THE HUDSON RIVER VALLEY REVIEW

A Journal of Regional Studies

MARIST

The Hudson River Valley Review (ISSN 1546-3486) is published twice a year by the Hudson River Valley Institute at Marist College.

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Poughkeepsie, NY 12601-1387

Subscription: The annual subscription rate is $20 a year (2 issues), $35 for two years (4 issues). A one-year institutional subscription is $30. Subscribers are urged to inform us promptly of a change of address.

POSTMASTER: Send address changes to Hudson River Valley Institute, Marist College, 3399 North Road, Poughkeepsie, NY 12601-1387

Publisher's Intro

It is with great pleasure that I introduce two new members to the Editorial Board of our *Hudson River Valley Review*, as well as two new members to the Hudson River Valley Institute's Advisory Board. On the Editorial Board, Michael Groth joins us from Wells College where he is an Associate Professor in History and Kim Bridgford, Professor of English at Fairfield University, will act as our poetry editor for Regional Writing. Shirley Handel and Robert E. Tompkins, Sr. bring their experience and commitment to our region to the vision of the Institute.

—Thomas S. Wermuth

Editors' Intro

While the Hudson River Valley National Heritage Area's "Corridor of Commerce" theme has not received the greatest amount of attention, it highlights an important aspect of the region's historic legacy. Time and again, commercial and industrial innovations developed in the Hudson Valley have placed the region firmly into the history books. Glenn Curtiss's 1910 flight from Albany to Manhattan established that air travel could be a practical means for moving people and goods, much as Robert Fulton's steamship proved the potential for that mode of transportation a century earlier. But the valley's commercial legacy really begins with Native Americans, such as Daniel Nimham, who traded goods and land with European settlers. While Nimham is most often remembered as a Patriot who fell at the battle of Kingsbridge, there is substantial evidence he also was one of the colonial era's great land barons. Over the eighteenth and nineteenth centuries, the regional economy grew to include manufacturing—such as the bell foundries located in the upper valley—as well as substantial shipping and wholesale and retail operations. Finally, it was the valley's suitability for travel that made it a crucial point of defense by militia and regulars during the American Revolution, and later one of the ideal routes for establishing Post Roads enabling communication between the Northeast's major cities. The Old Rhinebeck Aerodrome, the Maybrook Historical Society, and the Danbury Rail Museum are each dedicated to preserving a different portion of this transportation legacy. We welcome you to another issue of the *Hudson River Valley Review*, which explores all of these fascinating topics.

—Christopher Pryslopski, Reed Sparling

Hudson River Valley Institute

This issue of The Hudson River Valley Review has been generously underwritten by the following:

The mission of the Hudson River Valley National Heritage Area Program is to recognize, preserve, protect, and interpret the nationally significant cultural and natural resources of the Hudson River Valley for the benefit of the Nation.

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Call for Essays

The Hudson River Valley Review is anxious to consider essays on all aspects of the Hudson Valley—its intellectual, political, economic, social, and cultural history, its prehistory, architecture, literature, art, and music—as well as essays on the ideas and ideologies of regionalism itself. All articles in *The Hudson River Valley Review* undergo peer analysis.

Submission of Essays and Other Materials

HRVR prefers that essays and other written materials be submitted as two double-spaced typescripts, generally no more than thirty pages long with endnotes, along with a computer disk with a clear indication of the operating system, the name and version of the word-processing program, and the names of documents on the disk. Illustrations or photographs that are germane to the writing should accompany the hard copy. Otherwise, the submission of visual materials should be cleared with the editors beforehand. Illustrations and photographs are the responsibility of the authors. Scanned photos or digital art must be 300 pixels per inch (or greater) at 8 in. x 10 in. (between 7 and 20 mb). No responsibility is assumed for the loss of materials. An e-mail address should be included whenever possible.

HRVR will accept materials submitted as an e-mail attachment (*hrvi@marist.edu*) once they have been announced and cleared beforehand.

Since HRVR is interdisciplinary in its approach to the region and to regionalism, it will honor the forms of citation appropriate to a particular discipline, provided these are applied consistently and supply full information. Endnotes rather than footnotes are preferred. In matters of style and form, HRVR follows *The Chicago Manual of Style*.

