March 2005

Volume 6 Issue 1

TRENTON POTTERIES

Newsletter of the
Potteries of Trenton Society

Jiggers for the Manufacture of Pottery: An Original Patent by Joseph Crossley from Trenton

Jacqueline Beaudry Dion and Jean-Pierre Dion, Saint-Lambert, Canada

Nineteenth century America has contributed in many respects to improvements in the manufacture of pottery ware. Miss F. E. Fryatt wrote in a rare 1881 issue of *Harper's Magazine,* now in our collection, that the application of steam as a motor for the potters wheel was first successfully made in the United States and this increased its capacity by twenty-five percent. Another area of improvement was related to jiggers and the pull-down mechanism. We present here the specifications and claims that Joseph Crossley submitted to obtain such a patent in the United States in 1894 and in England in 1895.

In the production of cups, the use of a mold, rather than a disk on the spindle of the potters wheel, lead to greater uniformity in size of the finished product. Miss Fryatt's description of the process is so accurate we can almost see it evolving as she takes us inside some Trenton potteries. The plaster mold fits into a metal top called the "jigger-head"; clay is thrown into its cup-shaped hollow and then the mold revolves while the potter's hand shapes the sides and bottom with a few strokes; in an instant it is ready to go to the storeroom to set sufficiently for burnishing.

According to Miss Fryatt, in a single day a man and his assistant could make fifty to sixty dozen cups by this process. But add to this, she says, a simple mechanical contrivance called the pull-down – a piece of steel taking the place of the potter's hand – and one hundred dozen can be produced each day.

The jigger and the pull-down were not invented in the United States, but Joseph Crossley obtained several U.S. and foreign patents for improvements in and relating to jiggers for the manufacture of pottery. In fact the Crossley Machine Company, established in Trenton in 1879 and incorporated in 1896, did obtain patents for almost all aspects of the mechanization of pottery manufacture: from the clay mixer to the clay washer; from the filter press to the fret grinder and clay disintegrator; from the color or glaze mill to the hand stilt press and sagger press, to name just a few. By 1911, they had such a wide array of products that they published a beautifully illustrated 173-page catalogue with the claim: "All the machines in this catalogue, with few exceptions, are protected by U.S. and Foreign Patents, and we will go to the full extent of law to protect our rights." They proudly described themselves as Engineers to the Clay Worker.

We recently acquired an original 1894/1895 Crossley patent for a combined jigger and pull-down intended for making cups, plates, saucers and other circular objects. This document, stamped Patent Library

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Contents

The Potteries of Trenton Society is a non-profit organization dedicated to the study and preservation of Trenton's ceramic past. Officers: President – Patricia Madrigal; Treasurer – Amy Earls; Secretary – Christy Morganstein. Board: Ellen Denker, Barbara Goldberg, Richard Hunter, Meta Janowitz, Jay Lewis, Emma Lewis, William Liebeknecht, George Miller, Brenda Springsted, Rebecca White. Newsletter Editor: Patricia Madrigal

Jiggers for the Manufacture of Pottery

N° 3284 A.D. 1895

(Under International Convention.)

Date claimed for Patent under Sect. 103 of Act, being date of first Foreign Application (in United States of America), 11th Aug., 1894
Date of Application (in United Kingdom), 14th Feb., 1895
Complete Specification Left, 14th Feb., 1895—Accepted, 29th June, 1895

COMPLETE SPECIFICATION.

Improvements in and relating to Jiggers for the Manufacture of Pottery.

I, JOSEPH CROSSLEY of corner of Monmouth and State Streets, Trenton, County of Mercer and State of New Jersey, one of the United States of America, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement :—

This invention relates to machinery for making pottery ware and has especial reference to that class of machinery used for making plates, cups, saucers and other circular ware and has for its object certain improvements in the construction of a combined jigger and pull-down which will be fully disclosed in the following Specification and claims.

