

to fill gap

EB 15 1919

U. T. A. CONVENTION ISSUE

Monotype

A
JOURNAL
OF
COMPOSING-ROOM
EFFICIENCY

Vol. 6

No. 2

Published by LANSTON MONOTYPE
MACHINE COMPANY, Philadelphia

IMPORTANT—SEE CARD INSIDE

The *TRUTH* from Boston: Monotype *BEST* By Test

Real Records of an Actual Test in a Representative Printing Plant, using the Standard Cost System, *show that Five Monotypes Produce More Work at Less Cost than Seven Slug Machines*



The following records from the ATLANTIC PRINTING COMPANY, Boston, Mass., cover a comparative test between the Monotype System of Composition and Non-Distribution and the so-called All-Slug System. The records cover the average cost for a period of nine months (May, 1917, to January, 1918, inclusive) under the Monotype System, and for three months (March, April and May, 1918) under the Slug System.* They are taken directly from the monthly Form 9H reports of the United Typothetae Standard Cost System, installed in this plant and kept under the personal supervision of the Secretary of the Boston Typothetae.



Equipment

Four Monotype Composing Machines
One Monotype Type-&-Rule Caster

Five Multiple Magazine Slug Machines
Two Display Type Slug Casters

Operators

Four Keyboard Operators
One Caster Machinist
One Caster Helper

Six Keyboard Operators
One Machinist
One Slug Caster Operator

The Cost

MONOTYPE MONTHLY AVERAGES:			ALL-SLUG MONTHLY AVERAGES:		
	Payroll	All other Mfg. Cost		Payroll	All other Mfg. Cost
Monotype Machines	\$821.33	\$475.62	Slug Machines	\$1570.43	\$622.08
Hand Room	1911.36	554.73	Hand Room	1463.15	360.18
Total Cost.....	\$2732.69	\$1030.35	Total Cost.....	\$3033.58	\$982.26

Payroll under All-Slug System increased per month.....\$300.88
Manufacturing Cost decreased per month..... 48.09

Net Increased Cost per month under Slug System.....\$252.79

The Profit

Net Monthly Decrease under Slug System as Compared with Monotype System.....\$371.75

Ninety-five per cent. of all matter set during this test was plain straight reading matter and advertisements for trade publications. The straight matter set averaged about 3,000,000 ems per month.

**Since the test all the work of the Atlantic Printing Company is Produced on Monotypes in their own plant*

LANSTON MONOTYPE MACHINE CO., PHILADELPHIA

NEW YORK

BOSTON

CHICAGO

TORONTO

Monotype Company of California, SAN FRANCISCO

THE WORD MONOTYPE MEANS MUCH MORE THAN THE NAME OF A MACHINE, IT INCLUDES A COMPLETE SYSTEM OF COMPOSING-ROOM EFFICIENCY, BASED ON THE WORK OF THE MONOTYPE BOTH AS A COMPOSING MACHINE AND AS A TYPE AND RULE CASTER

Monotype

A Journal of Composing-room Efficiency

Published by LANSTON MONOTYPE MACHINE COMPANY, Philadelphia

VOLUME 6

SEPTEMBER, 1918

NUMBER 2

A Business Meeting of Business Printers

The Thirty-second Annual Convention of the United Typothetae of America is to be held in Cincinnati on September 23, 24, and 25, 1918, and it is expected that it will be one of the best and most productive of benefit to the trade ever held.

For several years these conventions of employing printers gradually have been becoming more and more the strictly business functions that such assemblies should be, and each year has seen less and less of the entertainment feature, while there has been an increase in the real get-together spirit.

The 1918 convention of the United Typothetae of America will merit the title given it in our caption, as it has been announced as a strictly business convention.

The headquarters of the national officers will be in the Hotel Sinton, and all the meetings will be held there, the general sessions beginning each morning at 9.30 and continuing until 1 o'clock. The afternoons are reserved for the meetings of committees and for conferences; the Executive Session of the organization, to which members only are admitted, being scheduled for Tuesday afternoon.

An excellent program has been arranged, with some splendid and timely subjects to be discussed by men who are well known throughout the country as successful printers.

One important feature of this convention will be the Report of Secretary Borden, giving the results of the launching of the big three-year educational campaign which is now being rapidly inaugurated in various sections of the country and meeting with great success.

Another worthwhile report will be that of the presentation of the new Accounting System which has been devised to work in harmony with the Standard Cost System, thus complet-

ing the system of printing-office record keeping from the workman right through to the final handling of the profit. This is something that has been needed for a long time, and a great deal of hard work has been expended on it by the committee and the accountants having it in charge. It will translate the results of the cost system into

real money and make them more tangible to the printer. Of course, the results of war conditions on the printing business will receive a large share of attention, and the prospects after the war will be thoroughly discussed.

