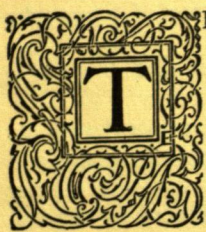


Saint Louis' Place on the Type Founders' Map

By N. J. WERNER



THE recent death in Saint Louis of its last active type founder, Charles H. Schok-miller, prompts me to give to printerdom a recounting of the influence this city has had upon the art and business of type manufacture. It may be well to write this record for the benefit of the future historians of typography or for the individuals who may at some time set themselves to the task of providing for us a long-needed, comprehensive encyclopedia of the graphic arts, to supplant the scanty books that long ago tried to fill this want and are now hopelessly out of date.

Hence, being in a large measure familiar with what has been done in Saint Louis in type founding lines, I shall make it my task to tell of the good things which its type craftsmen have done, what they started, have bettered, and have led others to do. The old-timers may not find anything new in what I have to tell, but I have a hope that it will freshen their memories and I believe it will be educational for the younger generation of printers to be advised of the large measure of improvement accomplished through the initiative of Saint Louisans, and what reasons the local printing craftsmen have for being proud of their loved city.

Before proceeding, I will say that it is almost axiomatic that the better one's tools and machinery are the lower will be the cost of production, which should make the story interesting to those who figure costs. It is sad to notice that there are still so many printers who do not seem to realize that the better their type is the cheaper they can do printing.

About the year 1875 there came to Saint Louis from the "hub of the universe" a young man who was destined to greatly revolutionize type foundry practice. This Bostonian was James A. St. John, who came west to start an agency for the old Boston Type Foundry. He began rather humbly, but his congeniality soon won him many friends, and his business grew so well and quickly that he induced an associate, Carl G. Schraubstädter, to come on from Boston and join him in establishing the Central Type Foundry, whose trade-mark, resembling two copper coins, may not yet be entirely forgotten among us.

Prior to Mr. St. John's day type was cast of a somewhat soft metal. His foundry astounded the type founding world as well as printerdom by announcing its use of a harder metal, to which was given the name "copper-alloy," into which Mr. St. John had introduced more copper than his competitors claimed was possible. That this type was really harder and wore longer than other type was soon demonstrated, and its popularity had the effect of waking up the other type founders, with the result that several came along with imitation alloys, while others hardened up their metals to a greater or lesser extent. This is count No. 1 for Saint Louis, as from here came the influence which made for harder, longer wearing type.

Our young printers can scarcely have an idea of nor appreciate the troubles their forerunners had in working with type bodies of former days, when every foundry had its own peculiar system of bodies, whose dimensions varied from the dimensions of its competitors. The vexations incidental to justification with these variant bodies would make too long a story, so I will advise the younger printers to ask their older colleagues to tell them about these trials. They will then appreciate how much better off they are today.

Shortly after the great Chicago fire, a foundry of that city was induced by a type dealer on the Pacific coast, Nelson C. Hawks, of San Francisco, to experiment with a new system of type bodies devised by him. In this system the pica was divided into twelve parts—"aliquot parts" he termed them—and each size in the older systems was to be replaced by one measuring a definite number of these parts.

This, the earliest point system attempted in this country, while appreciated by all who worked with it, met with scant recognition from the other type founders, the majority of whom opposed it and made all sorts of derision of it. It drifted along in a desultory way some fifteen years, and there seemed to be no life or go in it until Mr. St. John announced that his foundry would adopt the new system. The Central Type Foundry had by this time grown so much in size, popularity, and influence that all the other type founders fairly tumbled over themselves in their haste to follow suit. At a meeting of the Type Founders' Association at Buffalo in August, 1885, it was then formally adopted as the system of all. It is quite safe to say that if the Central Type Foundry had remained a conservative there would have been no leader whom the others were willing to follow, and perhaps we might not yet have today's American point system, which now prevails in England and its colonies as well as in this country. This is count No. 2 in my brief for Saint Louis.

Incidentally, I may mention that there was a possibility at one time of the evolution of a different system, one in which the pica was to be divided into eight instead of twelve parts, the eighth of pica being called a unit. Eight-to-pica and sixteen-to-pica leads would have been necessary adjuncts of this system. Two foundries were in line for the introduction of this eight-to-pica unit system, but the action of the Central Type Foundry killed the child while it was aborning, whereat we should be glad.