In the accompanying drawings which form part of this Specification

Figure 1 represents a side elevation of my improved machine with the pull-down raised and the parts of the machine in their normal position or at rest ; Figure 2 a like view, with the pull-down lowered and all the parts in position when at work, and the casing and the operating shaft of the jigger in vertical longitudinal section ;

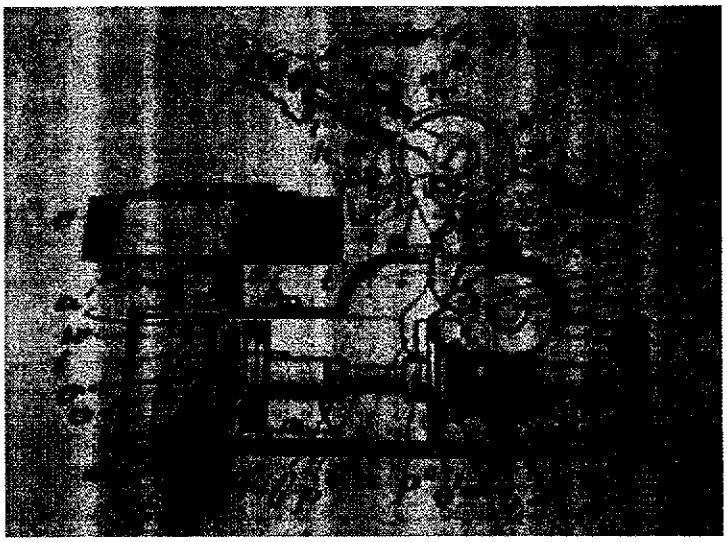
Figure 3 a top plan view with the jigger-head removed ;

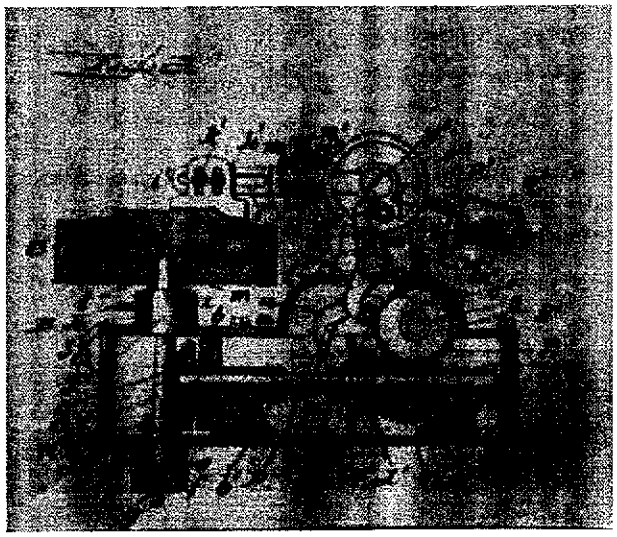
Figure 4, an enlarged section of the worm gear-wheel, showing its cam surface in one of its sides and the cam which operates the pull-down automatically ;

Figure 5, a view taken on the line *x. x.* Figure 1 looking in the direction of the arrow ;

Figure 6, a vertical transverse section on the line *y.* Figure 1 and

Figure 7 a detail perspective of the pull-down.





Jiggers for the Manufacture of Pottery

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is :—

First. A jigger having a vertical spindle, a support for said spindle and a horizontal operating shaft inclosed in a casing, in combination with a pull-down supported on the cover of the casing.

Second. A jigger having a vertical spindle, a vertically adjustable bearing for said spindle, a horizontal operating shaft inclosed in a casing and a removable cover for the casing, in combination with a pull-down supported by said cover.

Third. The combination of a jigger, a pull-down and a brake operated by the pull-down.

Fourth. A jigger and a longitudinally movable operating shaft provided with separable friction disks, in combination with suitable operating mechanism, and a pull-down.

Fifth. A rectangular casing, in combination with a vertical spindle supported in a movable bearing and a horizontal shaft connected to the spindle and supported on brackets within the casing, and a pull-down supported on the cover of the casing.

Sixth. A casing, a vertical jigger spindle supported in extensions of the casing on its bottom and top, in combination with an operating shaft within the casing and a pull-down supported on the cover.

