



LINN BOYD BENTON
1844-1932

In recognition of the benefits showered upon the industry through the genius of this great and now departed figure, inventor, among other things, of the punch-cutting machine which revolutionized typefounding, this position of eminence is given the last portrait for which he sat. Look upon the kindly, intelligent, understanding features; read the story of his interesting career, which begins on page 53. Remember him along with Hoe, Mergenthaler, and Lanston as one of the truly great characters in the industry's march of progress

Achievements of Linn Boyd Benton

Vital to Industry's Progress

WHILE the poet of former days sang about great men who, departing, might leave behind them footprints on the sands of time, the great man of the printing industry who quietly departed this life at Plainfield, New Jersey, on July 15, left behind him impressions of his handiwork upon the type matrices of the whole printing industry. Linn Boyd Benton is a name that should and will rank in the annals of the printing industry with the names of other great men whose devotion to their work and consequent achievements placed our industry in the dominant position it holds today.

Intimate friends of Mr. Benton say that while his inventions have been of inestimable value to the development of modern type manufacturing, yet his extreme modesty was responsible for his being so little known among those men whose pleasure and livelihood are dependent upon the graphic arts. These friends, in appraising his value to the industry, say that what Edison was to the general use of electricity, and what Bell was to the development of telephonic communication, Benton was to the modern use of type in the graphic-arts industries.

Without use of the inventions of Benton, the typesetting machines of Mergenthaler and Lanston probably would have been abandoned as impracticable, like so many proposed machines the discarded wreckage of which marks the path of mechanical progress all through the history of the industry.

The story of the life and work of Linn Boyd Benton was told in an article by Henry Lewis Bullen which appeared in *THE INLAND PRINTER* for October, 1922. In that story Mr. Bullen described the dilemma of the stockholders of the Mergenthaler Linotype Company, who had invested several million dollars in the machine and then discovered that the replacement of the broken punches made the use of the machines of questionable value. Mergenthaler had relied upon hand punch-cutters, not realizing

that there were not enough of these in the whole world to make punches for one-tenth of the matrices required for the linotype. Because punch-cutting was an art which few men could master, and the cleverest mechanic was not able to cut two letters precisely alike, almost every line of type which was cast on the first linotype machines used in composing rooms would contain the equivalent of wrong-font letters.

About the time when Philip T. Dodge and Whitelaw Reid, chief backers of the

Mergenthaler company. In a subsequent report to the directors of the company the statement was made that "by the acquisition of the Benton punch-cutting machine we have been enabled to overcome a seemingly insurmountable obstacle to our success."

Commenting upon this use of Benton's invention, Mr. Bullen remarked: "Nothing is surer than that without the Benton machine, or a similar invention, apparently not in any other man's mind, the Mergenthaler Linotype Company could not have recovered the cost of its long series of experiments before its patents had expired—if at all. The same is true of the Lanston monotype machine, which also had to depend upon Benton's wonderful invention to make it practicable. Benton had accomplished greater things than he had ever imagined."

Now that we have referred to the importance to the industry of one of the twenty patents obtained by Mr. Benton, eighteen of which relate to the art of typesetting, it might be interesting to readers to understand how he became associated with the typefounding business in which he was destined to achieve such remarkable success.

Linn Boyd Benton was born in Little Falls, New York, May 13, 1844. His father, a lawyer by profession, became editor of a newspaper in practice, and moved to Milwaukee in 1853, where he became the editor and part owner of the then Milwaukee *Daily News*. A former partner of the elder Mr. Benton, a J. A. Noonan, also moved from the East to Milwaukee, where he became a partner in a paper mill and established what became known as the Northwestern Type Foundry. Young Benton became familiar with typesetting by reason of his association with the printers in his father's newspaper office, and later learned the trade in a newspaper office at La Crosse, Wisconsin, in which city his father had been made a judge of the circuit court. However, young Benton decided to become a bookkeeper for a leather house.

LINN BOYD BENTON

May 13, 1844—July 15, 1932

In recognition of the benefits showered upon the industry through the genius of this great figure, some of whose achievements are here recorded, the seat of honor, as it were, in this issue is given over to his most recent portrait. Turn to the frontispiece (page 24), study the kindly, intelligent features, recognize that he worked to benefit you—even after years of practical blindness—until past eighty-eight, and remember him as one of the truly great in the industry's march of progress.—The Editor.

Mergenthaler linotype, realized its inadequacy to meet the needs for practical typesetting, R. V. Waldo, associate of Mr. Benton in the conduct of the typefounding firm of Benton, Waldo & Company, of Milwaukee, called at the office of the New York *Tribune* to offer a supply of the so-called "self-spacing" types developed and patented by Mr. Benton. Mr. Waldo, in his sales talk, referred to the fact that better stereotype matrices could be made with the use of these types because punches were uniformly cut with a machine of Mr. Benton's personal invention.