The old type bodies had peculiar names, which I need not list here. These names had no meaning in themselves as type measurements, and many a printer, old and young, wondered why such and such a body was given this or that name, there being nothing self-explanatory in any of them. The first maker of point system type kept on using the old names, applying them to the new bodies that came nearest in dimensions to the ones displaced. He argued—mossback that he was—that we should not discard the "grand old names," as he termed them. Some of these names were quite cumbersome, such as double great primer, two-line small pica, double paragon, two-line Columbian, two-line mignonette, etc. It occurred to the sensible folks of the Central Type Foundry that names designating the number of points a body measured would be immeasurably better, and so the names as we now have them were adopted. Though the new names were not novel, the Central Type Foundry was the first to persistently, consistently, and aggressively maintain their use. It "threw its hat in the ring" for them, and we have to honor it as the leader that induced the other fellows to help bring about the universal use of the point system names. Of course, some customs die hard, hence a few of the old type body names still linger—such as pica, nonpareil, and agate. The present vogue of measuring advertisement space still keeps life in this last name.

In earlier days matrices for casting type were produced by first cutting steel punches for each character and then driving these into slabs of copper, which were called "drives."

These were trimmed, filed, and fitted so they could be properly adjusted to the type molds. This cutting of steel punches was done by highly expert men and was very costly, which precluded the issuing of new type faces except at long intervals of time. "Drives" were often sold by one type founder to another. Later on matrices were made by an electrotyping process, which resulted in much so-called "piracy" among the type founders, who were addicted to stealing in this manner any face that was found to be popular. The electrotyping process, however, proved itself to be highly valuable in the production of original faces, these being first cut in a special type metal alloy by experienced engravers, who could achieve better results than the punch cutters. By this method the founders were able to issue new series more speedily and in greater numbers. It was at first supposed that fine, delicate faces could not be engraved on type metal, but this idea had to give way when one of the Central Type Foundry's engravers cut the twelve and fourteen point sizes of a light-face script face on such metal, his work rivaling that of any done on steel.

In due order machines were invented for cutting both steel punches and metal master type, which made it possible to produce new faces with still greater speed and also, through the means of pantographic devices in the machines, to make the faces more accurate and conformative in design in all the sizes of a series. One of the earliest of such machines found its way to Saint Louis from Germany in 1882 and enabled the Central Type Foundry to push the making of original faces. Up to the time of the formation of the American Type Founders Company, only one other foundry (a small concern in Milwaukee) engraved new faces with the aid of machinery. So here we may again record pioneer work in Saint Louis.

A still more modern method of producing matrices now in vogue in type foundries is that of doing away with punches and master types. This consists in engraving the character into a matrix direct, a process rendered comparatively easy for the experts by the engraving machine. Here again Saint Louis was the scene for the pioneer work of this sort in the United States, the matrices for the Geometric, Geometric Italic, and Morning Glory, three quite popular faces at one time, having been the first that were produced in this manner. The first work on this machine was done by William A. Schraubstädter, who was then an apprentice in the Central Type Foundry. The patterns used as guides for the pantographic tracers were made by Gustav F. Schroeder, a type designer and engraver, from whose hands came a large number of the successful faces brought out by the Central Type Foundry, including that grand success, the De Vinne series, which enjoyed a world-wide popularity not only in this but in all other countries.

Later on Mr. Schroeder, with whom I became associated in 1888 at type engraving, had several improvements incorporated in a new engraving machine, which was built for us by the Boyer Machine Company, of Saint Louis, whose head at the time, Joseph Boyer, is now one of the leading men of the Burroughs Adding Machine Company. Mr. Schroeder was also the first to apply electric power to such a machine. Further improvements were next made in engraving machines by the Inland Type Foundry and later on by Charles H. Schokmiller, whom I mentioned at the beginning of this article. Machines of later models were sold to European type foundries — Genzsch & Heyse, Hamburg, and Stevenson, Blake & Co., Sheffield. I myself had the commission to go overseas and instruct the engraving force of the latter foundry in its use.

It may be news to many that the first font of typewriter type was cast in Saint Louis, being brought out by the Central Type Foundry and achieving so much popularity that it had to be cast by the ton. The patterns for it were made by Mr. Schroeder, and William A. Schraubstädter engraved the mat-

rices on the machine. Your essayist had the pleasure of setting up the first matter and taking the first proof of typewriter type.