Seventh. A rectangular casing, provided with a removable cover, a jigger supported by the casing at one end and a pull-down supported on the cover, in combination with suitable operating mechanism.

Eighth. The combination of a jigger, a horizontal operating shaft provided with a friction disk, an automatic pull-down and a brake operated by the pull-down.

Ninth. A jigger and a pull-down in combination with a shaft supporting a worm gear, a shaft supporting a worm gear wheel and a cam and an arm engaging the cam to operate the pull-down and a brake operated by the pull-down.

Tenth. A jigger in combination with a pull-down comprising a circular rim having a head to support an arm and a strike on one side and a counter-weight on the opposite side and a projecting stud, a vibrating lever and a cam for operating the lever and a brake operated by the pull-down.

Eleventh. A jigger, in combination with a pull-down, clutch mechanism and a device for automatically disengaging the clutch and a brake operated by the pull-down.

Twelfth. A jigger and an operating shaft provided with a worm gear, a worm gear wheel engaging said worm gear and provided with a cam on one side, and a rod engaging the cam, in combination with a pull-down, and a clutch mechanism.

Thirteenth. A jigger, an operating shaft provided with a friction disk, and

a pull-down, in combination with a cam, a vibrating lever having an arm operated by the pull-down, an arm engaging the friction disk and an arm engaging the cam.

Dated this 14th day of February 1895.

JENSEN & SON,
77, Chancery Lane, London, W.C., Patent Agents.

London: Printed for Her Majesty's Stationery Office, by Darling & Son, Ltd.—1895.

Jiggers for the Manufacture of Pottery

(Continued from page 1)

Nottingham, has 4 pages of text along with 4 sheets of figures. The document is self-explanatory and the essential parts of pages 1, 3 and 4 as well as two figures are reproduced here. The date 1894 is significant for Trenton as being the year of the general strike in the pottery industry, the jiggermen continuously running check on any potter who would try crossing the lines. To quote from a most informative book by Stern (1994, p. 99): "Although Trentonians had rejected mechanization years ago for fear of a strike, they were now [1894] prepared to upgrade their facilities." The owners wanted absolute control of their factories and "real control also meant pulldowns..."

Barber (1893, p.6) illustrates another combined jigger and pull-down made by Peter Wilkes of Trenton, and Amy Earls' web site, well worth a monthly visit, provides other curious and interesting details on jiggers along with more illustrations.

References

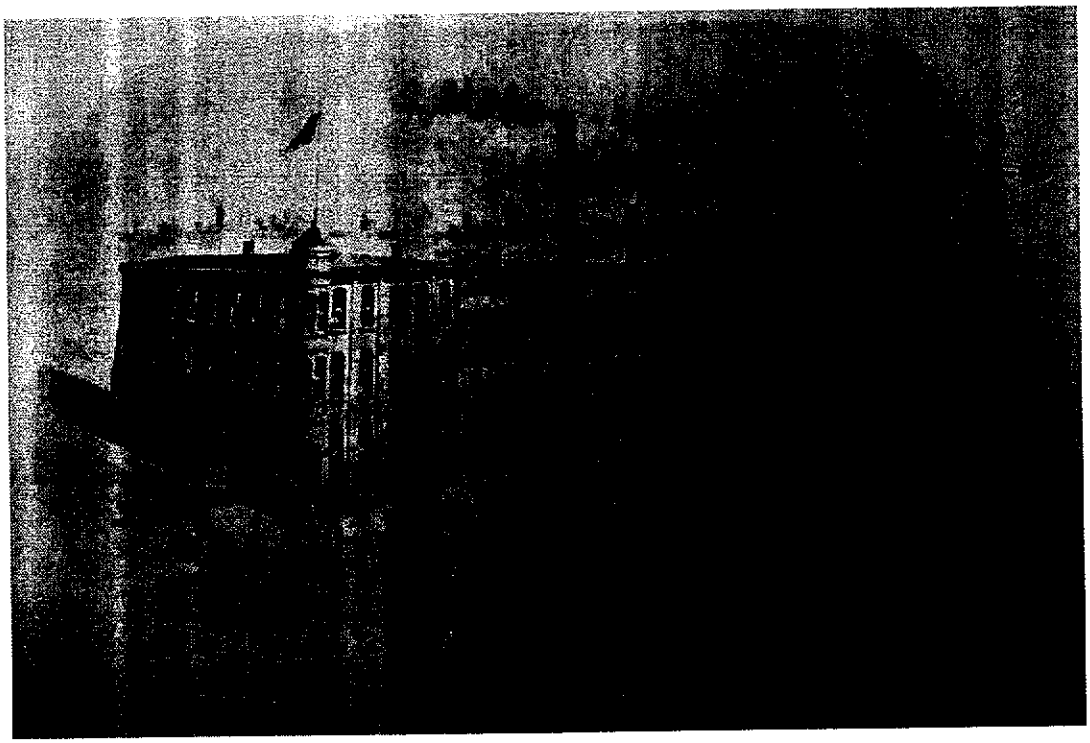
Barber E.A.
1893 *The Pottery and Porcelain of the United States.* Putnam's Sons, New York.