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THE HUDSON RIVER VALLEY REVIEW

Vol. 26, No. 2, Spring 2010

Regional History Forum:

Regional Writing

Book Reviews

On the Cover: *Albany Flyer,* by John Gould, Photo courtesy of Bethlehem Art Gallery

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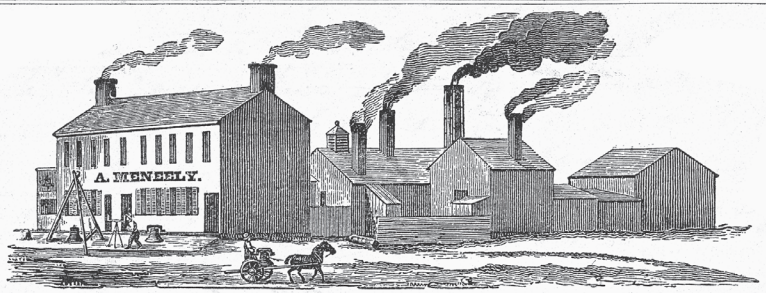

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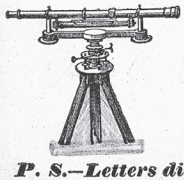

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Broadside advertisment, circa 1841

Bell Founding in the Upper Hudson River Valley

Edward T. Howe

On June 24, 2007, the church bell at the Jonesville United Methodist Church in Clifton Park (Saratoga County) rang out again following an extensive restoration of the building's wooden tower.[1] The reinstalled bell, made in 1841 by the West Troy Meneely Bell Foundry of Albany County, served as a reminder that the Hudson-Mohawk region of Albany and Rensselaer counties once had several firms that cast bronze bells. Tower bells, produced either singly or in combination (i.e., peals, chimes, or carillons), constituted the mainstay of the business. Cast primarily for churches, they were also made for schools, colleges, municipal buildings, and other private and public facilities. The tower bells generally weighed from 400 pounds with a diameter at the opening (mouth) of twenty-seven inches up to 7,500 pounds with a diameter of seventy-two inches. For nearly a century and a half, the Hudson-Mohawk bell founders cast a combined output roughly estimated at 100,000 bells.

More notably, the bell foundries provide an interesting historical example of how firms in a niche craft rose from local beginnings in the Hudson-Mohawk region to national prominence during the nineteenth century. Accordingly, after exploring the colonial and early American origins of tower bell founding, this essay will trace the development of this skilled trade in the Hudson-Mohawk region from its early nineteenth-century roots, through its heyday of innovation and national expansion in the second half of the nineteenth century, to its demise by the mid-twentieth century.

Background

Since there were no bell founders in the seventeenth and early part of the eighteenth centuries in colonial America, tower bells had to be imported. Most came from England, which already had a long tradition of casting quality bronze bells. This tradition started around the eighth century, when bell founders lived in monasteries, abbeys, and other religious communities. Gradually they replaced iron with various alloys, including copper and tin (bronze), as they experimented in

making small bells. By the thirteenth century, bell founders began to work independently and to produce larger bronze bells. The first known bell founders toiling for themselves were Master John and Master Thomas, who cast bells in Norfolk as early as 1229 and 1333, respectively. Bell foundries subsequently emerged over the next several centuries in larger cities—such as London—and smaller towns and villages. The British colonists imported most of their bells from the Whitechapel foundry, which traces its roots to 1570 in Croydon.[2] As immigrants from Holland, Sweden, and Germany came to America in the seventeenth and early eighteenth centuries, they also imported bells from their native lands. Colonial tower bells—as in past and subsequent generations—were mainly used to call people to worship, a funeral, a celebration, or a meeting; for sounding a fire or other alarm; and for indicating the time of day or start of a curfew.

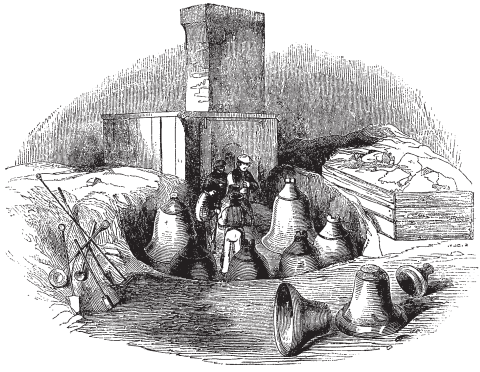


Illustration of bell casting process, from Penny Magazine, 1842

A few British colonists—already experienced in using metals to make clocks, surveying instruments, and brassware—first turned to bell casting around 1740. Although an abundant amount of many metals was available in the colonies, there was a noticeable lack of copper and tin needed to make bronze bells. Since domestic supplies were insufficient, especially of tin, the colonists relied on British imports.[3]

