were coated by painting or pouring of the glaze (Stern 1986:255). Following dipping, filled ware boards were carried into the glost or gloss kiln room or shed (buildings 47, 47A and 47C in Figure 3).

Dipped ware was then placed in the glost kiln. This process was similar to that used in the biscuit kiln with several important differences. Glost kilnsmen coated the insides of their saggers with a glaze or wash to prevent the absorption of glass from the fired ware. The ware was also placed on clay tripods and clay pins were embedded in the sagger's wall. These steps prevented the pieces from touching one another and left only a small mark on the ware (Stern 1986:240). Placing of sanitary ware was especially critical because these large vessels had a tendency to warp if incorrectly placed (Maddock 1910:67). Glost kilns were raised to 1,900 degrees F in less than a day and held there until the glaze melted and fused with the earthenware body. The fire was then withdrawn, and the kiln was allowed to cool (Stern 1986:241).

The fired ware was moved to the glost warehouse or ware rooms for inspection, cleaning, grading and storage (buildings 48 and 48A in Figure 3). The ware was selected from this room and packed for shipment in the packing room (Building 48B in Figure 3).

Packing of pottery required substantial skill because the vessels had to be sufficiently cushioned to withstand rough treatment during shipment to the customer. Maddock described the packing process for sanitary pottery:

> Barrels, casks, hogsheads, and bentwood crates, in two sizes, large and small, were used in which to pack pottery items. These packages were lined with straw; the piece or pieces were each wrapped with straw and then straw was stuffed between the pieces and finally straw was forced into every vacant space to prevent any movement of the contents while in transit. With reasonable handling such packages would carry their contents safely to destination (Maddock 1962:228).

The straw used to pack each crate was stored in the straw house (Building 40 in Figure 3). Most shops used special nail-less crates made from split birch or pine saplings (Stern 1986:250).

Because of the substantial packing and shipping costs, most sanitary pottery manufacturers confined their sales to wholesalers who could buy in railroad carload lots. Approximately 500 water closets could be packed into a standard railroad freight car (Maddock 1962:229). Most potteries, including Enterprise, had access to rail siding, allowing boxed vessels to be easily loaded for shipment.

The Enterprise Pottery Company

The Enterprise Pottery Company manufactured earthenware closets, druggists' vitrified ware, plumbers' earthenware, stationary washbasins, decorated toilet ware, and other general earthenware (Harney 1929). Its products were shipped primarily to New York and Philadelphia. By 1883, its manufacturing capacity had reached $125,000 annually, and it employed 50 workers (Woodward and Hageman 1883:860).

The pottery was one of several established in Millham. Millbam was originally part of the city of Trenton but was annexed by Lawrence Township in 1844. In 1882, Millbam became an independent jurisdiction, and six years later it was reincorporated into Trenton (Trenton n.d.:41).

The area known as Millham began development as a residential and industrial community in the early nineteenth century, taking advantage of water power provided by the Assunpink Creek and transportation provided by the Delaware and Raritan Canal. The canal area's role as a transportation corridor increased with the construction of the Camden and Amboy Railroad (Trenton n.d.:42).

Until well into tbe nineteenth century, Millham was largely comprised of large estates. By 1850, land developers began to subdivide some of these estates into building lots (Trenton n.d.:43). The subdivision of the area increased as the result of activity by two real estate development firms, the East Trenton Land and Building Company and the Enterprise Land Company of New Jersey. The former firm was incorporated in 1866, and the latter in 1873 (Woodward and Hageman 1883:859). The site of the Enterprise Pottery was located on land subdivided by the Enterprise Land Company. Enterprise Land Company obtained its boldings in 1873 when it purchased a total of 228 acres in four tracts for $80,000 from the Ricbey and Moore families (Mercer County Deed Book 98:41, August 16, 1873).

Potteries took advantage of tbe township's proximity to Trenton and its excellent railroad connections. Soon potteries became Millham's leading industry. The first pottery to be established there was located in a converted distillery operated by Messrs. I & C. Moore. The Moores were succeeded by Forman and Brewer. Other Millbam potteries included the East Trenton Porcelain Company, the American Crockery Company and tbe Franklin Pottery Company (Woodward and Hageman 1883:860).

By the 1880s, these potteries dominated the landscape of the area. A visitor described bis first impressions of this section in *Harper's New Monthly* magazine:

> As the train enters the suburbs one catches a glimpse of groups of substantial new buildings, whose ruddy, flamed-colored cones proclaim the great industry is striking its roots outward from

> the center with its crowded factories and its networks of railways and canals. Reaching the eastern portion of the city, one is surrounded by telling signs of the peculiar activity which has given this region its title of the Staffordshire of America. On every side may be seen smoking chimneys and kilns looming above tall modern factories or long, low, weather-stained buildings, lumbering carts filled with casks and crates of finished wares (as cited in Trenton n.d.:42).

The property on which the Enterprise Pottery was constructed historically consisted of three adjoining parcels. Two of these parcels were formerly the site of the New Jersey Fire Brick and Clay Company, also known as Phillips' Fire Brick Works (Everts and Stewart 1875:22) This company sold its property to pay debts in 1875. The purchaser was John Van der Veer (Mercer County Deed Book 123:365, January 4, 1875). At tbe time of its sale, the land was described as containing "brick and frame buildings and firebrick buildings with the Steam Engine boiler, line of Shafting, tubs, boards, fixtures and machinery of all kinds."

Four years later, Van der Veer sold the property to William N. Weidner of Trenton for $10 and a $7,000 mortgage (Mercer County Deed Book 123:368, October 23, 1879). Just four days later, Weidner sold the same property to E. Mercer and Rebecca Shreve on October 27, 1879 for $1 and the assumption of a $7,000 mortgage (Mercer County Deed Book 123:67, October 27, 1879). The third parcel, consisting of the western portion of the property, was sold to the Shreves by the Enterprise Land Company in 1880 for $2,000 (Mercer County Deed Book 125:186, February 23, 1880). All three parcels were sold by the Shreves to Charles Henry Skirm, founder of the Enterprise Pottery Company, on January 1, 1881 for $40,000 and the assumption of a $15,000 debt to the Trustees of the Public Schools of the State of New Jersey (Mercer County Deed Book 127:387, January 1, 1881). Later the same month, Skirm sold a balf interest in the property, presumably to raise the capital necessary for operation of the party. The purchaser, Samuel D. Oliphant of Chambersburg, New Jersey, paid $20,000 for the half interest (Mercer County Deed Book 127:421, January 12, 1881). In August 1882, Oliphant sold bis half interest in the property back to Skirm for $14,000 (Mercer County Deed Book 146:143, August 25, 1882). Skirm subsequently sold quarter sbares in the property to Richard Brian, Andrew Cochran, and William H. Umpleby for $10,375 each (Mercer County Deed Book 146:146, 148, 151, August 25, 1882).

The Enterprise Pottery Company was a partnership formed by several local businessmen. According to Lee, its founders were Richard Brian, W. H. Umpleby, Charles H. Skirm, and George Knowles (Lee 1907:I:107), while Maddock cited Andrew Cochran as the fourth partner along with Brian, Umpleby, and Skirm (Maddock 1962:236). Cochran and Umpleby were both listed as potters in Trenton city directories (Fitzgerald 1870s). Cochran had several plumbing related patents to his name, including one for an improved pipe coupling for a water closet (Cochran 1890) and another for a flushing device for water closet bowls (Cochran 1892). He was later affiliated with Trenton's Equitable Pottery, founded in 1888 (Maddock 1910:27), and Keystone Pottery, founded in 1892 (Maddock 1962:267). He subsequently purcbased the Brian Pottery Company, whicb was later purcbased by the Kohler Company (Maddock 1962:270).