[Crossley]
1911 *The Crossley Machine Co., Manufacturers of Clay Working Machinery.* Illustrated catalogue, Trenton, New Jersey.

Earls, Amy
2004 *Making pots : jigger / jolly machine.* www.greatestjournal.com/community/potterynews/14998.html, 2004-11-22 , ca. 5 pages.

Fryatt, F.E.
1881 Pottery in the United States. *Harper's New Monthly Magazine,* February, p. 357-369.

Stern, M.J.
1994 *The Pottery Industry of Trenton: A Skilled Trade in Transition, 1850-1929.* Rutgers University Press, New Brunswick, New Jersey.



A view of the Crossley Machine Company, taken from their 1911 catalog.

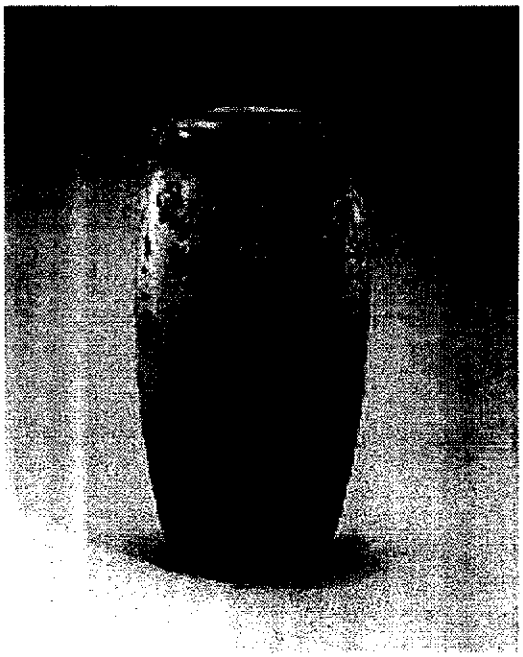
American Art Pottery, St. Louis Art Museum

American Art Pottery, an installation of 40 works from the Saint Louis Art Museum's collection and several private collections, celebrates the beauty and variety of artistic ceramics made in America between 1880 and 1920. This installation includes works by many award-winning art potteries such as Grueby, Van Briggle, Rookwood, Tiffany, Dedham, Gates, and Walrath. Twelve works made in University City at the Art Academy and Porcelain Works between 1909 and 1914 are also featured.