Colonial tower bell production began in Connecticut, Pennsylvania, and Massachusetts. One of the earliest known bell founders was John Whitear of Fairfield, Connecticut, a well-known clockmaker. He publicly announced in 1738 that he would cast bells "from the lowest size to two thousand weight."[4] One of his first known bells was made a year later for Christ Church in Stratford, Connecticut.[5] By the late eighteenth century, some members of the Doolittle family had become well-known bell makers. In 1773, Isaac Doolittle of New Haven, Connecticut, another clockmaker, acquired the bell-making assets of John Whitear, Jr., who had succeeded his father in business in 1762. Doolittle sold his equipment to James Cochran in 1800. Enos Doolittle of Hartford (a cousin of Isaac) and his son James later cast bells from 1782 to 1811.[6]

Meanwhile in Philadelphia, Pennsylvania, a bell was ordered in 1751 from the Whitechapel foundry for the State House. Unfortunately, the bell cracked after being initially struck upon its installation. Subsequently, two local brass found-

ers—John Pass and John Stow—successfully recast a 2,080-pound bell, which became the famous "Liberty Bell," in 1753.[7] The only other known Pennsylvania bell founder was Matthias Tommerop of Allentown, who cast at least one of his bells for Zion Reformed Church in 1769.[8]

About 1770, Colonel Aaron Hobart of Abington, Massachusetts, established a bell foundry that produced meetinghouse and church bells for nearby towns. Hobart, also known for sending both his son and a blacksmith to teach Paul Revere how to cast a bell, sold his business to the Commonwealth of Massachusetts around 1800.[9]

Some people advertised in local newspapers that they were prepared to cast tower bells, but no evidence of actual production has been found. For example, Aaron Miller of Elizabethtown, New Jersey, informed the public in 1747 that he would make church bells.[10] Similarly, Robert Barker of Hanover, Massachusetts, said in 1765 that he was willing to cast meetinghouse bells.[11]

By the end of the Revolutionary War in 1783, a foundation for future growth in tower bell founding had thus been established. However, colonial demand for tower bells was necessarily limited to local areas as land transportation costs were relatively high. Since income from the sale of bells was often sporadic, bell founders were frequently engaged in producing and selling clocks, watches, surveying instruments, and other artifacts.

After approval of the U.S. Constitution in 1789, market activity expanded geographically as western settlements spread beyond the Appalachian Mountains. Markets also became more integrated as new transportation developments (i.e., canals, steamboats, and railroads) linked formerly separated areas. One of the earliest bell founders who benefited from these developments was Paul Revere. Armed with his knowledge of the operations of the Hobart foundry, he cast his first tower bell in 1792 for the Second Church in Boston. He produced his masterpiece, a bell for King's Chapel in Boston, in 1816. The prolific output of the firm during its thirty-six year history testified to the quality of its products. Revere and his descendants cast 467 church bells between 1792 and 1828, as well as innumerable ship, courthouse, school, factory, and town crier bells.[12] They were sold mainly in New England, but also in several states across the country and as far away as Singapore. Operating as the Revere Copper Company after 1828, the firm occasionally made undated tower bells. Given its output, the Revere firm was arguably the first large bell foundry in America. Two apprentices of Paul Revere—Major George Holbrook and William Blake—eventually left his employ to establish other well-known Massachusetts bell foundries in Brookfield (1797) and Boston (1823), respectively.

Hudson-Mohawk Bell Foundries Emerge 1800-1860

Bell Founding in the Hudson-Mohawk region began shortly after the turn of the nineteenth century. Between 1808 and 1860, three large bell foundries commenced operations in the region. By 1860, only two firms remained in business—the Meneely firm in West Troy and the Jones foundry in Troy.

In 1808, Colonel Benjamin Hanks, who began casting bells in 1786, left Mansfield, Connecticut, with his son Julius to start a bell foundry in Gibbonsville (which became West Troy in 1836), near Albany. Julius stayed in Gibbonsville until 1825, when he moved across the Hudson River to Troy. He and his son Oscar concentrated on bells initially, but increasingly turned to clocks and surveying instruments, which constituted most of the business when the firm closed in 1845.[13]

Andrew Meneely—a former apprentice of Julius Hanks—began making bells and surveying instruments in 1826, the year he both married Philena Hanks (a niece of Col. Benjamin) and bought the Gibbonsville foundry.[14] The Gibbonsville and Troy foundries were poised for growth, given their strategic locations near the beginnings of the Champlain and Erie canals (completed in 1823 and 1825, respectively) at the junction of the Hudson and Mohawk rivers. The canals, relative to land conveyance, allowed both raw materials and heavy manufactured goods—such as bells—to be transported more cheaply over greater distances. Several short-haul railroads, constructed over the next three decades, further enhanced the transportation advantages of the region.

After Andrew Meneely died in 1851, his sons Edwin and George took over the business. James Hitchcock, a cousin of the Meneely brothers and the foundry foreman, left the firm a year later and opened the Troy Bell Foundry with Eber Jones. This operation became Jones & Co. in 1857, when Hitchcock retired.