The following synopsis of the program shows just how interesting it will be:

MONDAY, SEPTEMBER 23

- 9.30 a. m. Invocation Rev. Frank H. Stevenson, Presbyterian Church of the Covenant, Cincinnati
- 9.35 a. m. Patriotic address Hon. John Galvin, *Mayor*, Cincinnati
- 10:00 a. m. Announcements and committee appointments
- 10:15 a. m. Address of the President Benj. P. Moulton, Providence
- 10:40 a. m. Address of the First Vice-President Arthur F. Southworth, Chicago
- 11:00 a. m. Annual Report of the Secretary Jos. A. Borden, Chicago
- 11:30 a. m. "Something Doing." Henry P. Porter, *Chairman*, Committee on Education
- 12:00 m. Presentation of the Standard Accounting System
J. Hugh Jackson, *Assistant Professor of Accounting*, University of Minnesota
Edgar E. Nelson, *Secretary*, Boston Typothetae Board of Trade
Frank W. Fillmore, *Staff Accountant*, United Typothetae of America
- 1:00 p. m. Open discussion
Announcements and adjournment
Meeting of Executive Committee in committee-room at 3:00 p. m.

TUESDAY, SEPTEMBER 24

- 9:30 a. m. Report of Credentials Committee
- 9:45 a. m. "Better Letters" Homer J. Buckley, Buckley, Dement & Co., Chicago
- 10:15 a. m. "How Can the Printer Create Unusual Business?"
Jas. M. Evans, Evans-Winter-Hebb, Detroit
- 10:45 a. m. "Preparing and Presenting a Plan for a Direct-by-Mail Campaign"
C. L. Estey, *Advertising Counsel*, Munroe & Southworth, Chicago
- 11:15 a. m. "Relative Value of Direct-by-Mail and Magazine Advertising"
- 11:45 a. m. "Advertising Your Own Business" J. Linton Engle, Holmes Press, Philadelphia
- 12:15 p. m. "Education for the Printing Industry"
Frederick W. Hamilton, I.L.D., *Educational Director*, United Typothetae
- 12:45 p. m. Open discussion
- 1:00 p. m. Report of Nominating Committee
Adjournment
Executive Session, 3:00 p. m. (members and delegates only)

WEDNESDAY, SEPTEMBER 25

- 9:30 a. m. Report of standing committees
Cost Commission H. W. J. Meyer, *Chairman*, Milwaukee
Education Henry P. Porter, *Chairman*, Boston
Price List J. Harry Jones, *Chairman*, Chicago
Trade Matters E. Lawrence Fell, *Chairman*, Philadelphia
- 10:30 a. m. "Abnormal Costs" J. M. Thomson, Methodist Book Concern, Cincinnati
- 11:00 a. m. "Price Control. Is the time ripe for presentation of a bill in Congress to license and regulate the Printing Business?" Geo. H. Gardner, *Vice-President*, Cleveland
- 11:30 a. m. "Business Associations and the Anti-Trust Laws"
Frank W. Noxon, *Secretary*, Railway Business Assn., New York
- 12:00 m. Open discussion—"War Problems and the Printing Business"
Led by Fred W. Gage, *Treasurer*.
- 12:30 p. m. Report of Resolutions Committee
Election of Officers
- 1:00 p. m. Adjournment
Meeting of New Executive Committee in committee-room at 3:00 p. m.

The morning sessions will be open to all employing printers, their superintendents and foremen, and it is impossible for any wide-awake printer to attend these three sessions without gaining an inspiration and taking back home with him some ideas that will be worth many times the expenses of the trip to Cincinnati. Besides the stated talks and the discussions following them there will be much to gain by rubbing elbows and personal discussions with each other between sessions.

It is expected that the Composite Statement of Cost Production for 1917 will be ready for presentation at this time and that it will be a surprise to most printers, especially those who have not kept in close touch with the tendencies of the times in the work-rooms. That it will be more nearly correct than those of previous years is certain from two causes: the accountants in the National Office have been more exacting in their demands upon the members for correct statements from which to compile it, and the members have had their attention more strongly called to shop conditions and the unusual labor situation due to the war. Both of these will tend to greater care in making up 9H reports.

As the United Typothetae says in the announcements of this thirty-second annual meeting, it will be the "Most important strictly business convention ever held for printers." There will be no frills nor general entertainment, but it is expected that there will be a record attendance of business printers who realize that only by co-operation can the greatest advancement of their vocation be secured.