William H. Umpleby may have been responsible for the design of sanitary ware produced by Enterprise. During the 1880s, he received three patents for water closet design. His first, received on July 3, 1883, involved the design of the water closet sluice or water pipe so that a water tight joint could be made without the use of cement (Umpleby 1883). Three years later, he received two patents for improvements in the means of ventilating a water closet (Umpleby 1886).

Skirm, wbo served as president and treasurer of the firm (Fitzgerald 1886:217), was born in Ewing Township, New Jersey on July 29, 1833 (Harney 1929). Skirm's early business career bas not been documented. In addition to his role as a partner in Enterprise, he served as a member of the Trenton Common Council from 1866 to 1868, as postmaster of Trenton from 1872 to 1876, as Mercer County Sheriff from 1879 to 1882, and as president of the Trenton Water Association from 1894 to 1900 (Lee 1907: I:248). Richard Brian was a potter by trade. He was bom in Longton, Staffordshire, England on April 25, 1835. Orphaned at an early age, be became a potter's apprentice while a boy. Upon completion of his apprenticeship, be entered the employ of Stokes and Billingham,

potters, and worked as a china dipper and bisque fireman. In 1870, he emigrated to the United States. After landing in New York, he traveled to Trenton. He was initially employed in Trenton by Joseph Moore, potter, and subsequently by Millington and Astbury. After working for the firm for nine years, he collaborated in the formation of Enterprise Pottery. After the sale of Enterprise in 1891, Brian retired from active business (Lee 1907:I:107). He later joined with his sons James and George in the establishment of the Brian Pottery Company, founded in 1898 in Trenton (Maddock 1962:270).

Samuel D. Oliphant, Skirm's first partner, later served as secretary of the Enterprise Pottery Company. He was described as being "held in honor for his attainments as a lawyer, his usefulness in various important official positions, and his brilliant record as a soldier during the war of the Rebellion" (Lee 1907:230). A native of Franklin Township, Fayette County, Pennsylvania, he attended Jefferson College in Cannonsburg, Pennsylvania. He subsequently graduated from Harvard Law School and began work as a lawyer. He entered the Union Army during the Civil War as a colonel and was discharged in July 1866, having reached the rank of general (Lee 1907:232). He moved to New Jersey after the conclusion of his military service and received an appointment as clerk for the district of New Jersey, a position he held until his death in 1903 (Lee 1907:233).

The Enterprise Pottery Company was profiled in an 1887 publication. It was then described as "one of the most reliable houses in Trenton, manufacturers of sanitary earthenware exclusively" (Anonymous 1887:280). The partners, listed as Messrs. Skirm, Umpleby and Brian, were described as "thoroughly practical men, fully conversant with every detail of this...business and the requirements of plumbers and sanitary engineers" (Anonymous 1887:280).

The "spacious" premises contained 350 foot frontage on the Delaware and Raritan Canal and 300 foot frontage on the railroad and included "several extensive buildings fully supplied with the latest improved appliances, apparatus and machinery for the successful conduct of the business" (Anonymous 1887:280). The plant was powered by a 50 horsepower steam engine and employed 120 workers. It contained five 22 by 6 foot kilns and produced an average of $200,000 in goods annually. Its products included "oval washout closets, tall f.r. hoppers, Philadelphia f.r. hoppers, traps, urinals, bidet pans, ship closet basins, plug basins, closet bowls and other sanitary specialties" (Anonymous 1887:280). The profile concluded that the company's products were "absolutely unrivaled for utility, finish, superiority of design, quality and excellence" and the prices quoted were "as low as the lowest" (Anonymous 1887:280).

The first dated plan of the Enterprise Pottery Company plant appeared on an 1890 Sanborn fire insurance map (Figure 19). At that time, most of the property was covered by a series of interconnected one to three story buildings housing the kilns and other fabrication shops. Unconnected buildings included a single story clay shed, located at the end of a rail spur; two, two story straw barns, located near the north end of the property; one large one and two story shed and one smaller single story shed, located along the New York Avenue edge of the property; and a one and two story carpenter and fitting shop (Sanborn 1890). Comparison of the 1890 map with later maps (Sanborn 1908; 1927; 1963) indicates that a three story portion of the interconnected buildings may have been modified to form the present main block of the manufacturing building.

Beginning in the 1890s, five sanitary pottery makers in Trenton, including Enterprise, were consolidated in order to attempt to protect the local market share. The combined firm, established with a capital stock of $3,000,000, was called the Trenton Potteries Company, later Tepeco. It initially included the Empire, Enterprise, Delaware, Equitable, and Crescent potteries (Barber 1893:242-243).

The Enterprise Pottery property was acquired by the Trenton Potteries Company in two transactions on June 16, 1892. In the first, Charles H. and Elizabeth D. Skirm, Richard and Hannah Brian, and William H. and Mary J. Umpleby sold the three parcels containing the pottery to William S. Hancock for $1 and other valuable considerations (Mercer County Deed Book 183:546, June 16, 1892). William S. Hancock then sold the parcels to the Trenton Potteries Company for $1 and other valuable considerations (Mercer County Deed Book 183:556, June

16, 1892). Hancock, who had organized the Crescent Pottery in 1883 (Maddock 1962:245), later served as vice-president of Trenton Potteries (Walker et al. 1929:530).

An illustration in an 1899 publication depicts the appearance of the pottery at that time (Figure 20). The major buildings, multi-story brick, gabled roof structures are similar to the plans shown on the 1890 Sanborn map. The connecting corridors between the buildings are not shown, nor are several of the single story detached buildings (Anonymous 1899). This may have been due to artistic license on the part of the engraver of the vignette.

By 1901, Tepeco accounted for at least 40 percent of sanitary manufacture in the city (Stern 1994:130). Its products had received many awards, including the Gold Medal for Bathroom Appliances at the 1898 Trans-Mississippi and International Exposition in Omaha; the Gold Medal for Sanitary Earthenware and Plumbers' Specialties at the 1899 National Export Exposition in Philadelphia; a gold medal at the Exposition Universelle at Paris in 1900; and the Gold Medal for Plumbers' Earthenware, Solid Porcelain and Vitreous China at the Pan American Exposition in Buffalo in 1901. In 1904, the company received the First Prize and Gold Medal for "Sanitary Pottery Plumbing Fixtures" at the Louisiana Purchase Exposition in St. Louis (Trenton Potteries 1913:vi).

A Sanborn map of 1908 illustrated the footprint of the plant at that time. The main block of the plant retained a configuration similar to that of 1890. The major differences included the construction of a single story brick ell in the vicinity of the present three story ell of the manufacturing building, and the construction of a two story straw storage building along the New York Avenue side of the property. This straw storage building, though altered, still stands. The single story brick ell was used for clay storage and replaced the clay shed formerly used for that purpose (Sanborn 1908).

By the end of the first decade of the twentieth century, Trenton Potteries operated six plants in the city, designated as Crescent, Delaware, Empire, Enterprise, Equitable, and Ideal. Its products included "Ideal" porcelain ware bathtubs, showers, lavatories, drinking fountains, sinks, laundry tubs and urinal stalls; "Impervio" vitreous china ware lavatories; "Vitreous China" sanitary ware closets, urinals, basins, drinking fountains, and closet flush tanks; and "White Bone China" bathroom and toilet specialties (Trenton Potteries 1913:v). Samples of TePeCo's products are depicted in excerpts from company catalogs contained as an appendix to this report.