Some lesser-known bell foundriesalso operated in or near the region. Lewis Aspinwall ran a small foundry in Albany from 1823 to 1848. He was known to have cast bells for churches in Albany, Rochester, and the hamlet of Oak Hill in Greene County.[15] Just outside the Hudson-Mohawk region in Greene County, Beelzebub Barton cast church and sleigh bells in South Cairo for an unknown time in the early nineteenth century.[16]

Although tower bells comprised most of their business, the Meneely firm and the Jones foundry also cast innumerable academy, factory, fire alarm, depot, locomotive, plantation, school, ship, and steamboat bells.

Several bell foundries also emerged outside the Hudson-Mohawk region in the first half of the nineteenth century, especially in various cities that had excellent transportation facilities. William Greene of Cincinnati, Ohio, opened one of

the earliest foundries in 1817, the Cincinnati Bell, Brass, and Iron Foundry. Other well-known Cincinnati firms included the Buckeye Bell Foundry, established by George W. Coffin in 1837 (operating as the E.W. Vanduzen firm after 1865). This firm made the heaviest tower bell in America in 1896, at 17.5 tons, which hangs in the belfry of St. Francis de Sales Church in that city.[17] George L. Hanks—a nephew of Benjamin Hanks—continued a family tradition when he opened the Cincinnati Bell Foundry in 1842.

Baltimore, Maryland, had two known foundries. Joshua Regester began his foundry operation in 1844; he made both tower bells and plumbing supplies. Henry McShane, an apprentice of Regester, opened his firm in 1856.[18] St. Louis, Missouri, had at least five bell foundries before 1860. Among the owners were David Caughlan, in business from 1853 to 1866, and Johann Stuckstede, who began operating in 1855.[19] Other regional bell foundries of this era included H.W. Rincker, who opened for business in 1849 in Chicago, Illinois; Joseph Bernhard, who began casting bells in 1845 in Philadelphia; the Fulton Brass and Bell Foundry, which started in Pittsburgh, Pennsylvania, in 1832; and W.T. Garratt, who commenced operations in 1851 in San Francisco, California.[20]

Although most tower bells were made of bronze, cast steel bells began to appear shortly before 1860. The foundry of Charles S. Bell, in operation from 1858 to 1974, was the most notable producer. The Meneely West Troy firm, along with other bronze bell casters, criticized cast steel bells as having a harsh and discordant sound and being more liable to break because of the metal's hardness.[21] Nevertheless, small rural churches often purchased these bells since they were less expensive than bronze bells.

Neither the Hudson-Mohawk bell firms, nor any other bronze bell founders across the country, made handbells. The major firms specializing in these included Rowland Mayland of Brooklyn, Edward Street of Hartford, and Joseph Deagan of Chicago.[22] Currently, handbells are made by Schulmerich Carillons of Sellersville, Pennsylvania, and Malmark of Plumsteadville, Pennsylvania.

East Hampton, Connecticut, known as "Belltown U.S.A." by the early twentieth century, had numerous nineteenth-century bell makers. These firms specialized in sleigh, cow, fog, dinner, bicycle, and other small decorative and functional bells.

The bell founders that operated across the nation up to 1860 generally had few or no competitors. As mentioned, in the Hudson-Mohawk region the Andrew Meneely firm of West Troy competed only with the Hanks foundry in Troy during the 1830s and 1840s.[23] Between 1845 and 1857, the Meneely firm had a local monopoly until the arrival of the Jones facility.

Unfortunately, no business data regarding the Hudson-Mohawk firms could be obtained either from federal census data or the firms themselves for the period 1810-1860. Nevertheless, it seems, (according to *The Plough, The Loom and The Anvil),* that the West Troy Meneely facility had become a notable producer. During its first quarter century of operation from 1826 to 1851, the firm produced 8,274 bells, mostly tower bells. Most of these were sold in the United States, but the firm's international reputation was evident in its sales to Canada, the West Indies, Mexico, and China.[24]

Despite its famed reputation for quality, the West Troy firm went bankrupt in 1857 due to competitive pressures from the Jones Company and mismanagement by the sons of Andrew Meneely. The firm's closing was avoided when their mother, Philena, provided both management advice and financial support. It was finally solvent by 1863.[25]

Innovation and National Expansion 1850-1900

Between 1850 and 1900, the tower bell industry in America experienced significant changes in product development, technological improvements, and competitive conditions—with the Hudson-Mohawk firms playing leading roles. The end result was that the Hudson-Mohawk firms had achieved national prominence by the end of the nineteenth century.