A WORD FROM THE PRESIDENT

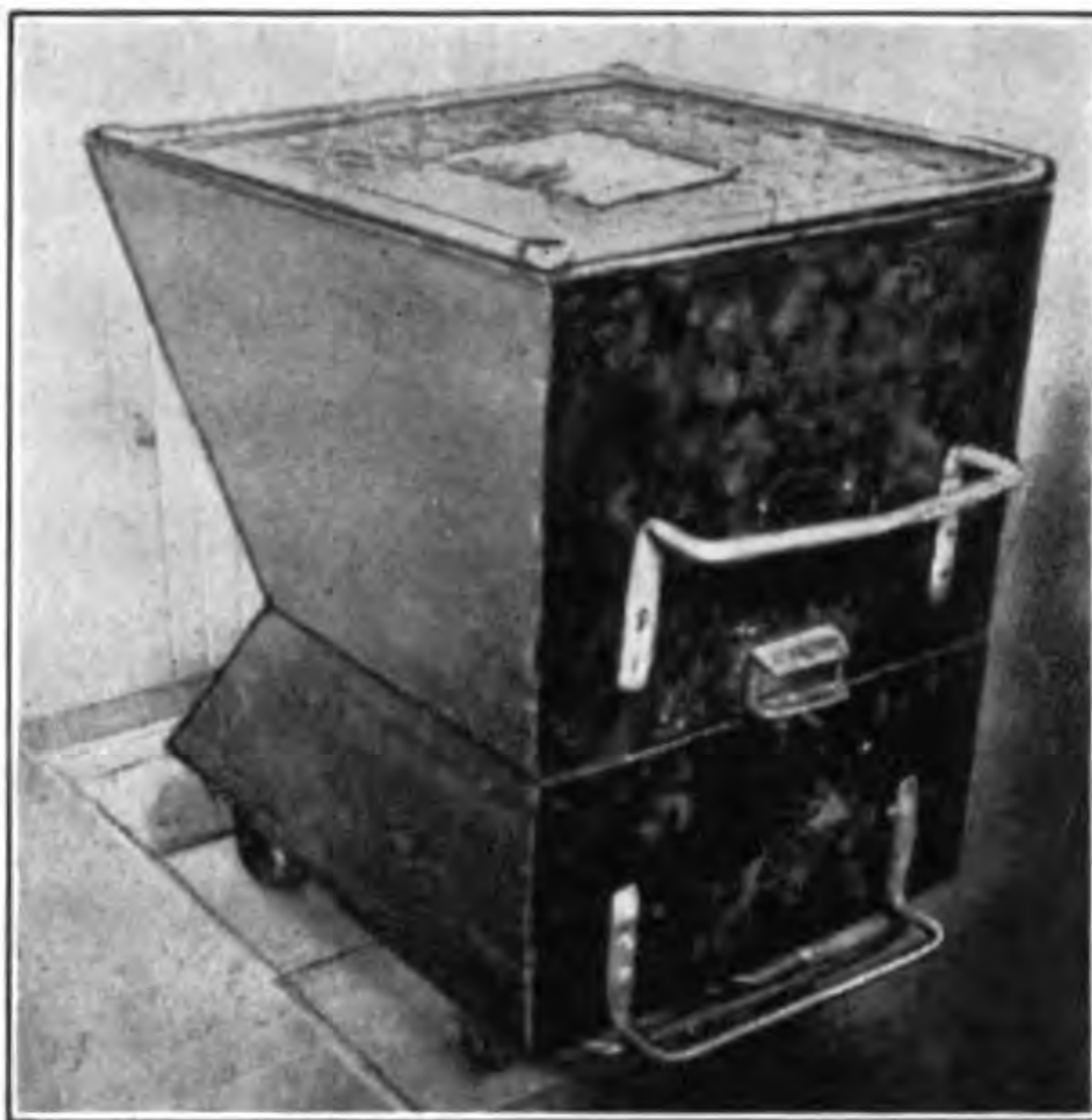
We regret that it is necessary to inform you that Mr. Fred. W. Weindel, Jr., will sever his connection with the Lanston Monotype Machine Company on September 1, for the purpose of entering the organization of the Solvay Process Company, Syracuse, N. Y., where he will be associated with Mr. Robert W. Swift. With Mr. Weindel go our very best wishes for his continued success.

Mr. H. D. Best has been appointed Assistant to the President in charge of sales, and since, through his efforts, so much of the success of the Monotype Co. has been attained, we look forward with highest expectations to a successful administration in his new office.

Continuous production means more than just keeping the wheels going 'round. While there is copy that has not been put into type, the Monotype keyboard or caster is continuously producing. The temporary stoppage of one does not delay the other.