By 1927, additional facilities had been constructed at the plant. The wing that previously was used for coal storage had been either enlarged or rebuilt to its present four story height. It, as well as the main block of the building, was designated as manufacturing space. A brick single story mixing room had been added north of the wing. Concrete clay bins and a two story carpenter shop had been constructed east of the main block of the plant (Sanborn 1927).

By 1941, the Trenton Potteries Company no longer needed two of its properties, the Delaware Pottery, located on Prospect Street, and the Enterprise Pottery, located on New York Avenue (Trenton Tax Assessment file, April 5, 1941). In August 1941, the company sold the two adjoining tracts containing the former pottery buildings on New York Avenue to Central Jersey Wholesale Supply Company for $21,250 (Mercer County Deed Book 820:359, August 1, 1941). At the time of the sale of the property, Forrest R. Weiant was leasing the straw house on a month-to-month basis, and Baldwin-Hill Company, a distributor of insulation materials, had leased the entire second floor of the Slip House and Press Shop building (Mercer County Deed Book 820:360, August 1, 1941).

A 1963 Sanborn fire insurance map of the property shows buildings at the north and south ends. At the north end, adjacent to New York Avenue, was a two story masonry building used for storage. A vacant single story building, roughly square in plan, was situated southwest of the masonry building. A four story, masonry, T-shaped building was located adjacent to the Trenton Freeway at the south end of the property. This building was used for storage. A railroad spur extended to the main block of the building along the south wall of the ell. On the south side of the spur, extending from the south end of the east wall of the main block of the building, were two single story

masonry blocks that contained an engine room and a boiler room (Sanborn 1963). In 1971 the property was acquired by its present owners, Robert J. and Marjorie J. Pierce, for $65,000 (Mercer County Deed Book 1877:702, March 31, 1971).

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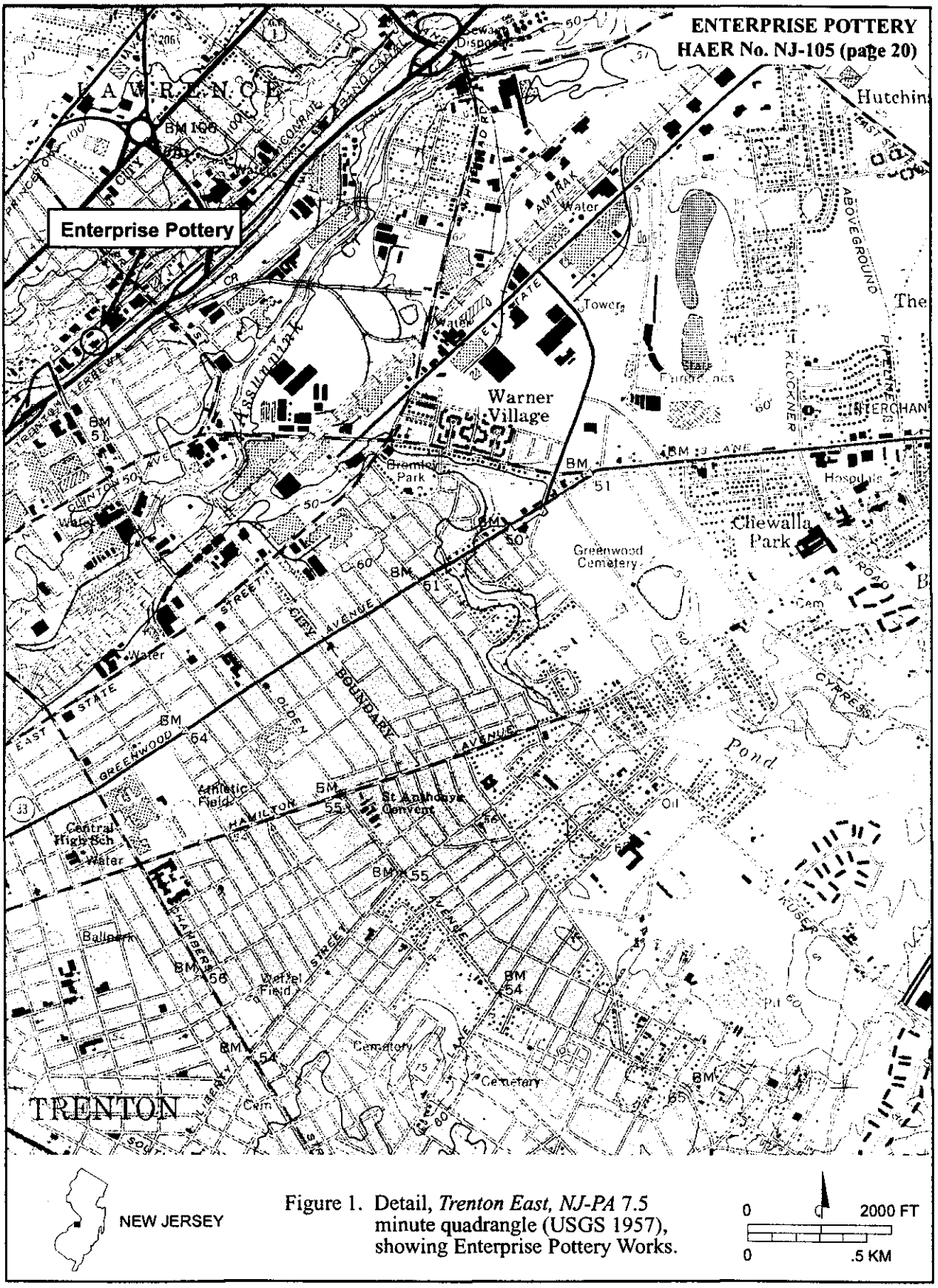


Figure 1. Detail, *Trenton East, NJ-PA* 7.5 minute quadrangle (USGS 1957), showing Enterprise Pottery Works.

