



The WAYZGOOSE GAZETTE

A QUARTERLY NEWSLETTER OF THE INTERNATIONAL PRINTING MUSEUM • BUENA PARK, CALIFORNIA

VOLUME 6, NUMBER 1

APRIL, 1996

Ottmar Mergenthaler Finally Receives His Honor from the United States Post Office

Years after our cultural icons Elvis and Madonna received national honor from the United States Post Office via a stamp, the Postmaster has finally decided to recognize an inventor whose machine singlehandedly revolutionized the world. The appearance of Ottmar Mergenthaler's Linotype machine in 1886 would correctly be considered the beginning of what has been termed the Information Age; for with this marvelous machine came an explosion of printing and literacy throughout the world. Eighty-eight years after the introduction of the Linotype machine, the Los Angeles Times was still utilizing Ottmar Mergenthaler's technology to produce one of the largest daily newspapers in the country.

Though tradition ascribes Thomas Edison to have stated the Linotype to be the "eighth wonder of the world," the Postal Service has never considered Mergenthaler important enough in American history to warrant his appearance on a postage stamp. For many years there have been numerous calls for such a stamp, spearheaded by the printing historian and former Linotype operator Carl Schlesinger of New Jersey. When you consider their selection of Elvis and Madonna and rejection of Mergenthaler, it becomes an almost humorous example of our modern society and values. "Mergenthaler just would not have the appeal to sell many stamps," they kept replying.

This present chapter of Mergenthaler's story continues the saga of a genius inventor who never fully received the rewards of his labor. In 1872, young Ottmar immigrated from a small German town to America. The skills he had acquired working with clocks in Germany helped Mergenthaler to secure a position in the shop of an instrument maker in Washington, D.C., at the age of 18. This city was a center for many of the great inventors and inventions of the world at this time. And it was in this creative



Ottmar Mergenthaler, circa 1897, inventor of the Linotype Machine in 1886 which revolutionized the world.

environment that the inventive talents of Mergenthaler were developed.

By this time in the 19th century, the printing industry had seen the advancement of technology in almost all aspects of the trade except that of type setting; type was still tediously set and distributed by hand, the same as it was done since the days of Gutenberg. A race, of sorts, had developed to invent a machine that would solve this typesetting problem. Many entered this race with little success, including such well-known figures like Mark Twain who invested heavily in a machine he thought would secure him a sizeable fortune. The honors, however, went to Ottmar Mergenthaler who in 1886, after ten years of development, gave the world the first Linotype machine, one of the greatest inventions of mankind since Gutenberg's perfection of movable metal type.

Mergenthaler spent tens years developing that first Linotype, and as a typical inventor did not have the personal resources to capitalize on his ideas. A syndicate of newspaper owners, headed by Whitelaw Reid of the New York Tribune, purchased a controlling interest in the Mergenthaler Company. Upon completion of the first batch of over 100 machines, the syndicate proceeded to denounce the Linotype machine as a failure in the very newspapers which were using them successfully! It was their desire to limit the use of the Linotype machine to their newspapers only, effectively creating a monopoly with the new technology.

With Whitelaw Reid in charge of the corporation, Mergenthaler's fortunes (or hopes of fortunes) quickly dissipated. From January of 1888, the company's relationship with its inventor became increasingly strained. As President, Reid used every maneuver possible to prevent payment of royalties to Ottmar Mergenthaler, all the while the inventor continued the improvement and perfection of the Linotype machine to the benefit of the company. Mergenthaler eventually resigned from his position within the company and continued his developments at his own factory (financed by friends).

The ultimate insult to this great inventor came from Phillip Dodge, president of the company after Whitelaw Reid, in a letter to Mergenthaler dated 19 October 1895:

"...it has been found that the present name (Mergenthaler Printing Company) is so very long as to cause us much inconvenience. We find almost daily that the first part of the name is misspelt in check, drafts and other papers...the writing of this name, as frequently happens four or five hundred times a day by one person, involves a serious amount of labor. All things considered, it is thought best to call the new company simply the Linotype Company...there is no desire on our part to detract from the credit which belongs to you...."

Frederick Ives and the Beginnings of the Halftone Dot

From the time of Gutenberg until the late 19th century, the majority of reproduced images were wood cuts and engravings. These engravings were well suited for the letterpress process with their ability to be printed along with type; also, a line engraving gives a graphic balance to type. The skills of these engravers over the centuries were amazing—to look at the fine line details achieved in many 18th and 19th century engravings gives you an appreciation for the craftsmanship applied to this end of the trade.