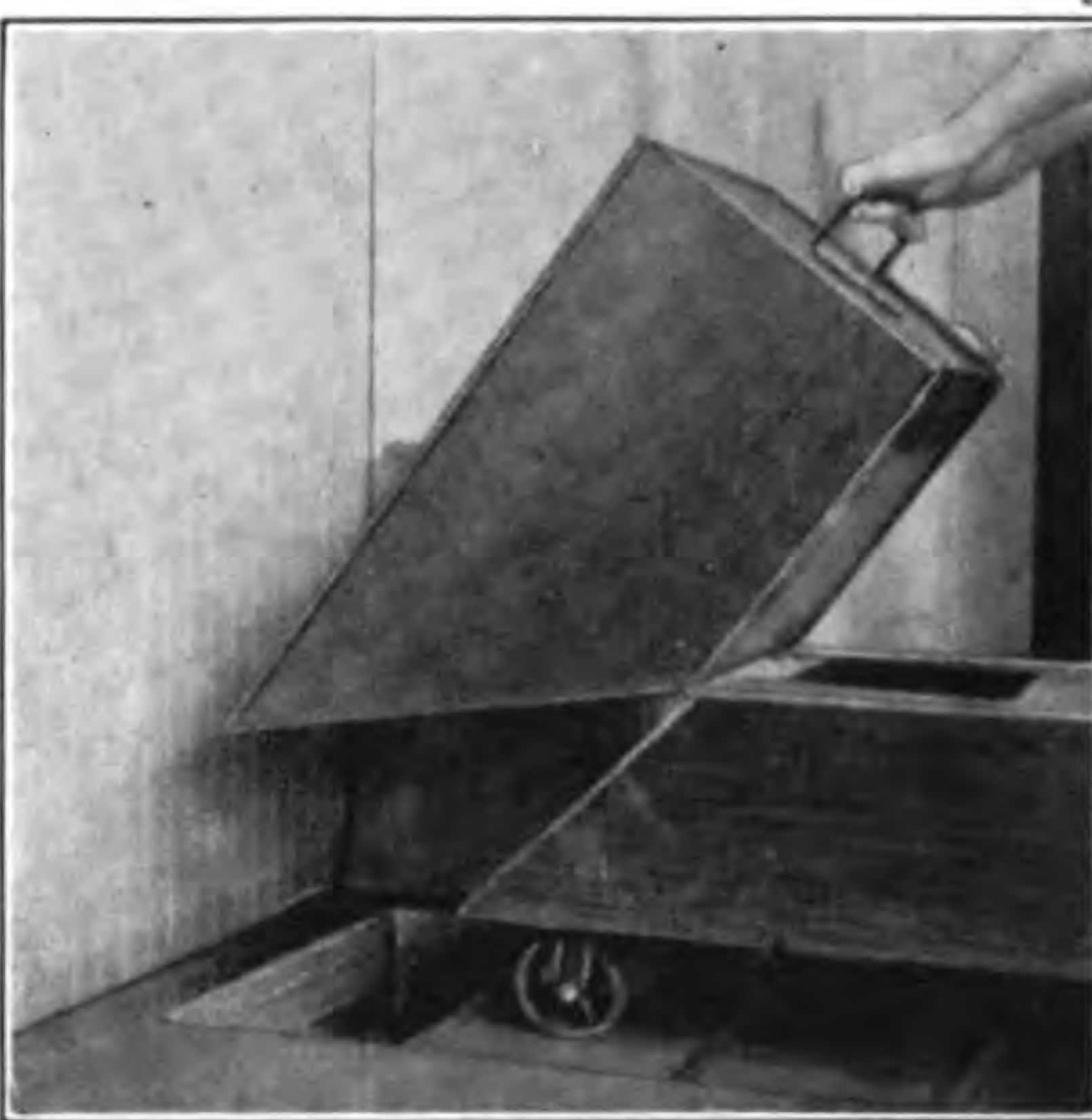
LABOR-SAVING METAL TRUCK

While the essence of the Non-Distribution System is the dumping of all used type and material and the constant replacing of the same with new material, there is also opportunity for efficiency in the method of doing the dumping.



TRUCK READY FOR USE

Mr. Adam K. Wilson, superintendent of printing of the Harvard University Press, has devised a very efficient method of handling used metal, consisting of a special truck and metal box, hinged so as to render it easy to dump the metal into the chute leading to the melting room. Provision is made for locking the box and truck in position until ready for emptying, and also for locking the truck wheels to prevent movement while dumping.



DUMPING INTO METAL CHUTE

This truck can be taken right to the break-up table and moved from one table to another until filled, then run over to the chute and dumped.

The Monotype is not only continuously productive itself, but it makes the whole composing room continuously productive.

THE MONOTYPE IN THE COUNTRY PRINTSHOP

BY LEON E. DERR

The problem of how large a shop should be in order to afford a Monotype has created considerable discussion. As to size, the Quality Print Shop, of Sterling, Ill., is typical of a great number of shops in the country and in small cities, where the bulk of composition is done by hand or the jobs of composition that are too large or too intricate for their facilities are sent to a trade plant or to some neighboring printer fortunate enough to have a typesetting machine.