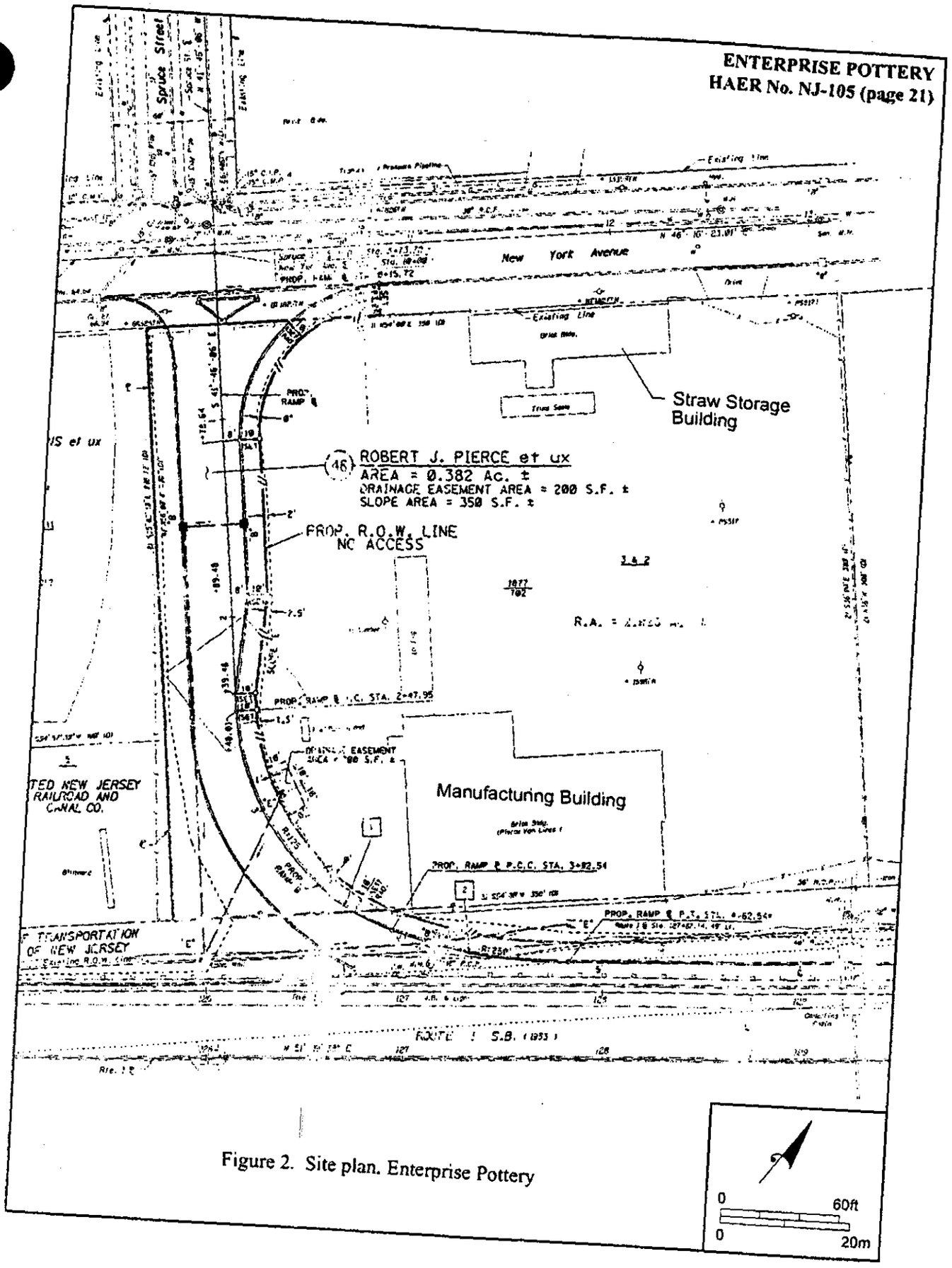


Figure 2. Site plan. Enterprise Pottery

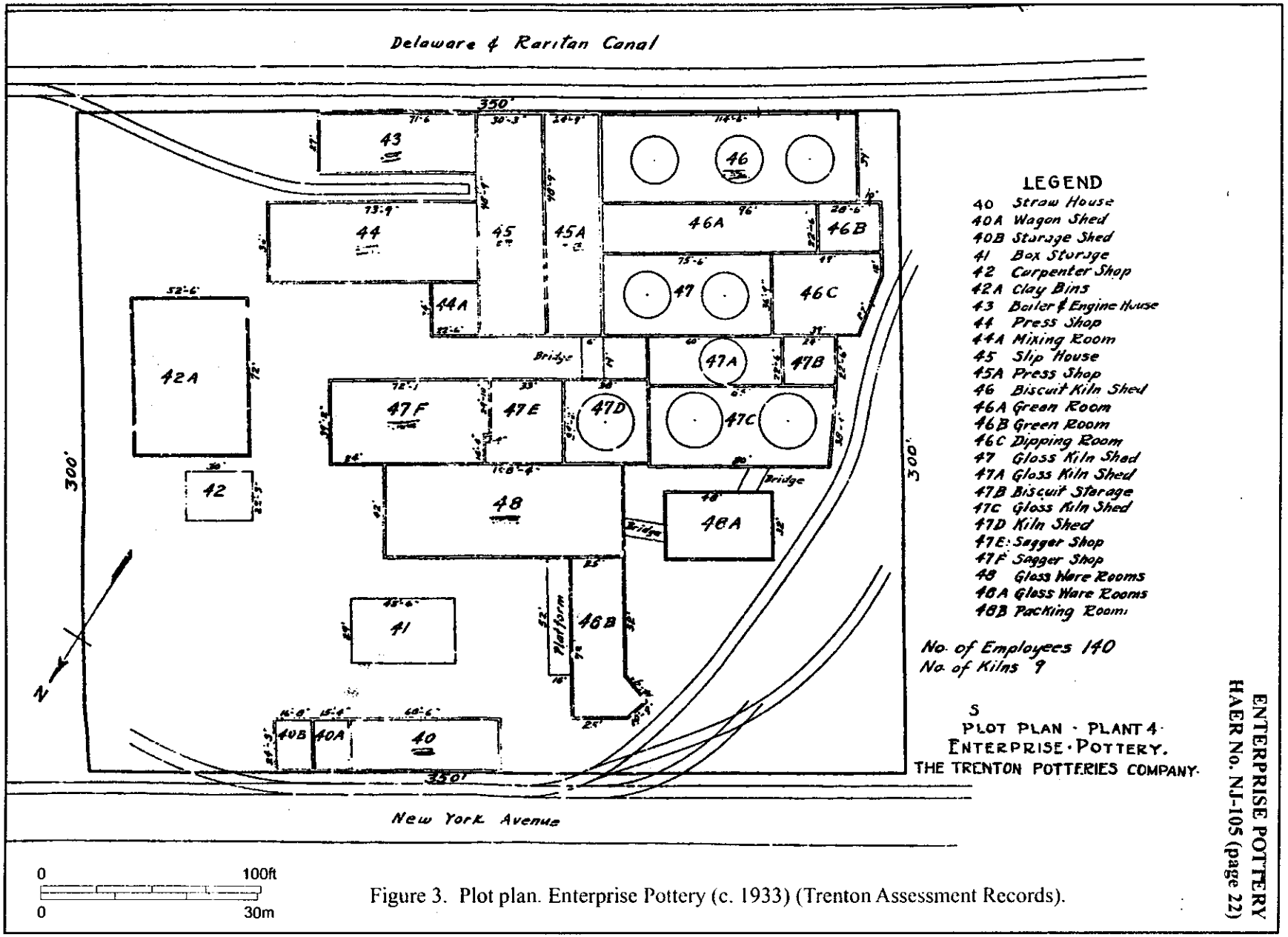


Figure 3. Plot plan. Enterprise Pottery (c. 1933) (Trenton Assessment Records).

Figure 4. Clay bins (Maddock 1910).

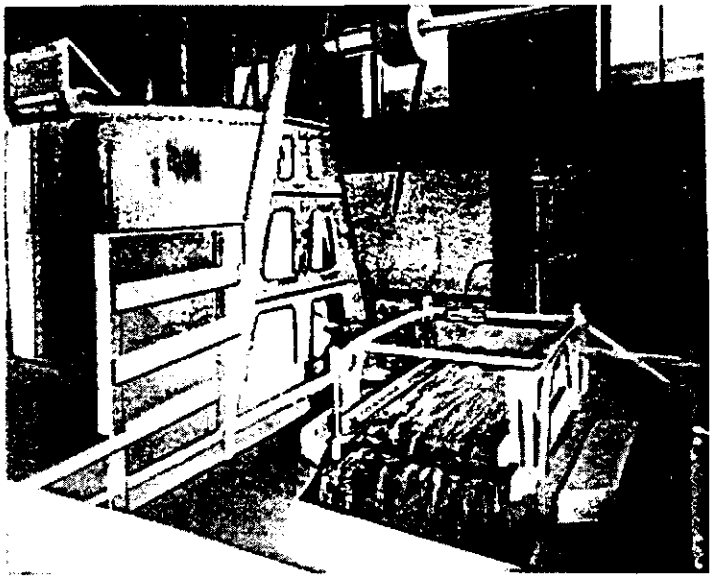


Figure 5. Blunger and lawn (Maddock 1910).