The late-19th century interest in design reform and the craft revival came together in a broad artistic movement called Arts and Crafts. An important aspect of that movement is art pottery. The term art pottery covers a wide variety of styles and techniques of decoration. Some vases were used as surfaces for naturalistic painted decoration or a vibrantly colored, patterned, or textured glaze. Other potters focused on created vessels as primarily a sculptural form on which the surface decoration was less important. Works made at the Rookwood Pottery, for example, were usually decorated with flowers and other naturalistic subjects painted in thick, colored slips under a glossy glaze. Other potteries, such as the Gates Potteries near Chicago, focused more on the vessel shape, making sleek, architectonic forms. They used molds and occasional hand-modeling to create both simple and more complex forms covered with a thick green glaze that was matte in texture. A vibrant pattern of stains and glaze on a gourd bottle shape illustrates a type of porcelain made in University City. The designer, Taxile Doat, was especially inspired by Asian traditions which he had discovered around the turn of the century. Of course, one or more of these techniques or sensibilities can be used in the same piece and many manufacturers and studio potters made exquisite wares using a combination of molding techniques, matte or glossy colored glazes, and surface decoration.

American Art Pottery is curated by David Conradsen, assistant curator of decorative arts and design, and is on view in Gallery 120 from November 5, 2004 through 2005.

For more information, contact the St. Louis Art Museum at 1 Fine Arts Drive, St. Louis, Missouri 63110-1380 USA. (314) 721-0072 or www.slam.org.



©2004 Copyright The Saint Louis Art Museum

William Day Gates, American, and Fritz Albert, French, designers; Gates Potteries, American, maker; Vase, c.1903–4; glazed earthenware; 26 x 15 inches; Lopata Endowment Fund, the E. Reuben and Gladys Flora Grant Charitable Trust, the Richard Brumbaugh Trust in memory of Richard Irving Brumbaugh and Grace Lischer Brumbaugh, and funds given by Dr. and Mrs. Matthew Newman in memory of Susan Lorenz 2:2004.

A Place to Take Root

Jan Clark, U.S. Botanic Gardens

In its mid-Atlantic debut, *A Place To Take Root: The History of Flowerpots & Garden Containers in North America* is on display in the West Orangerie of the Conservatory at the U.S. Botanic Garden. Curated by Susan Tamulevich in association with the College of the Atlantic (Bar Harbor, Maine), *A Place To Take Root* is described as the first exhibition devoted to the evolution of the common flowerpot. Visitors to *A Place To Take Root* can learn about the not-so-common flowerpot -- tracing its history and exploring its various materials, shapes, and designs. The exhibit places special emphasis on 18th- and 19th-century American designs as well as innovative contemporary designs. Over 100 pots are featured, including finely detailed Italian terracotta, wood and cast-iron Versailles-style tree tubs, an English rhubarb forcer, traditional American pots, orchid pots, strawberry jars, and the latest in plastic pots, seed-starting supplies, and ornamental urns. *A Place To Take Root* is on display through October 2, 2005.

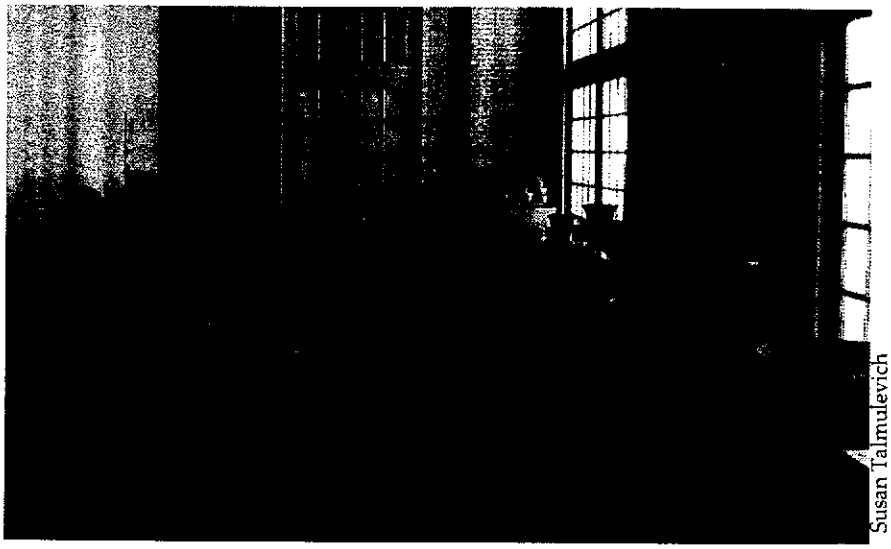
The U.S. Botanic Garden Conservatory is open to the public, free of charge, every day of the year from 10 a.m. to 5 p.m. The Conservatory is located at 100 Maryland Avenue, SW, at the foot of the U.S. Capitol. Visitors are encouraged to take Metrobus and Metrorail. Further information is available by calling 202-225-8333 or visiting our website at www.usbg.gov.