Two years ago the proprietor of this plant reached the point where a machine of his own was needed in order to give prompt service to the shop's patrons. In his own words: "A slug-casting machine will give me only a machine to set type, but the Monotype will furnish practically a whole, always new composing room so far as type, rule, and spacing material are concerned." For this reason the Monotype was installed—and it has more than made good so far as quantity, quality, and versatility of output are concerned.

The Quality pressroom contains four presses—two cylinders and two platens—and they are kept running to full capacity by the Monotype operator and the shop proprietor in the composing room. The operator puts in full time on the machine and floor, and the proprietor about one-third time, mostly on the stone. The composing-room cost is therefore very low; but possibly the greatest factor in the reduced cost is the fact that the department is equipped properly to handle practically any kind of composition that may be offered.

Very few offices have given proper study to matrix equipment—it is a difficult problem at best, and there are few proprietors or operators who select a matrix equipment that is perfectly harmonious and suited in all respects to the work the machine will have to perform. As a rule, the face in most common use in the shop before the advent of the machine should be the nucleus about which the new equipment will be built. The number of series chosen should be kept as low as possible. This saves case room, and reduces the amount of metal kept in storage for sorts. The best selection for the average shop using one machine is the No. 64 family as one group; the Caslon family as a second; Series 20 and 107 a third, or Nos. 38 and 45 or 97 as a fourth—any one of these could be chosen and amplified as the shop expands.

"Sterling is a manufacturing town of 10,000, the industries being chiefly

Continued on page 31

A Live-Wire Western Print Shop

By R. T. CLARK

"A man is known by the company he keeps"—and we are glad to have Monotype efficiency judged by association with plants such as that of M. F. Shafer & Co., of Omaha. In a previous issue we described the startling way in which they introduced their new plant to the people of Omaha. Curiosity as to the "inside" of this growing business led to our requesting a glimpse within its walls. This article is the result. We looked carefully at their calendars, expecting to find them dated 1928—at least ten years ahead of their time.

It is one thing to keep abreast of the times, installing occasional new equipment as competition demands, and

making improvements as the necessity arises. That is typical of all progressive plants; but it is quite a breathtaking experience to discover a plant "sprung full-grown and full-armed from the brain of Jupiter." And that is the impression made by this flourishing western concern. Everything in and about the place is up-to-the-minute—the latest and best are all that they tolerate. "And that" is why they feature the Monotype System in their plant.

The accompanying pictures illustrate the building and composing equipment. The growth of the concern has been "a marvel to the business men of Omaha," to quote from the *Omaha Bee*, and in Omaha things happen every day that might startle more conservative places. The firm of M. F. Shafer & Co. has been incorporated only since 1911, and in seven years



HOME OF M. F. SHAFER & CO., OMAHA

they have increased their floor space from 480 to 52,000 square feet—an increase of a little over one hundred fold. The plant as it stands today occupies six floors, is built of brick and concrete throughout, and has 10,000 square feet of glass windows—an all-day "daylight" plant, even in winter. An automatic sprinkler system, automatic elevator fire-doors, and heavy steel doors throughout make fire protection as perfect as possible. A large smoke-consumer with double firebox heats the plant; and the scientific arrangement of vents and windows would gain the approval of the most exacting sanitary inspector.

So much for external considerations. The equipment is quite in keeping with the rest. Six large cylinder presses with every attachment for careful and speedy work occupy the base-