Figure 6. Filter press (Maddock 1910).

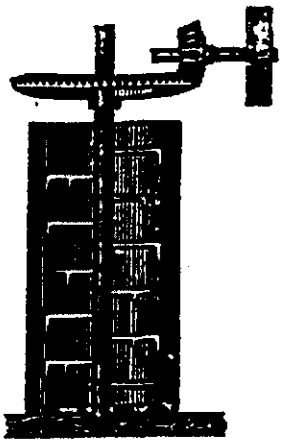


Fig. 21.—Vertical Pug-Mill, in use at Union Porcelain Works, Greenpoint.

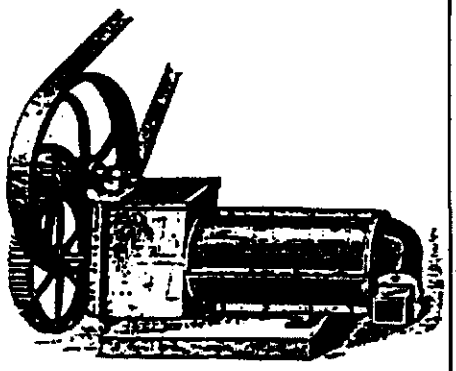


Fig. 22.—Horizontal Pug-Mill, in use at Union Porcelain Works, Greenpoint.

Figure 7. Pug mills (Young 1878).

Figure 8. Modeler forming sample of toilet bowl (Maddock 1910).

Figure 9. Mold making (Maddock 1910).

Figure 10. Syphon jet being assembled (Maddock 1910).

Figure 11. Green Room (Maddock 1910).

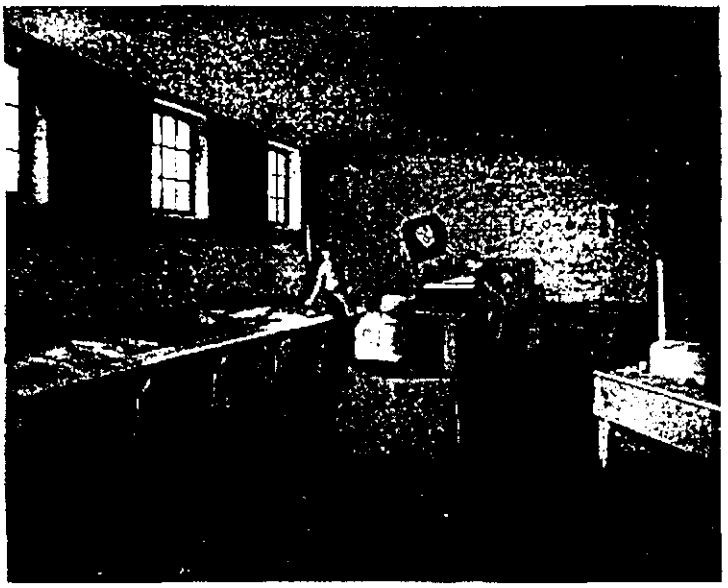


Figure 12. Making saggers (Maddock 1910).

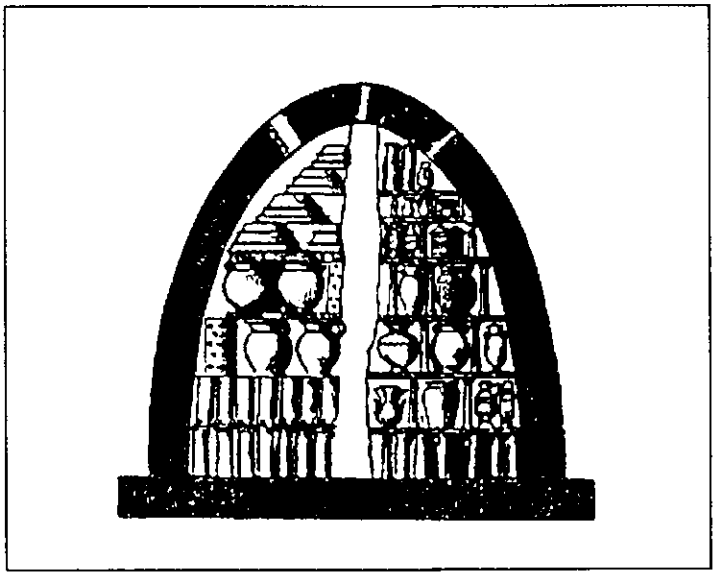


Figure 13. Hard pottery kiln (Young 1878).

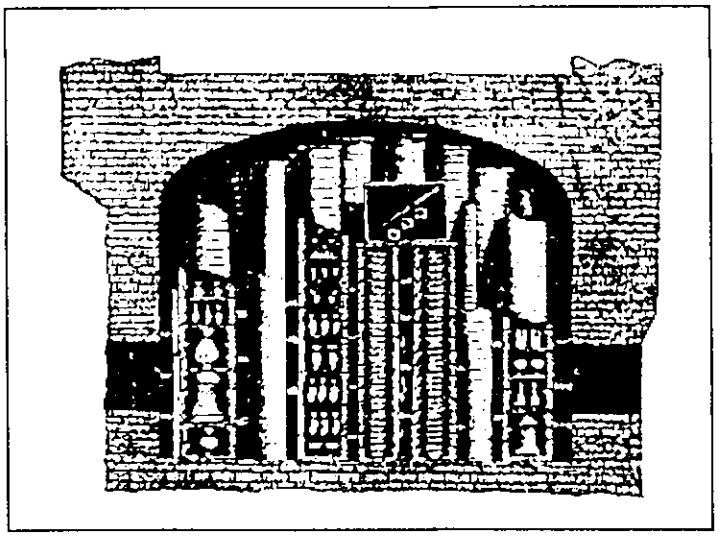


Figure 14. Porcelain kiln (Young 1878).

Figure 15. Placing kiln (Maddock 1910).

Figure 16. Removing defects in biscuit (Maddock 1910).

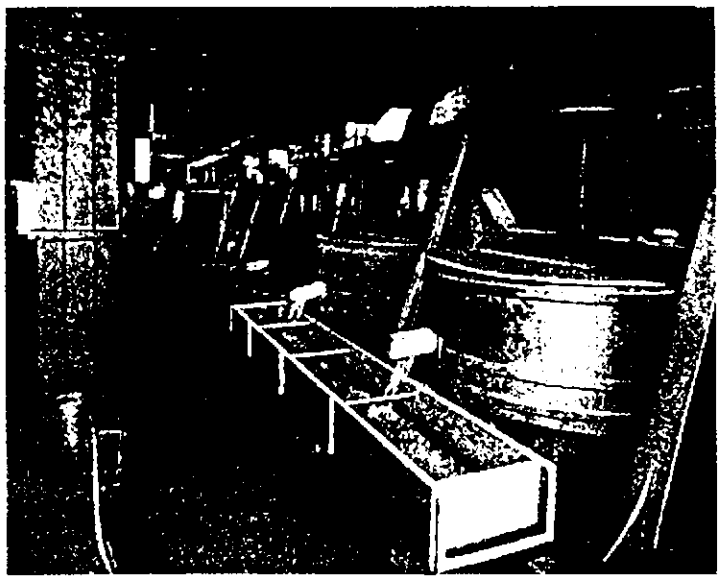


Figure 17. Glaze pans (Maddock 1910).