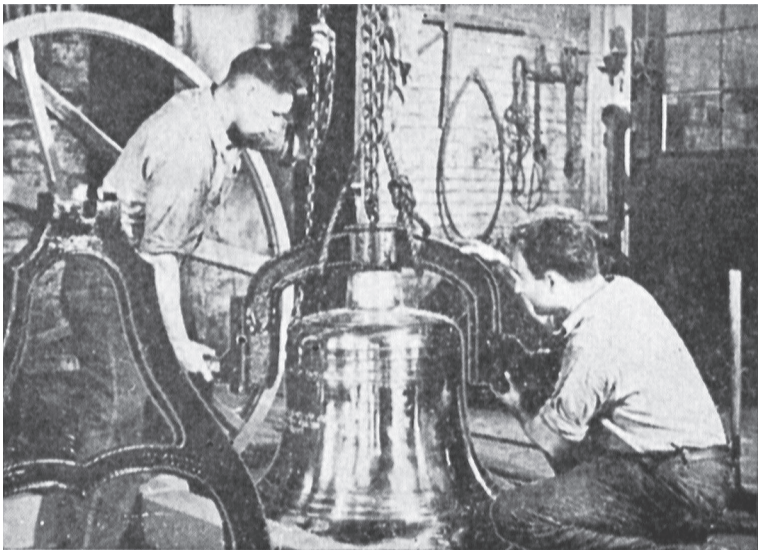
After 1850, many American tower bell makers extended their offerings to include peals and chimes. A peal is a set of two to seven (commonly three or four) swinging bells using a major chord of the first, third, and fifth notes. Before 1850, peals of bells in America were generally imported from English firms, such as Whitechapel. Meneely of West Troy cast one of the first peals made in America, which was sold to a Kingston, Ontario, church in 1848.[26] A chime, a set of eight to twenty-two stationary bells in a major scale, was produced in greater quantities. The Jones foundry was among the first to cast chimes, producing a nine-bell set for St. Stephen's Episcopal Church in Philadelphia in 1853. The West Troy Meneely foundry also claimed it had produced one of the earliest chimes, a nine-bell chime cast in 1850. It was exhibited at a fair of the American Institute in New York, but apparently was never hung anywhere.[27]

An important breakthrough in bell hanging occurred in 1855 when George W. Hildreth of Lockport obtained a patent, later held by the Jones foundry, for an "improved mode of hanging bells" using a rotary yoke. Under the old method, the clapper, located inside the bell, would hit the same opposing sides when the bell swung. The rotary yoke, emanating from the frame from which the bell hung, now allowed the clapper to hit other parts of the circumference to help prevent

Pouring a cast at the Meneely Foundry, c. 1937

breakage.[28] George W. Meneely of the West Troy foundry also received a patent for rotary yoke improvements in 1868.[29]

The Jones foundry also secured patents for improvements in the tuning of bells, an operation especially needed in the casting of chimes. Eber Jones believed that the proper tone of a bell could best be achieved through an improvement in the casting of the inner and outer molds (i.e., the core and the cope) by providing more uniformity in the thickness of the bell metal so there was more accuracy in how the perforated molds were centered and placed. He received a patent for this advance in mold preparation in 1855.[30] Octavous Jones, the son of Eber, was awarded a patent in 1870 for improvements in the machinery used for turning the inside surface of a bell to enhance its final tuning.[31]



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Checking the fit of the yoke, Meneely Foundry

Federal census data shows that the number of tower bell firms remained relatively constant at ten to fifteen producers between 1860 and 1890, with most regional areas having anywhere from one to four firms competing at any one time. However, the value of all types of large bells produced rose from $334,520 to $540,506.[32] The major reason for the increase in the value of these bell products was that most new churches constructed between 1850 and 1890 wanted a tower bell. U.S. census data shows that in 1850 there were 38,061 church buildings in the nation. By 1890, the number had risen to 142,521, with most of these churches built by Protestants—particularly Methodists, Baptists, and Presbyterians.[33] Although no specific data is available, additional tower bells were ordered for various public and private buildings, such as government offices and educational facilities, as urbanization intensified across the nation in the late nineteenth century.