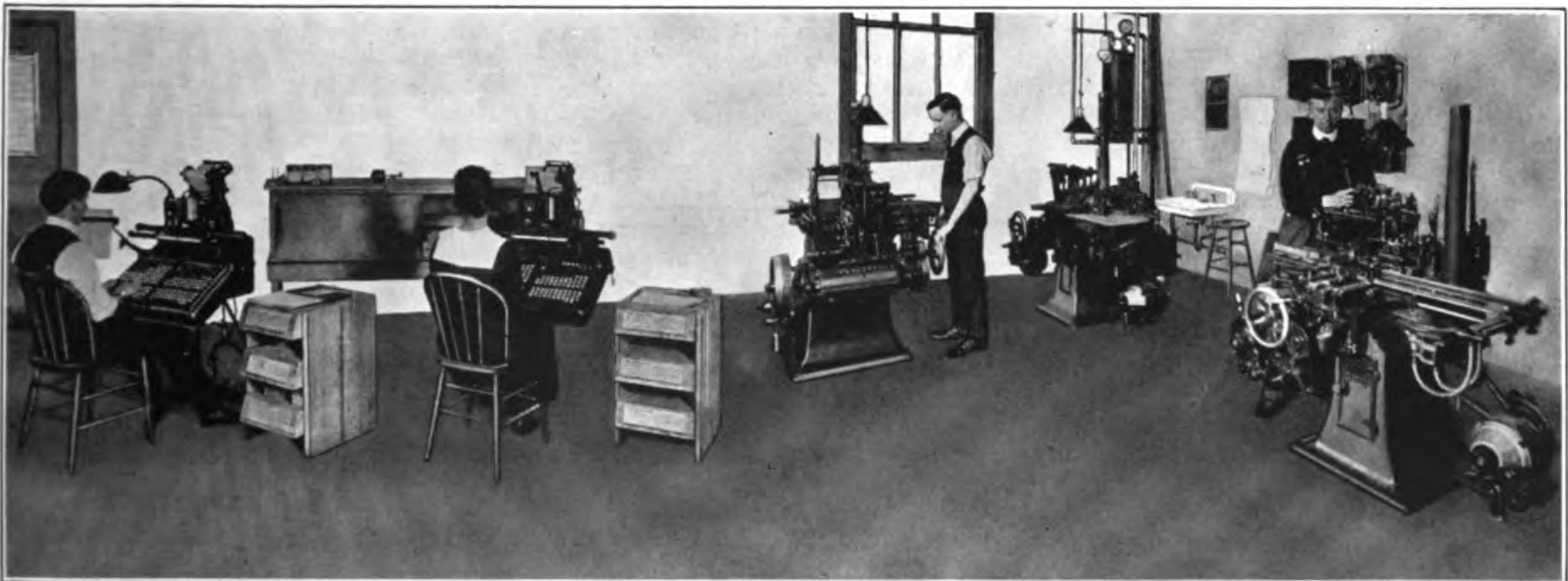
ment floor. Automatic paper lifts, extension delivery, gas-flame electricity removers, and numerous other refinements are on these presses. A "pony" press takes care of rush jobs. On this floor there are a mammoth 72-inch paper-cutter and a vault for storing high-priced inks.

The main floor is occupied by the general offices, and is one of the best lighted it has ever been our pleasure to visit. A door leads past the offices of the superintendent and the assistant superintendent into the composing room, with its individual type alleys, steel lock-up tables, with storage racks for 200 catalog pages, saw trimmer and routing machine, and a very complete outfit of wood-

type. There are also facilities for wood engraving, a conveniently arranged form-rack, indexed storage cabinet for cuts, steel form-trucks, and the best of the known appliances for expediting the compositors' work are there in abundance.

On this main floor is the Monotype room, which Mr. Shafer calls "the heart of the printing department." "We are immensely pleased with our Monotype equipment, and cannot say too much for the service rendered by the Lanston Company in advising us as to the best placing of machines, work-bench, and storage cabinet," said Mr. Shafer. "We believe that in this department, at any rate, we approach close to 100 per cent. efficiency."

The equipment consists of two keyboards, two composing machines, a Type-and-Rule caster, a melting fur-



THE MONOTYPE DEPARTMENT, M. F. SHAFER & CO.

nace, and a large library of matrices. The Shafer Co. specialize on catalog work, and as a result of their Monotype System find themselves able to handle the large volume of business necessary to keep their presses busy, without the work "clogging" in the composing room. The selling argument of "keeping the job standing" is proving decidedly effective.

Much as we would like to dwell on the Monotype advantages, there are other interesting features of the plant's equipment. On the second floor is the Gordon pressroom and bindery department. Five Gordons, one a self-feeding machine, occupy one section of the room. In another part are the three folding machines. Farther down the same side are the various stitching, punching, and perforating machines, arranged in such order that there is no back-tracking of jobs as different operations are gone through with. On this floor the other bindery work is done, and a smaller cutting machine occupies one corner. The remainder of the building is devoted to the manufacture of calendars and advertising specialties—very interesting operations to watch, but not being connected with the printing business, space forbids a detailed description here.

There is another feature of Shafer service that should not be overlooked—that is, the copy and art help given to those desiring it. A well-appointed art department submits designs and working drawings for anything from business cards to catalog covers and calendar layouts. If so desired, the copy department will produce a complete catalog.

This description covers pretty completely the physical or outward aspect of the business organization back of the Shafer Company's magnificent and rapid success.

But probably the most important factor concerned with their splendid progress is one not to be observed from the outside—that is, the attitude of the company toward its employees. Twice a week the department heads meet with the president and discuss plans and policies. Perfect freedom of expression is allowed, and mutual consideration given to the other fellow's problems. At fairly regular intervals meetings are held for the sales force. Approximately every two weeks the *Shafer Shaft* is published—a house organ devoted to the creation of an *esprit de corps* loyal to the best interests of the firm. And every month, at the "efficiency meetings," attended by every employee, prizes are given for the best suggestions for the improvement of methods or the detection of errors on jobs.

Furthermore, the physical well-being of the employees is not disregarded. A shower-bath is provided in the basement; an automatic passenger elevator saves many weary climbs; and a co-operative lunch room is run at cost for the benefit of the employees of all departments.