Figure 18. Dipping in glaze tub (Maddock 1910).

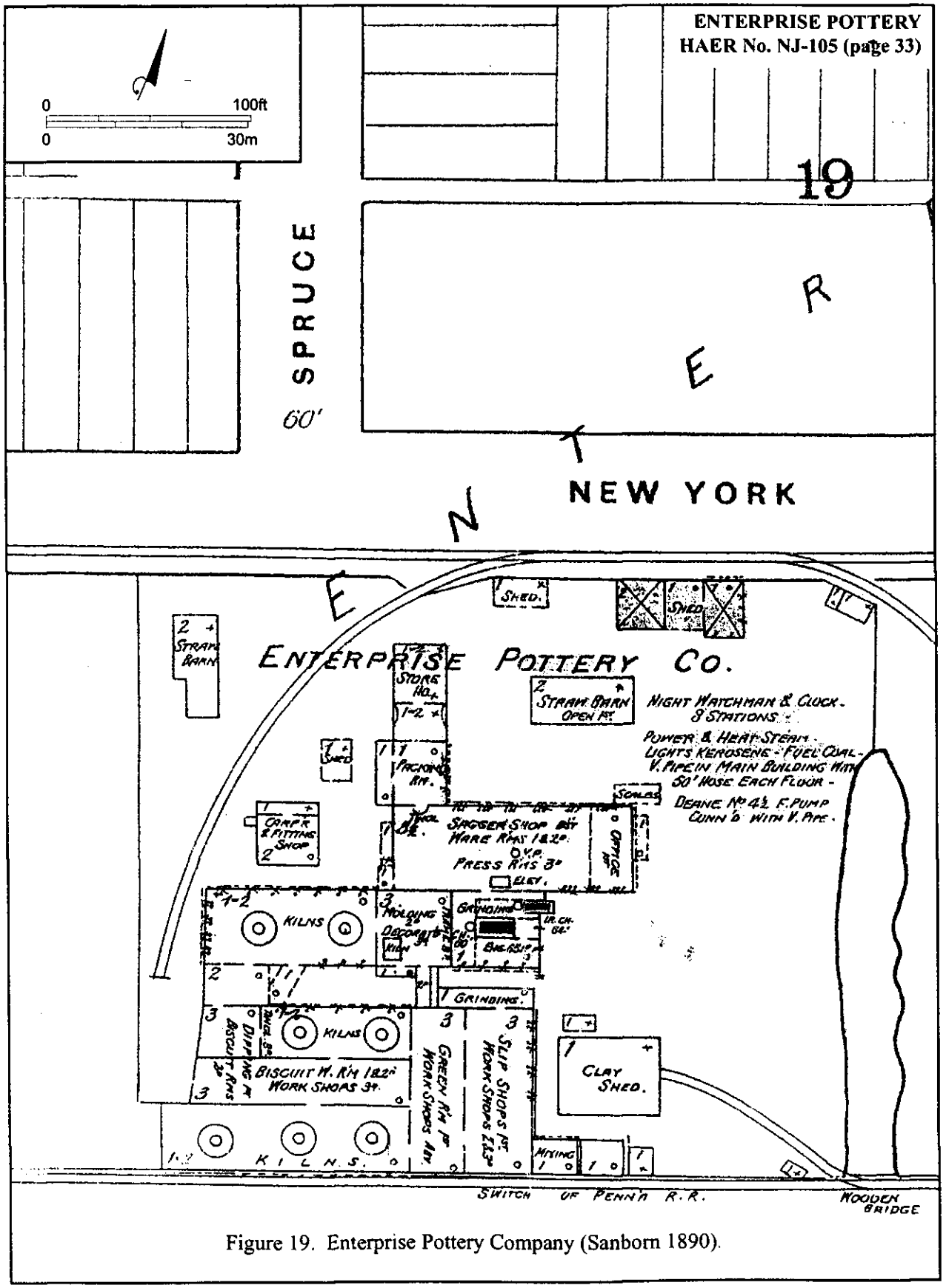


Figure 19. Enterprise Pottery Company (Sanborn 1890).

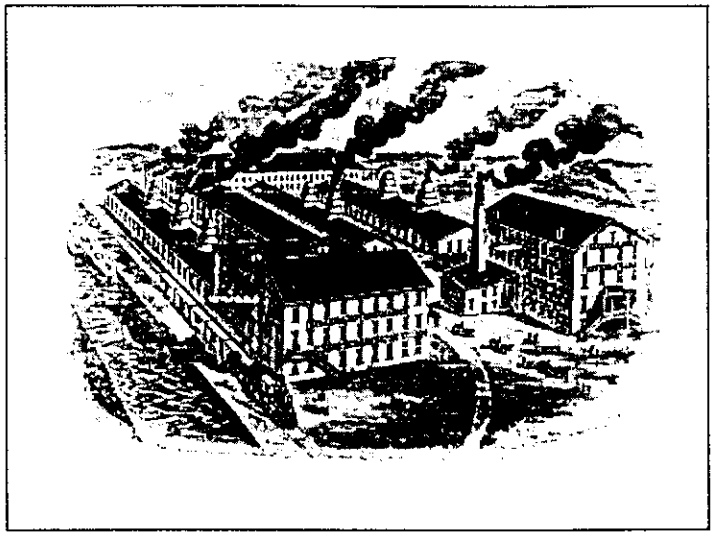


Figure 20. Enterprise Pottery (Anonymous 1899).

APPENDIX

SAMPLE PAGES FROM TRENTON POTTERIES COMPANY CATALOGS

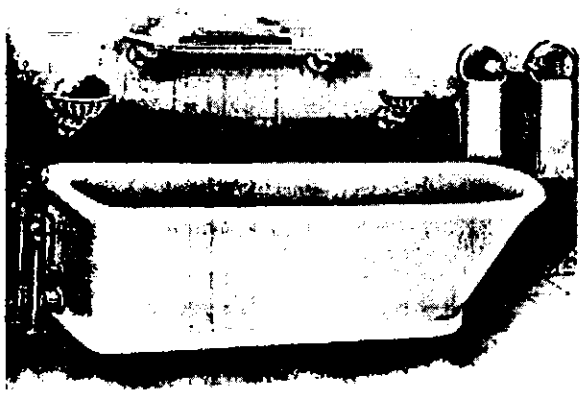


PLATE 5-KH

"Ideal" Porcelain Special Light Pattern Bathtub on Base

Dimensions: Outside lengths as given below; outside width, 30 inches; inside depth, 17 inches; height over all, from floor to top, 21 inches.

GLAZED inside and over roll rim and around base, and finished plain white outside, and fitted with N. P. Brass Combination Bell Supply and Waste, with China Indexes on Compression Valves and Waste.

Code:	VERHAZCO	VERHACCIO	VERHACHTE
Length of Bath	4 ft. 6 in.	4 ft. 10 in.	5 ft. 4 in.
List, Bathtub only, no fittings, "A" quality	$80 00	$85 00	$95 00
"B" quality	62 50	67 50	75 00
List, White finish outside only	15 00	15 00	15 00
List, White finish and bead	20 00	20 00	20 00

See page 18 for lists on fittings.