But consider the time required to create an en-

For Mergenthaler, this was the most painful correspondence yet from the Company. He replied:

"To strike [my name from the company] now will be a serious and ill-deserved blow and reflection upon me, and the pain caused thereby will be mitigated but little by your assurance that the blow is not intended to hurt me...Hoping that I may be spared the intended humiliation, I am, yours truly, Ottmar Mergenthaler."



The postage stamp honoring Ottmar Mergenthaler as a Pioneer of Communication, issued February 22nd, 1996.

When Ottmar Mergenthaler died four years later from tuberculosis at the age of 45, he was an embittered man with the Mergenthaler Company. After providing a machine which revolutionized the entire printing and publishing industry around the world, this great inventor received but a fraction of fortunes and honor due him. Mergenthaler's name and the importance of his machine to Western civilization are rarely, if ever, mentioned in schools or history books. One hundred and ten years later, the Post Office has seen fit to finally give him the basic national honor of a postage stamp!

And now, head down to your local Post Office and ask for Mergenthaler's stamp. Maybe if enough of us do this, the Postmaster might get the idea that printing is a large and important industry in this country!

graved block suitable for printing. Depending on the size of the image or the quantity of detail in it, the work can take days or weeks to complete. In looking through a wide selection of printed matter between the days of Gutenberg and the 19th century, you will notice an emphasis on type and a sporadic use of engravings. There were, of course, books with large quantities of illustrations, but these tended to be more costly to produce. A good example of a cost-saving use of engravings is a 15th century book on the history of the world. Rather than engrave about

eighty different portraits of famous individuals, the printer used the same engravings numerous times and simply changed the name in the caption!

A newspaper in the nineteenth century would be an unfamiliar sight for most modern people because there were few illustrations in them. On occasion, such as news of a war battle in a distant place, artists would hurriedly engrave an illustration of what the scene might look like and maybe even a portrait of the general in charge, though with little resemblance



FREDERICK E. IVES (1856-1937) Halftone process

Frederick Ives, inventor of the halftone dot, was also honored by the Post Office as a Pioneer of Communication.

of the actual man. Towards the end of the century, demand increased to accurately, efficiently and economically produce images for these papers.

In response to this demand, the engraving trade began to shift away from work produced wholly by hand toward forms of mechanization. The introduction of photography in the mid-nineteenth century opened the possibilities for the direct reproduction of an image rather than an artist's conception of it. Early pioneer's of the art, such as Dageurre and Fox Talbot experimented with methods of photo-mechanical reproduction; this was mostly out of a desire to save their earlier photos which were fading.

The problem in photomechanical reproduction has always been the reproduction of a full range of tonal values. From his experiments in 1852, Talbot realized that the tones in a photograph could be intelligibly reproduced by exposing the original through some form of a fine line screen. This was the beginning of the development of the halftone screen. But rather than being the invention of one person only, the halftone screen was the work of several inventive minds, working separately and in different locations. A major breakthrough came in 1885 when the American Frederick Ives successfully developed a glass cross-line screen; the screen was made with two pieces of glass with parallel lines on each, crossed at right angles.

The first halftone published in a newspaper is credited to Stephen Horgan in *The Daily Graphic*. Horgan was employed by the paper in the photomechanical department where he spent many years experimenting with halftone techniques. It was the issue on March 4, 1880, when he published the first halftone, made from a photograph of "Shantytown." The halftone effect was created by use of a single-line screen (rather than a cross-line), which gave the image a somewhat coarse appearance. The use of a cross-line screen, such as Ives', would have been preferred by Horgan but the pressmen on the paper refused to printed with it, saying it could not be done! It would be years before pressman would adapt to the new techniques for printing photo-engravings along with type.

With the introduction of photo-mechanical reproduction, the wood engraving trade now faced virtual extinction. Some felt the new techniques to be only a fad which would soon disappear; it was evident, however, that photo-engraving was to have a lasting role in the printing industry. As a response to the pressure placed on their commercial art, engravers by the turn-of-the-century began to combine their skills with photo-engraving, producing what was called "engraved halftones." In this process, the halftone block would be given to an engraver who would use his skills to emphasize certain details and create a cleaner look to the image.

The halftone screen and dot have been the backbone of modern printing. In our age of visual communication, one can hardly pick up a piece of printing that does not use a halftone image. Over the years, the quality of the halftone dot has improved considerably, and the use of lithography has made the reproduction of photographs an exacting art. But place yourself back in New York on March 4, 1880, around 9:00 a.m., and imagine your reaction to the first reproduction of a photograph in your daily newspaper; it's a picture of "Shantytown", a place you had just visited the other week! What will they think of next?