With such equipment, such a plant, and such a spirit of co-operation back of them, we predict unmeasured success for the progressive firm of M. F. Shafer & Co.—and future additions to their already very complete Monotype department.

While hunting for the key to the situation be careful that your competitor does not pick the lock and enter into the profits.



COMPOSING ROOM M. F. SHAFER & CO.

BRITISH GOVERNMENT MONOTYPES

The British Government originally placed an order for three Monotypes for the Stationery Office, later increasing the order to six. The first was delivered in July, 1917, and in less than a year another order was placed, increasing the equipment to ten casters and sixteen keyboards. Can you imagine a better endorsement of the merits of Monotype than the conservative British Government increasing its plant so rapidly after giving the Monotype a trial?

The machine that gives the greatest satisfaction to your customers at the same cost is a good buy, but the machine that gives greater satisfaction to your customers and bigger profits to you at less cost is the one that you cannot afford to do without any longer than it takes to send in an order and secure delivery. The Monotype is the leader in the latter class. It reduces cost, eliminates non-productive time, and makes better satisfied customers, all the time enabling you to pile up profits without increasing prices to the consumer.

THE SAME OLD STORY

The newspaper and other periodical publishers are very much exercised in mind over the recent changes in postal rates and excess profit taxes, which they denominate as a tax on education. The following extract from the columns of the *New York Mercury* of Monday, December 20, 1756, is therefore quite appropriate as foreshadowing the way in which the emergency will be met:

"As the Act lately passed by the General Assembly of this Province for erecting a Stamp Office in this Colony, commences the first day of January, 1757, by which all News-papers printed in this Province are liable to a duty of one Half Penny weekly each; which amounts to Two Shillings and Two Pence, per annum; And as no reasonable Person can imagine, that the Printer of the Mercury should pay that Tax himself, 'tis thought advisable to give this public Notice, to all Persons concerned, That unless they incline to pay the Duty besides the former price, they need not expect to be served with the Mercury any longer than the first day of January next; a proper allowance of Time will be given to distant customers. Those that have advanced money already for the Mercury, shall be punctually served until the Time for which they have paid is elapsed; then to be stopped, unless proper Orders to the contrary are received.

"'Tis hoped all those that are now in Arrears for the Mercury will cheerfully discharge the same; and consider that the Sum to be raised by the Stamp Office is to be laid out in the Defence of their Country; and that the advanced Price of this Paper is not extorted from them by the Printer, but is owing to the Act, legally passed by three different Branches of the Legislature of this Province.

"I flatter myself that the Mercury has given satisfaction since its first publication, which is now upwards of Four Years; and I assure my readers that no Cost, Dilligence or Pains, shall be wanting to make its continuance profitable and entertaining.

"By their very humble servant,
"The Printer."

I. T. U. WAR ACTIVITIES

In the excitement of Liberty Bond campaigns, Red Cross rallies, and the draft, we sometimes overlook what the other fellow is doing, and it is good to be reminded of these things.

The International Typographical Union realized this and has issued a neatly printed booklet giving data of its war work. It is a well-prepared document, and shows, among other things, that the I. T. U. has furnished 4081 men and 656 apprentices, a total of 4737 who were in the United States army on July 1, 1918. Of course, there are more now.

Besides the man-power furnished, the International has purchased \$90,000 of Liberty Bonds, being \$30,000 each of the three issues.

This is certainly a good patriotic showing for our trade, and in a measure accounts for the present shortage of composing machine operators and job compositors in all the cities.

Constants

Copyright, 1918, By FRANK S. HENRY, Instructor in Printing, Philadelphia
Trades School. Author of "Printing for School and Shop"

(All rights reserved)

One of the most impressive things about the Monotype and its production is the accuracy with which everything has been mathematically calculated. Nothing is left to the imagination of the user. Tables of constants have been prepared so that the keyboard operator can set his various devices with mathematical precision.

About two years ago it was discovered that 53 typewriter characters equaled 25 set ems of Monotype type. This was a great discovery, for by its use the printer could tell how many set ems of type the matter would make. The calculation, however, involved two processes: multiplying by 25 and dividing by 53. These two processes can be reduced to one. If we divide 25 by 53, we obtain the decimal fraction .4717. If we multiply the number of typewriter characters in a piece of copy by .4717, we obtain practically the same result as by multiplying by 25 and dividing by 53.

Let us suppose that copy contains 28976 typewriter characters (including spaces); now—

$$\frac{28976 \times 25}{53} = \frac{624400}{53} = 13668 \text{ set ems.}$$

$$\frac{28976 \times .4717}{53} = 28976 \times .4717 = 13668 \text{ set ems.}$$

Therefore, .4717 is a new constant for changing typewriter characters to set ems.