NOTE.—The light weight pattern Tub is made in only the French style. Waste at bottom through square end of Tub.

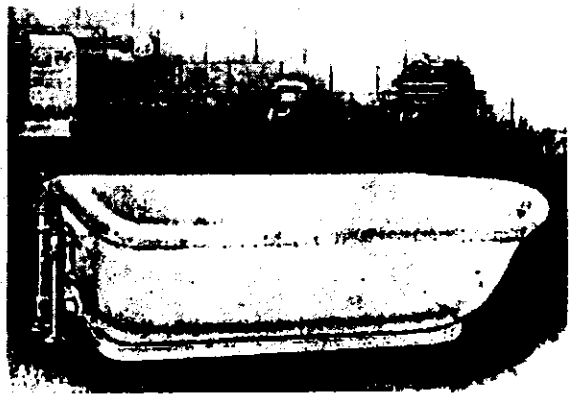


PLATE 6-KH

"Ideal" Porcelain French Bathtub on Base

(Made to Tile in along Back)

Dimensions: Outside lengths as given below; outside width, 30 inches; inside depth, 19 inches; height over all, from floor to top, 21 inches.

GLAZED inside and over roll rim and along base, and finished plain white outside and fitted with N. P. Brass Combination Bell Supply and Waste, with China Indexes on Compression Valves and Waste.

Code:	VERHANST	VERHAPT
Length of Bath outside	5 ft.	5 ft. 6 in.
List, Bathtub only, "A" quality	$150 00	$160 00
List, Bathtub only, "B" quality	105 00	112 00
List, White finish outside	15 00	15 00
List, White finish and bead	20 00	20 00

See page 18 for lists on fittings.

NOTE.—This pattern Bathtub can be furnished for left waste, as shown, or for right waste. State clearly on order which is desired—left or right waste. Waste is at bottom of Tub through square end.

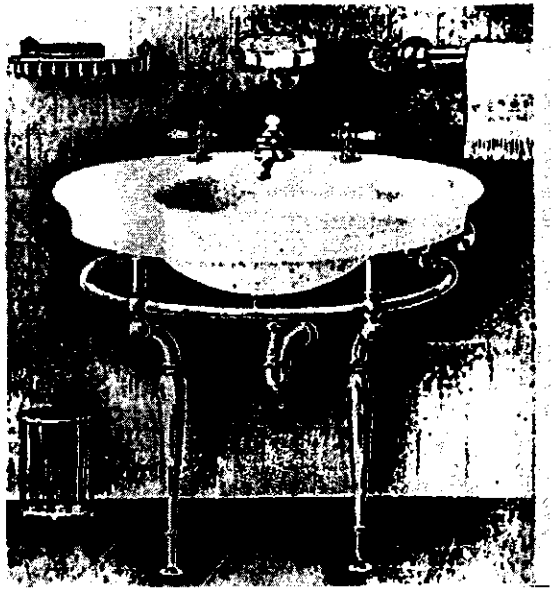


PLATE 118-KH

"Ideal" Porcelain "Glenside" Oval Lavatory

(On Nickel Plated Brass Towel Bar Legs)

Code:	VERKITE	VERIBOKIT	VERIBOKUG
Reference number	0	1	2
Size of Lava., inches	27 x 22	33 x 24	37 x 27
Size of Bowl, inches	13x19x6	13x17x6½	15x19x7
List, Lava. only, "A" quality	$28 00	$30 00	$36 00
List, Lava. only, "B" quality	19 60	21 00	25 20

See page 91 for lists on fittings.

NOTE.—State clearly on order the measurements for fittings, unless fittings are ordered with the porcelain.

PLATE 120-KH

"Ideal" Porcelain "Advance" Lavatory, with Wall Slab

(Set upon Porcelain Legs)

Code:	VERHASO	VERHASOLO
Reference number	1	2
Size of Lava., inches	30 x 24	33 x 24
Size of Bowl, inches	13x17x6	13x17x6
List, Lava. only, 3¼ roll rim, "A" quality	$30 00	$36 00
List, Lava. only, 3¼ roll rim, "B" quality	21 00	25 20
List, Wall Slab only, 16 inches high, "A" quality	8 00	8 00
"B" quality	5 60	5 60
List, per pair, Porc. Legs and Wall Straps, "A" quality	12 00	12 00
"B" quality	8 40	8 40

See page 92 for lists on fittings.

NOTE.—State clearly on order the measurements for fittings, unless fittings are ordered with the porcelain.

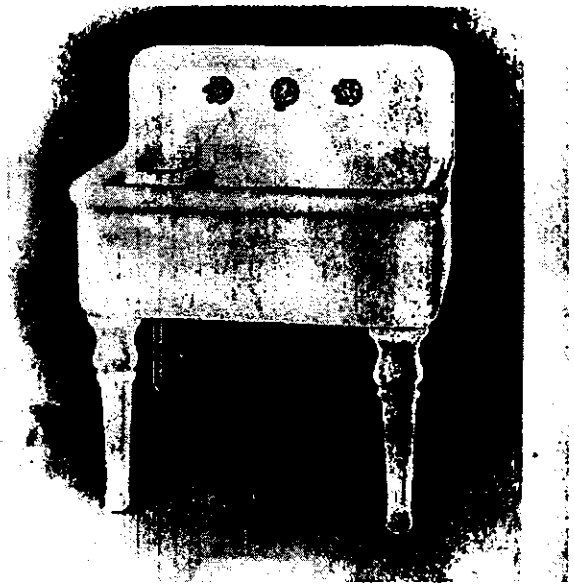


PLATE 328-KH

"Ideal" Porcelain Integral High Back Vegetable Sink, with Round Partition and without Drain Shelf

(Set upon Two Porcelain Legs)

NOTE.—This Sink is similar in style to Plate 327-KH, except that the partition is here rounded, and there is no drain shelf in this Sink. State clearly on order the measurements for fittings, unless fittings are ordered with the ware.

Code:	VENOSEDEN		VERUSULA	
Size of Sink, inches	30 x 22		36 x 24	
Depth of Sink, inside, inches	8		9	
Height of Back, inches	8		9	
	"A"	"B"	"A"	"B"
List, Integral High Back Sink only	$35 00	$24 50	$45 00	$31 50
List, Porc. Legs and Straps, pair	12 00	8 40	12 00	8 40

See page 150 for lists on fittings.

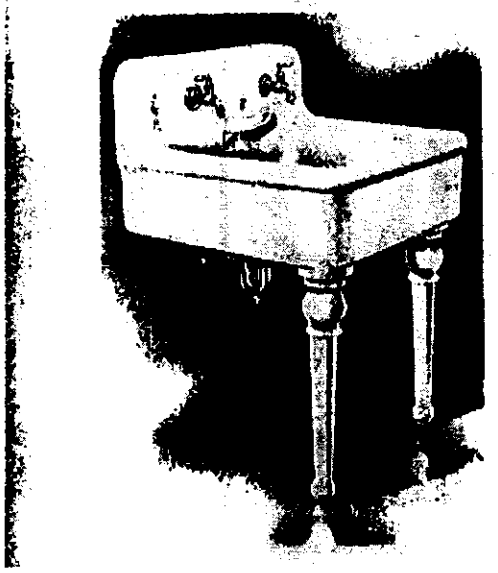


PLATE 329-KH

"Ideal" Porcelain Kitchen Sink, with Integral Back

(Set upon Two Porcelain Legs)

Code:	VERALUCIUS	VEROTIDORO
Size of Sink, inches	27 x 26	30 x 26
Height of Back, inches	9	9
Depth of Sink, inside, inches	7	7
List, Integral Back Sink only, "A" quality	$30 00	$35 00
List, Integral Back Sink only, "B" quality	21 00	24 50
List, Porc. Legs and Straps, per pair,		
"A" quality	12 00	12 00
"B" quality	8 40	8 40
List, China Soap Cup	50	50

See page 151 for lists on fittings.