In the Hudson-Mohawk region, competition increased with the opening in 1869 of the Clinton H. Meneely foundry in Troy. Denied a partnership with his brothers in the West Troy foundry, Clinton Meneely began casting bells of all sizes and shapes with his brother-in-law, George Kimberly. The ensuing bitter rivalry between the two Meneely foundries culminated in a lawsuit initiated by the West Troy firm charging that Clinton Meneely had illegally used the family surname for commercial reasons. The New York Court of Appeals, the state's highest court, ruled in 1875 that Clinton Meneely had the right to use his last name for commercial purposes. The court said that the family surname was not an exclusive

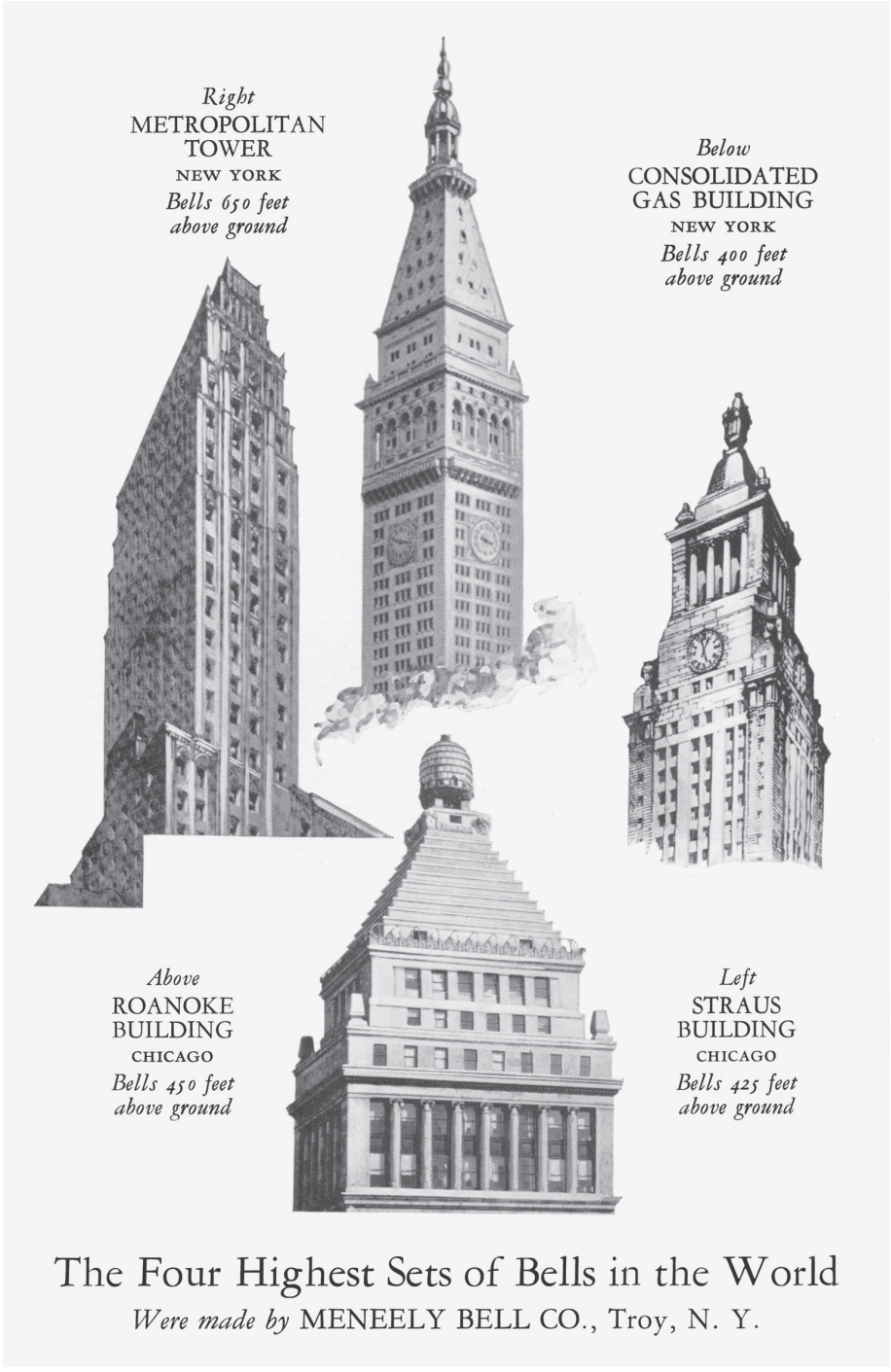
trademark that could be used to prevent another firm with the same name from conducting lawful business practices in the same industry.[34] This ruling became a landmark decision in trademark litigation.

The Clinton Meneely foundry was known for its many replicas of the Liberty Bell. It cast its first reproduction in 1876 (the Centennial Bell) for the Independence Hall belfry in Philadelphia. A second Liberty Bell reproduction was made in 1893 for the World's Columbian Exposition in Chicago. Another well-known replica was the Women's Liberty Bell, cast in 1915 for the Suffragist movement.[35]

After relying on imports of copper and tin from Britain since the eighteenth century, the Hudson-Mohawk bell founders—along with many of their competitors—turned to various U.S. sources of supply in the nineteenth century. Starting in 1840, copper mines opened in the Upper Peninsula of Michigan and dominated production until the 1880s, when deposits in Montana and Arizona became available.[36] As for tin, nineteenth-century imports were obtained from the Straits Settlements in Malaysia. The Hudson-Mohawk bell founders purchased both metals through various brokers. For example, the West Troy Meneely foundry worked with the New York City firms of Phelps Dodge, D. Houston, J. H. Ackerman, and Bunting Brothers.