The exhibit will also travel to:

Stonington Historical Society, Captain Nathaniel B. Palmer House
A smaller exhibition focusing on Rudy Favretti's collection of 19th century cast iron urns and garden tools, and Guy Wolff's 19th century American terracotta flowerpots
May 1-June 19, 2005
Stonington, CT 860-535-8445

The Botanic Garden of Smith College, Lyman Conservatory
October 15 — December 15, 2005
Northampton, Mass. 413- 585-2740

Historic Morven
April and May 2006
Princeton, NJ 609-924-8144



Susan Talmulevich

A view of the A Place to Take Root exhibit, now showing at the U.S.Botanic Gardens, Washington, D.C.

Trenton Potteries Database Update

The Potteries of Trenton Society (POTS) and the New Jersey Department of Transportation (NJDOT) entered into an agreement that allows for the Trenton Potteries Database to be expanded, refined and updated as more information is gathered.

The agreement stipulates that POTS, as the caretaker of the database, will continue to collect and add information to the database, thereby ensuring that it remains a valuable research tool. As new classes of information are added, updated versions of the database will be distributed to the institutions that have an earlier copy. POTS will also make the database available to the public (through libraries, the internet, or other appropriate media).

In order for POTS to receive updated information about cultural resources investigations that involve the Trenton pottery industry, the NJDOT and the New Jersey State Historic Preservation Office will identify POTS as an interested party for cultural resources project conducted within the City of Trenton. POTS will then be given the opportunity to review, comment, and offer recommendations related to these surveys within the standard review timeframe. When appropriate, POTS will request a copy of the final report from which to glean information for the expansion and refinement of the database.

POTS has worked for a long time to reach this agreement; in fact, the database was one of the driving forces behind the group's formation. We will be establishing a database committee whose role will include overseeing the expansion and refinement of the database and to developing a plan to make it available to the public. If you are interested in helping, please contact Patricia Madrigal at president @potteriesoftrentonsociety.org.

Earthenware Symposium

On April 9 POTS, together with the New Jersey Historical Society, held the Second New Jersey Ceramic Symposium. This year's topic, *Filling America's Cupboards: New Jersey's Nineteenth-Century Earthenwares*, brought together historians, archaeologists, curators and collectors to discuss New Jersey's nineteenth-century earthenware industry and its important role in supplying sturdy table, kitchen, and sanitary wares to America's households.

Nearly 50 people attended the event. The symposium opened with Richard Hunter providing an overview of the earthenware industry in New Jersey. Emma Lewis then presented a slide show of the Fancy Rockingham exhibit at the University of Richmond. Historian Jane Claney presented a paper that explored the role of Rockingham in refining the manners of 19th century Americans.

New discoveries in Trenton's yellow ware industry were presented by Rebecca White, followed by William Liebeknecht's paper on Trenton's majolica products. The final paper, by historian Ellen Denker, discussed how independent china decorators from across the country used earthenware blanks produced in Jersey City in the late 1800s.

The event ended with a reception, giving attendees an opportunity to mingle and discuss New Jersey's earthenwares.

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POTS Membership

Membership in the Potteries of Trenton Society is open to all interested in Trenton's pottery industry and the ceramic products manufactured here. We welcome pottery workers, historians, archaeologists and collectors. Your contribution is used to support newsletter, lecture, meeting, and conference costs.

Annual Memberships:
_____ Regular ($20) _____Couples ($25) ____ Students ($15, with ID) _____ Seniors ($15)

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