Being almost coincident chronologically with the above, I may state that, so far as I know, the first brass type for bookbinders' use cast in the United States was a Saint Louis product. An expert workman in that line, a Mr. Menuel, came from London and succeeded in inducing the Central Type Foundry to go into the business of manufacturing brass type. Such type had previously been imported. Now several concerns produce it in this country, the oldest independent one being one started by Mr. Menuel in Saint Louis after severing his connection with the Central Type Foundry. Being then the Central Type Foundry's specimen book compositor, I set up the first brass type book. I may add that Mr. St. John had so much faith in the wearing qualities and fitness of his copper-alloy type that he had me set up a special specimen book of type suited to bookbinders' use. Had not the London man come along with the brass type idea, this book would have been printed and circulated. All of it that saw the press was the set of proofs which I keep among my typographical curios.

In former days few type faces were cast in metal larger than four-line pica (now forty-eight-point); larger sizes seemingly were left for the wood type manufacturer to supply. It became the province of the Central Type Foundry to put forth sixty and seventy-two point sizes, especially of its original faces. The example found imitators, and nowadays it is a rarity to find popular faces which do not have these sizes; in many instances even larger sizes are now furnished.

About the year 1890 there was much promoters' talk and effort in the matter of consolidating all the existing American type foundries. Most of the frailer ones were quite willing to be taken into such a combination, but the more prosperous ones were not anxious and turned a deaf ear to the promoters. Among the latter were the Central Type Foundry and the MacKellar, Smiths & Jordan concern of Philadelphia. The promoters could not see their way clear unless these two leading foundries could be secured. Mr. MacKellar declared he would sell only in case Mr. St. John should sell. The promoters badgered Mr. St. John so much that he finally set a selling price, which he, however, thought was so high that it would frighten off his tormentors, and moreover, he said it had to be all in cash, as he would accept no consolidation stock or bonds. To his great surprise his price and terms were accepted. True sportsman that he was, he naturally could not go back on his agreement. The sale was made, and the Central in course of time lost its identity and name.

The lower-case *f*, whose upper part since time immemorial hung over the edge of the body, always was an abominable nuisance, making it necessary to have the letters *ff*, *fi*, *fl*, *ffi*, *ffl* in each font and the consequently necessary boxes in the cases to contain them. The old-style "long *s*" was kerned in the same manner, and it was a most wise thing when printerdom abolished it. Whether it was Mr. St. John's idea or that of his partner, Mr. Schraubstädter, or mayhap of some thinking printer, I can not say, but the Central Type Foundry set out to abolish the kerning *f* and its cognates, the double letters, by shortening or bringing in the part that used to overhang. This saved many an *f* from breakage, and also many a dollar that used to go for making punches and matrices for the "double *f*'s," and also for the casting of them. The Inland Type Foundry in this respect followed the practice of the Central. It is not recorded that any of the customers of either foundry ever made objection to the reformation of the *f*. It is a pity that the example here set was not as universally followed as it should be. Non-kerning *f*'s are a necessity with slugcasting machines, also with the monotype. These two Saint Louis foundries also treated the lower-case *j* in the same way. It used to have a kerned projection that easily broke off.

Incidentally I may mention that chalk plates, once used for producing a certain species of cuts in an easy, quick, and cheap way, had their initiative in Saint Louis. Two concerns made them, one the Hoke Engraving Plate Company and the other an engravers' supply house conducted by Carl Schraubstädter, Junior. Until photoetching on zinc displaced them, chalk plates were much used by the cartoonists; it made the extended use of humorous, roughly outlined illustrations possible, superseding the old, slow, and costly wood engravings. Even a few type faces and a series of holiday cuts were engraved on chalk plates for the Central Type Foundry by Carl Schraubstädter, Junior. This was about 1888.

About the same year that Mr. St. John came from Boston a somewhat younger man came to Saint Louis from the adjoining state to the west. This Kansan was at this time just out of his apprenticeship at printing. He worked in a number of job and newspaper offices during a series of very trying years in the printing industry, until in 1882 his orbit and that of Mr. St. John came into conjunction and he was introduced to specimen book composition and the manufacture of type, which both interested him deeply.

I trust I may be pardoned the temerity of making allusions to myself, but no history of typographic doings in Saint Louis would be complete without some reference to what I have tried to do and what great measure of influence my efforts have had over all the type founding world. I will subdue the capital "I" as much as possible, however, and speak more of the work than of my humble self. In working with the types of the ante-point system days the amount of cardboard and paper strips required to effect justification in lining up two or more type faces with one another, or in lining up rules when setting legal or other blanks, was really prodigious. The scissors were almost a more useful instrument than the composing stick. In those days of unsystematic type bodies there could be no hope of a better state of things. But when the point system slowly came along the longing for systematically aligning faces was no longer a "pipe dream."