In February of this year, the Post Office introduced a new series of stamps honoring the "Pioneers of Communication." One stamp recognized Frederick Ives for his work in developing the halftone dot. Virtually every picture reproduced with printing in the world today utilizes his invention—Ives has had a significant impact on communication lasting beyond even Mergenthaler's. Unfortunately, Frederick doesn't have nearly the following as old Ottmar, but it's nice to know he will have a permanent place in postal history.

Notes from the Curator

The year 1996 has been the busiest to date in regards to our Educational Tours. Since January, we have averaged 150 students per day on our different tours, from schools in each of the five Southern California counties. Our newest tour, Pages of Discovery: Ben Franklin's Science Tour, debuted in January and has been gaining in interest among Junior High classes.

The tour includes a tour through the collection to explore the five basic machines from which other complicated machines are derived: the wheel, the lever and fulcrum, the pulley, the counterweight and the inclined plane. After learning about the historical applications of these machines, followed with hands-on demonstrations, the students are shown the same principles applied on the various machines in the museum, such as the wonderful Linotype.

After this specialized tour through the galleries, the students are ushered into Ben Franklin's workshop to meet the great scientist and participate in many of his experiments. With the help of Franklin's 18th century static electric generator (standing five feet tall), the students recreate many of Franklin's famous experiments with electricity, learning about its properties and its applications.

With the addition of this new Science Tour, the Printing Museum now has a full range of educational tours, from American and World History to Literature and Humanities to Civics and Constitutional Studies. If you have contact with any school or youth groups, such as Scouts or Summer Camps, give us a call at the Museum and we will send along one of our educational brochures. We can always use your help in spreading the word about the Museum.

The Museum's Research Library of Printing History continues to grow, with current volumes numbering around 4,500. Recent additions include a number of 19th and early 20th century printing trade journals, which have great value to us for research. Among the six boxes of books donated by Lennart Alhkvist, former printer in Mountain View, CA, were a large quantity of such publications from 1915 to 1930: Inland Printer, Pacific Printer, Linotype Bulletin, Linotype News, and the American Printer.

Other additions include a donation by Ernest Lindner of several rare bound volumes of the Inland Printer from the 1880's to 1900; the American Type Founders Bulletin for the Los Angeles branch office, donated by Bill Soucy; several books on 19th century typesetting machines from the Richard Huss Library (a printing historian); several type specimen books for the Linotype machine and the Linograph.

The collection of these items becomes very important in developing the Printing Museum as a national institution with primary research material. As the collections grow, we have an increasing number of individuals and researchers accessing the Museum's holdings. Trade publications like the ATF Bulletin or the Linotype Bulletin, help to give us insight into the industry at a particular time, what equipment was used in certain shops, illustrations of printers, stories about current events and more. The Linotype Bulletins before 1920, for example, are helping us to document the use and popularity of the Linotype Junior, a rare birdcage-like typesetting machine recently added to the collection. As a Friend of the Museum, you have access to the library, whether for research or just the enjoyment of looking at some great old books and magazines.

Another wonderful donation made recently was by Robert Newcomb of Illinois. A little toy card press, the Maryland No. 2, circa 1920, which can only print a business card-size sheet, arrived in the mail one day. Probably even more interesting than the press was the original box it was sold in, complete with printed sales information and an illustration of the press on the side. The press has been added to the Museum exhibit about hobby presses used by small children for over a century (and some not-so-small children!).

And lastly, I would like to mention a large donation of Mohawk Superfine paper by the Mohawk Mills, which this and future Wayzgoose's will be printed on. As an archival paper, it should last more than 300 years. And as a printing historian, I love that idea!

Thank you again for your continued support as a Friend. Your involvement in the Museum, whether large or small, is very important to us as we continue to preserve our collective history and present it in fascinating ways to the public.

THE WAYZGOOSE GAZETTE

is issued for the Friends of the International Printing Museum, founded by David Jacobson and which features the Ernest A. Lindner Collection of Antique Printing Machinery.

Membership into the Friends is \$25 annually and goes to support the programs of the Museum.

The term "wayzgoose" refers to a traditional annual printers' celebration, dating back to the 17th century.

8469 Kass Drive, Buena Park, CA 90621
(714) 523-2070

Mark Barbour, curator and editor

Copyright 1996—The International Printing Museum