Mr. Waldo sold no type, and he returned to Milwaukee thinking that his visit to the East had been profitless. But soon afterward Mr. Dodge appeared in Milwaukee, and, after some preliminary experimental work, which he paid for, he made a contract with Mr. Benton by which Benton's machines were sold by

He later went to the Northwestern Type Foundry, of Milwaukee, as bookkeeper. When in 1873 this firm failed, Benton, with a partner named Cramer, bought the plant. A year later Cramer sold his half-interest, and the name was changed to Benton, Gove & Company. Gove died in 1882 and his interest was bought by Benton, who later sold one-third interest to R. V. Waldo, and the firm name became and remained Benton, Waldo & Company until 1892, when the business was one of twenty-three typefoundries which comprised the newly formed American Type Founders Company, now so widely known.

It was only after Mr. Benton became part owner of the typefoundry that he began the process of learning the business. As a bookkeeper he had trained himself to exactness in all his habits of thinking and working. As a typefounder he thought in terms of measurements down to .0001 inch. He applied his mania for accuracy to his business of typefounding, with the result that unit-width type faces were cut by him.

These types became famous among compositors of that time, who applied the term "self-spacing" to the Benton types. Tests indicated that compositors could save 20 per cent of their time with the new Benton product. Benton was granted a basic patent for making these unit-width types. All this development was achieved incidentally by Benton because of his dominant plan of inventing a typesetting machine.

In order to make progress in developing the typesetting machine, punches must be engraved for each of about three thousand characters to be used. Here was the big problem for Benton to solve. Punch-cutters—artists who could carve letters in steel, and had the right sense of proportion for the letters—were few and unavailable. The cost of making the punches, if the punch-cutters had been available, would have been prohibitive. Benton decided to solve his problem by developing a machine to do work which human hands had always done before. So in 1884 he put his first punch-cutting machine into successful operation. His second machine was easier to manipulate, and his third machine, patented in 1885, was the model which revolutionized the typefounding business.

The use of the machine in his own business resulted in his being able to

meet the increased demand for the Benton "self-spacing" types, which reduced composition costs in newspaper offices. Just as success was increasing, the deal was made with the Mergenthaler Linotype Company for the use of the machines in the process of making matrices for the new typesetting machine.

Until the formation of the American Type Founders Company, in 1892, the Benton engraving machine had not been used in any but the Benton, Waldo & Company foundry. This foundry was removed by the new company from Milwaukee to New York City, and Mr. Benton went along with it to serve the new firm as a member of the board of directors and as chief technical advisor. The value of his connection with the new organization, and of his inventions, was noted in an editorial concerning the formation of the new company which appeared in *THE INLAND PRINTER* soon after the completion of the new organization. In part the editorial said: "The new company has control of elaborate modern casting machines which make type in large quantities much cheaper than it can be turned out by machinery now used, and they claim that the product of their machines is superior to the ordinary type. They also own the system of punch-cutting by machinery, invented and patented by L. B. Benton of Milwaukee, which not only can furnish better punches but which largely reduces the cost of this most expensive element in the production of new faces."

In 1903 Mr. Benton became the manager of the general manufacturing department of the consolidated plant of the American Type Founders Company, at Jersey City, New Jersey. In this new position he applied his inventive genius to the task of improving most of the machinery and processes then used in type designing and manufacture. He also improved his own machine by which the punch, and the process of driving the punch to form the matrix, were eliminated. This was accomplished by engraving the matrices upon the Benton machine in intaglio.

Mr. Benton had been in active relationship with the American Type Founders Company until June 30 of this year, at which time he retired. His death two weeks thereafter, on July 15, was sudden, only twenty minutes elapsing from the time of his being taken ill until he

passed away. His achievements mark him as having been one of the great men of the printing industry.

In a recent autobiographical statement Mr. Benton said: "In 1890 I and my son, Morris, went to Washington to assist Lanston, then inventing the monotype machine, who had bought several of my machines, and to instruct his organization in the use of them. Since that date the monotype matrices have been made, both in this country and in England, on my machines or copies of them. Though a typefounder, I am fully appreciative of the great importance of the composing machines to the printing industry. It is a great satisfaction to me to have aided in their efficiency."

How Business Men Pay for Printing Obsolescence

By C. M. LITTELJOHN

To correct the public's notion that it can ever secure something for nothing—a fallacy tenaciously clung to despite all better judgment—is to perform a public service. Scouting this idea in the heads of any business executives who may possess it, the Western Printing Company, Seattle, has issued a broadside dwelling upon "Printing Obsolescence" the text matter of which reads as follows:

Many people believe that when they take orders to a printer downstairs under a bird store they're going to save money.

If they only knew the truth, they are not only paying a high price figured in *results per dollar*, but also are often paying an excessive actual price. Printing costs are all figured on the basis of *TIME*. Printers with out-of-date machinery, slow methods, and imperfect organization cannot hope—except by cutting the quality—to compete with prices in a highly efficient, modern high-speed shop.

You pay no *obsolescence costs* at the Western Printing Company. Up-to-date, modern machinery, the highly trained printing specialists, and perfect organization "high-ball" your order through the plant in the least possible time (consistent with good quality), and consequently at the *lowest possible cost*.

Let us prove it to you on your next order, whether it is large or small.

Thus a matter which apparently still persists in being mixed with obscure reasoning is made plain, and the direct advantages of modern printing machinery and modern methods are strikingly revealed. Failure properly to advise business executives of the possession of the finest mechanical devices for modern typography may mean neglect of opportunity, and business gained by default for obsolete printing machinery.