NOTE.—State clearly on order the measurements for fittings, unless fittings are ordered with the ware.

Vegetable sink and kitchen sink (Trenton Potteries Company 1910).

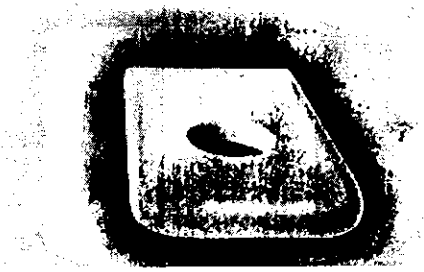


PLATE 415-KH

"Ideal" Porcelain Floor Slab for Closet

Dimensions: Wall to front, 21 inches; width, 12 inches.

	Code: VERLOLADIL
List, Floor Slab only, "A" quality	$4 00
List, Floor Slab only, "B" quality	2 80

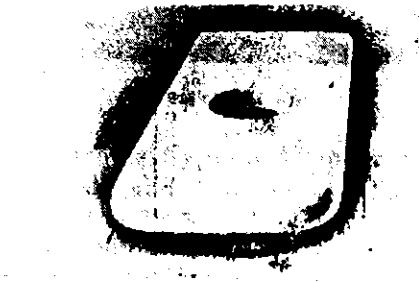


PLATE 416-KH

"Ideal" Porcelain Floor Slab for Closet

Dimensions: Wall to front, 27 inches; width, 12 inches.

	Code: VERLOLAFET
List, Floor Slab only, "A" quality	$4 50
List, Floor Slab only, "B" quality	3 15

PLATE 500-KH

"Ideal" Solid Porcelain Urinal Stall

(To be set in Tile Floor and encased between Slate or Marble Partitions)

Dimensions:	No. 1 Size	No. 2 Size
Height over all, top to bottom, inches	48	48
Height, floor line to top of Urinal, inches	42¼	42¼
Width over all, Urinal only, inches	24	28
Wall to front point of base, inches	19	19
Wall to front point of top, inches	12	12

(Diagrams with roughing-in measurements furnished on application.)

	Code: VERKISCO	VERALADE
Width over all, inches	24	28
List, Single Urinal only, "A" quality	$50 00	$60 00
List, Single Urinal only, "B" quality	35 00	42 00
List, N. P. Brass Curved Flush Rim Spreader, with N. P. Slip Joint, and N. P. Flush Pipe, with Lock Nut to Tank		$10 00
List, N. P. Brass Outlet Strainer and Floor Flange		4 00
List, Vitreous China Strainer only		1 00

Floor slabs for closet and urinal stall (Trenton Potteries Company 1910).

PLATE 967-KH

Vitreous China Syphon Hopper and Trap Closet and Low Down Tank

Closet.—Plain Syphon Hopper and Trap, No. 21.

Tank.—Plain Vitreous China Squate Pattern.

Tank Fittings.—Brass with Push Button at Top, Supply Pipe and Offset of N. P. Brass.

Seat and Lid.—Oak with N. P. Brass Hinges.

	Code: VERUSO5O
List, Plain Syphon Action, Hopper and Trap Closet . .	$8 50
List, Plain Square Tank only, no fittings	11 00
List, China Tank, complete with fittings	20 50

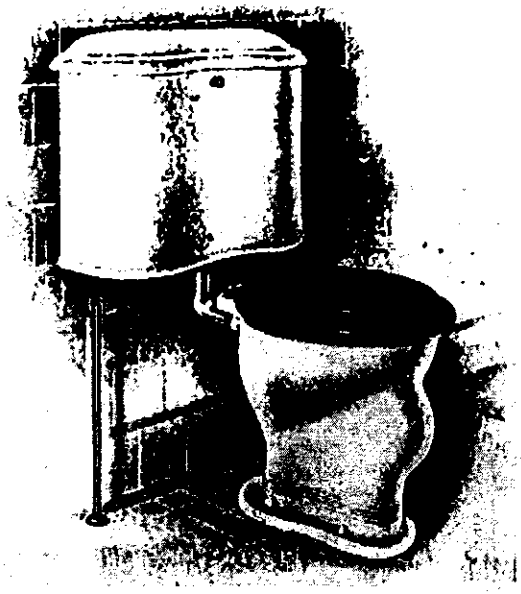


PLATE 988-KH

Vitreous China Syphon Hopper and Trap and Low Down "Curvino" Tank

Closet.—Plain Syphon Hopper and Trap, No. 21.

Tank.—Light Weight Vitreous China "Curvino" Pattern.

Tank Fittings.—Brass, with Push Button at Top; Supply Pipe and Offset of N. P. Brass.

Seat and Lid.—Oak with N. P. Brass Hinges.

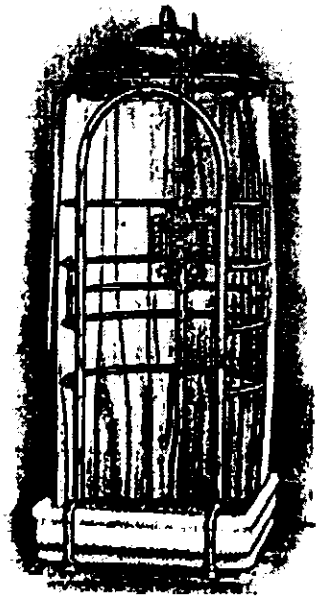
	Code: VERLODUMO
List, Plain Syphon Action Hopper and Trap Closet . .	$8 50
List, "Curvino" Light Weight China Tank, no fittings	12 00
List, China Tank complete with fittings	22 00

"Ideal" Porcelain Corner Shower Receptor with Combination Needle Spray, Shower and Bidet Fitting

NOTE—*For descriptions and prices on Porcelain Receptor, as shown, only, see Plate* 2067-N.

CODE—To be used only when Receptor and Fittings complete are desired	VALYN	UVFVL
Size, inches	28	34
List, N.P. Brass Combination Needle Spray, Descending Shower and Bidet Jet, with White Duck Curtain; fitting complete as shown	$142.75	$204.20
Fittings Nos.	6509	6503

This price does not include Shower Receptor



"Ideal" Porcelain Square Shower Bath Receptor with Combination Needle Spray Shower and Bidet Fitting

NOTE—*For description and prices on Porcelain Receptor, as shown, only, see Plate* 2082-N.

CODE—To be used only when Receptor and Fittings complete are desired	UVFUK	UVGAG
Size, inches	36x36x9	42x42x9
List, N.P. Brass Combination Needle Spray, Descending Shower, Liver Spray and Bidet Jet, supplied through Temperature Valve. Descending Shower controlled by Self-Closing Valve, with Ring and Chain, with White Duck Curtain. Fitting complete as shown	$272.85	$260.00
Fitting No. complete as shown	No. 6506	No. 6507

This price does not include Shower Receptor

Shower bath receptors (Trenton Potteries Company 1915).