My duties in the foundry in time spread beyond those of the composing room into those of the manufacture of type, so that I soon had a general knowledge of its various processes. This enabled me to attack the type face alignment problem from the type producer's as well as the user's side. As a printer I knew what was wanted; as a type founder I knew what could be had. The type founders, who knew practically nothing about the compositors' troubles with type, naturally could neither understand nor sympathize with their desires; in fact, they could barely understand why point-system bodies should be so desirable. The printers, knowing so little about the intricacies of the production of type, could not appreciate the difficulties that stood in the way of the founders giving them more useful types. And because of this mutual lack of helpful intelligence the reforms were slow in evolving. When we got the point bodies we should also have gotten a uniform lining system. However, it is well that we did not, for what we would have obtained at that time would not have proven satisfactory. The proper system was not ready for presentation. The problem required more time and study than had previously been given it in order to arrive at a correct solution. After much reflection and experiment I presented, in the *Artist Printer* (published by John E. Mangan, Saint Louis), in articles appearing in 1889 and 1890 the solution I had found. Of these the second article described particularly the system of standardized alignment my studies led me to offer. This system included the casting of all the faces of each body on a line common to the individual body, and in addition the idea of interalignment of all faces on different bodies, not only at the bottom of the face but at the top; also the lining of all faces so that two-point single hair-

line or dotted rule could be easily adjusted to range with them — all by means of point lead and slug justification. The scheme also provided for a proper gradation of the faces in a series, a factor hitherto not given sufficient consideration. When, in 1893, the proprietors of the Inland Type Foundry (who were three sons of Carl J. Schraubstädter) started in business they wanted to produce something better than had theretofore been offered to printers, and thus have a good reason for establishing a new type foundry. Knowing of my alignment proposition they conferred with me about it. As a result they adopted the plan.

I could not if I wished lay claim to originating the idea of bettering the lining of type faces, as the earliest mention of such an idea that I knew of was as far back as 1880 in Germany, and something had been done in the matter of interalignment by a foundry in Philadelphia, upon a plan of which I believe W. W. Jackson, a type engraver, was the originator. But the problem had never been attacked and worked out in such a detailed and scientific manner as was the "standard line" system.

It was indeed a most fortunate event when the Inland Type Foundry got started, as it was able to adopt the new system in its entirety and place it before printerdom much more easily than could the older foundries, who had the traditions of their plants and of their customers to consider. That a foundry able to push forward the systematic lining system got started here is another feather in Saint Louis' cap, since the influence emanating from here has compelled all the foundries in America, England, and Germany to "come into line."

From its being a desultory thing, the Inland Type Foundry put the idea of "point-set" type into a going factor. It cast all its type on point sets, and established a series of point-set spaces and quads to work with it.

Not only was there so much improvement in the type made in Saint Louis, but the machinery by which it was produced was also materially improved by local inventors and mechanics. Today the best hand power and electric power type-casting machines, aside from those automatically doing all the work (i. e., producing finished type) are those which were perfected in Saint Louis. At one time the Keystone Type Foundry, of Philadelphia, engaged Mr. Schokmiller to superintend the construction of sixty of these machines for its plant, to replace its former machines, which went to the junk pile. Mr. Schokmiller also built one in Saint Louis for a type founder in India. The Inland Type Foundry also sold one of its improved model casting machines to a German foundry.

I have mentioned the electrotype process of making matrices. For many years copper was the only metal used for depositing. The intense wear of repeated castings was incentive to the experimenting with harder metals. Nickel suggested itself, and it was found to be much more durable than copper. But it was a refractory metal to work with and many an experiment with batteries and solutions turned out vexatiously and unsatisfactorily. Nickel did peculiar tricks while being deposited. One could write a chapter about it. However, it was finally conquered, by a Saint Louisian, and today Charles L. Hochstadt (son of an old-time Chicago type foundry superintendent) may be credited with the ability to produce the best nickel matrices made anywhere. He does such work here at present for a foundry in another city.

The first matrices engraved here directly by the pantograph machine were cut in brass, but later they were done in steel and also a composition metal resembling German silver.

I believe I have presented enough argument to support the suggestion that Saint Louis has the right to stand proudly before printerdom, because of what its type foundry people have accomplished. In fact, a rather large spot should indicate where this grand old burgh stands on the typographic map.