The development of an intercontinental railroad network and the telephone system in the late nineteenth century further facilitated the growth and integration of national markets across the country. Many small firms in highly competitive consumer goods markets sought to meet the increased demand for their products by expanding their plant sizes to take advantage of economies of scale (i.e., the building of larger facilities that could utilize mass-production techniques to reduce various costs). Mergers with competitors also were undertaken to acquire more efficient facilities and consolidate the market position of the combined entity.

Precluded from achieving economies of scale because of their centuries-old processes and wishing to remain independent, the Hudson-Mohawk bell founders—and some of their competitors—turned to various marketing strategies to increase national sales and gain a larger market share. One of these efforts involved wider distribution of catalogs. These publications generally included a description of any improvements made in bell casting; a listing of various types of bells made by weight and diameter; the price of the hangings; the conditions of the warranty; and testimonials from satisfied customers. Another marketing ploy was to place small advertisements in local or regional publications, especially of a religious nature, scattered across the country. To reach prospective buyers, Meneely of West Troy, for instance, employed various advertising agents such as



Page from Meneely Bell 1937 Catalog

N.W. Ayer and Son of Philadelphia and Charles A. Clegg of New York City. In addition, the two Meneely firms periodically presented their tower bells at international exhibitions and fairs. Any prizes or awards received at these venues were immediately publicized.

The severe competition for regional and national sales dramatically altered the competitive landscape. Among the foundries that closed were the Holbrook firm in 1880 and the Jones Company of Troy in 1887. By 1900, six producers dominated the national market for tower bells: the two Meneely firms, McShane, Vanduzen, and two Stuckstede firms (Stuckstede and Bro. opened for business in 1890).[37] Unfortunately, federal census data limitations prevented market share calculations for these firms for the period 1860 to 1900.

End of an Era 1900-1952

The favorable economic conditions that the tower bell industry enjoyed during the last half of the nineteenth century was undermined by several adverse forces in the first half of the twentieth century. These negative factors included a slowdown in demand for tower bells, the introduction of electronic substitutes, increased foreign competition, and governmental restrictions on the use of metals. The result of these changes was that most of the major, and many minor, bell founders had disappeared by 1961.

Before conditions threatened their existence, however, both Meneely firms had some notable early twentieth-century successes. The Troy firm installed "the largest school bell in all the world," weighing 7,000 pounds, at the City College of New York in 1906.[38] Two years later, the firm mounted a peal of four bells outside the forty-sixth floor of the Metropolitan Life Insurance Co. in New York City. At 650 feet above ground, they are the highest bells ever hung in the world.[39]

The West Troy (City of Watervliet as of 1896) Meneely foundry further enhanced its reputation by casting the first American carillons. They were installed in churches in Danbury, Connecticut, in 1928; Holland, Pennsylvania, in 1930; and in 1931 in Storrs, Connecticut, and Valley Forge, Pennsylvania. A carillon is a musical instrument consisting of twenty-three or more bronze bells that are hung stationary in a tower. Before Meneely began casting them, carillons had initially arrived in America in the nineteenth century from France, Belgium, and England. The Meneely firm credited its tuning discoveries made in the late nineteenth century for their success in building these instruments.[40] Before electrification, carillons were played using a keyboard with wooden levers and pedals wired to the clappers. Two other firms are also known to have made them. The Troy Meneely foundry cast a carillon for a tower in Dayton, Ohio, in 1942 and

the Vanduzen foundry cast a carillon in 1933 for a tower in Glendale, Ohio. Many of the major bell founders, including the Meneely firms, also cast one or more bells as part of carillons that were made by foreign firms for installation in the U.S.

After experiencing advantageous growth in the late nineteenth century, the entire (i.e., tower and other bells) U.S. bell industry entered a period of rapid decline after 1900. Federal census data shows that the value of all bells produced rose from $1,023,010 to a peak of $1,247,730 between 1870 and 1900. After 1900, the aggregate value of total bell output dramatically declined, reaching $145,160 in 1939—the last year of federal data for traditional bells cast.[41]

One major reason for the eventual failure of the Meneely firms and other bell founders was the slowdown in demand for traditional tower bells. The number of new churches constructed between 1906 and 1916 increased from 210,418 to 226,718, a gain of 7.7 percent; but ten years later, the number had risen only to 232,154, a 2.4-percent gain. By 1936, church construction had fallen to 199,302, a decline of 14.2 percent.[42] In addition, the need for tower bells in governmental and private facilities had subsided. For example, demand for fire alarm bells had declined with the growing use of sirens after World War I.

The technological development of electronic sound further weakened the demand for tower bells. As early as 1899, a keyboard that had an electrical connection with magnets for controlling valves of air cylinders was used in playing chimes in St. Patrick's Cathedral in New York City. In 1926, the Verdin Company of Cincinnati, Ohio—known primarily for its tower clocks—developed an electric bell-ringing device that gave a tower bell a push before letting gravity take over the swinging. In the 1930s, the Troy Meneely foundry developed both an electrical vibration meter to detect flaws in tonal quality and an electrical ringing system that allowed sets of tuned bells to be played from a console that activated electromagnets causing specially designed clappers to swing inside the stationary bells.[43]

At least since the onset of the Great Depression, American bell founders had complained that foreign labor costs put them at a competitive disadvantage. After seeking tariff protection, they were rebuffed in a 1931 report issued by the U.S. Tariff Commission. The commission did not recommend any changes to the duties on tower bells and chimes, contending that bell founders had not been harmed by imports. The commission further contended that imported carillons did not pose a threat since there was no American industry.[44] Despite this setback, all of the major bell founders survived the Great Depression, except for the Henry Stuckstede firm, which closed in 1931.

World War II and the Korean Conflict created more formidable difficulties. All types of U.S. bell production, except for ships, ceased during World War II as copper and tin use was diverted to the military. After World War II, American bell founders again had to deal with foreign competitors. They now had both lower labor costs and new offerings of more advanced electronic substitutions.[45] Foreign imports—primarily from England, France, and Holland—gained a further advantage at the start of the Korean Conflict in 1950, when the U.S. government once more imposed metal restrictions on domestic bell founders.

The combination of metal restrictions and foreign competition proved to be insurmountable for the Meneely firms. Both ceased operation in 1952.[46] The Vanduzen foundry, experiencing similar conditions, had closed two years earlier. Stuckstede & Bro. continued to produce tower bells intermittently after 1940, but finally closed in 1961.

The McShane foundry, the last of the major casters of traditional bronze tower bells, currently remains in business. It does not cast any large tower bells, but relies on its service business of refurbishing, repairing, and electrifying old bells. Some other firms such as Maas-Rowe Carillons, Inc. of Escondido, California, (established in 1922), and Meeks, Watson and Co., of Georgetown, Ohio (established in 1990), are still willing to cast bronze tower bells, though these specialize in electronic bell-sounding devices. Verdin, the tower clock maker, has been casting tower bells up to 700 pounds since 1994.

Conclusion

The Hudson-Mohawk bell founders were part of an important niche industry. Beginning in the early nineteenth century and continuing for almost 150 years, they produced thousands of tower and other bells that were sold both domestically and in many foreign markets. The two Meneely firms, in particular, rose to national prominence because of the supreme quality of their products, their technological inventiveness, and their marketing skills. Their demise marked the end not only of a notable period of industrial creativity in the Hudson-Mohawk region, but as part of the passing of a uniquely traditional craft that could trace its immediate roots to Western Europe.

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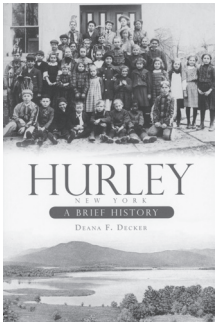

Hurley, New York: A Brief History
By Deana F. Decker
(Charleston, SC: The History Press, 2009)
144 pp. $19.99 (paperback). www.historypress.net

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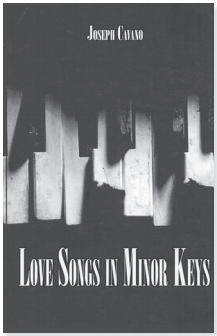

Love Songs in Minor Keys
By Joseph Cavano
(Charlotte, NC: Central Piedmont College Press, 2009)
166 pp. $13.99 (paperback).
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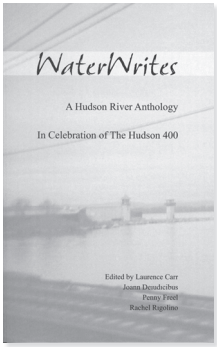

Water Writes: A Hudson River Anthology In Celebration of The Hudson 400
Edited by Laurence Carr, Joann Deiudicibus, Penny Freel, and Rachel Rigolino (New Paltz, NY: Codhill Press, 2009)
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—*Andrew Villani*

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