Set ems, however, are not chargeable ems, but vary for each face of type. Eight-point, 8-set, does not produce as many chargeable ems as would the same copy set in 8-point, 8½-set. Type matter (composition) is customarily charged for at so much per thousand ems; meaning the square of the type body in which the matter is set.

If we keep in mind the fact that the term "set" in Monotype work means the width in points of the widest character in the font (or 18-unit width), we will see that it is comparatively easy to change set ems to chargeable ems. If we multiply the number of set ems

by the "set" of the type we are calculating, we will express the length of the composed type in a definite number of points. If we now divide this number of points by the point-size of the type, we will obtain the number of chargeable ems. Let us take the number of set ems in the above example and determine how many chargeable ems we would have if the type were in 8-point, 8½-set. We found that 28976 typewriter characters produced 13668 set ems.

$$\frac{13668 \times 8.25}{8} = 14095 \text{ chargeable ems.}$$

$$\frac{13668 \times 8.25}{8} = 13668 \times 1.03125 = 14095 \text{ chargeable ems.}$$

We find from this that we can secure multiplying factors or constants for every size and set of type. Moreover, we can combine in one problem both the number of typewriter characters and the size and set of the type. Thus:

Pt. Size	Set	Constant for changing typewriter characters to square inches.	Constant for changing typewriter characters to set ems.	Constant for changing typewriter characters to chargeable ems.	Constants for Changing Typewriter Characters to Cost per 1000 ems at given rates per 1000											
					40c.	45c.	50c.	55c.	60c.	65c.	70c.	75c.	80c.	85c.	90c.	95c.
6	6	.003276	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
6	6½	.003412	.4717	.4913	.1097	.0221	.0246	.0270	.0295	.0319	.0344	.0369	.0393	.0418	.0443	.0467
6	6¾	.003549	.4717	.5110	.0204	.0230	.0256	.0281	.0307	.0332	.0358	.0383	.0409	.0434	.0460	.0485
6	7	.003685	.4717	.5307	.0212	.0239	.0265	.0292	.0318	.0345	.0371	.0398	.0425	.0451	.0478	.0504
7	7	.004458	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
7	7¼	.004617	.4717	.4885	.0195	.0220	.0244	.0269	.0293	.0318	.0342	.0366	.0391	.0415	.0440	.0464
7	7½	.004777	.4717	.5054	.0202	.0227	.0253	.0278	.0303	.0329	.0354	.0379	.0404	.0430	.0455	.0480
7	7¾	.004936	.4717	.5222	.0209	.0235	.0261	.0287	.0313	.0339	.0366	.0392	.0418	.0444	.0470	.0496
8	8	.005823	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
8	8¼	.006005	.4717	.4864	.0195	.0219	.0243	.0268	.0292	.0316	.0340	.0365	.0389	.0413	.0438	.0462
8	8½	.006188	.4717	.5012	.0200	.0226	.0251	.0276	.0301	.0326	.0351	.0376	.0401	.0426	.0451	.0476
8	8¾	.006369	.4717	.5159	.0206	.0232	.0258	.0284	.0310	.0335	.0361	.0387	.0413	.0439	.0464	.0490
9	9	.007370	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
9	9¼	.007575	.4717	.4848	.0194	.0218	.0242	.0267	.0291	.0315	.0339	.0364	.0388	.0412	.0436	.0461
9	9½	.007790	.4717	.4979	.0199	.0224	.0249	.0274	.0299	.0324	.0349	.0373	.0398	.0423	.0448	.0473
9	9¾	.007983	.4717	.5110	.0204	.0230	.0256	.0281	.0307	.0332	.0358	.0383	.0409	.0434	.0460	.0485
10	10	.009090	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
10	10¼	.009327	.4717	.4835	.0193	.0218	.0242	.0266	.0290	.0314	.0338	.0363	.0387	.0411	.0435	.0459
10	10½	.009554	.4717	.4953	.0198	.0223	.0248	.0272	.0297	.0322	.0347	.0371	.0396	.0421	.0446	.0471
10	10¾	.009782	.4717	.5071	.0203	.0228	.0254	.0279	.0304	.0330	.0355	.0380	.0406	.0431	.0456	.0482
11	11	.011010	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
11	11¼	.011260	.4717	.4824	.0193	.0217	.0241	.0265	.0289	.0314	.0338	.0362	.0386	.0410	.0434	.0458
11	11½	.011509	.4717	.4931	.0197	.0222	.0247	.0271	.0296	.0321	.0345	.0370	.0394	.0419	.0444	.0468
11	11¾	.011761	.4717	.5039	.0202	.0227	.0252	.0277	.0302	.0328	.0353	.0378	.0403	.0428	.0454	.0479
12	12	.013103	.4717	.4717	.0189	.0212	.0236	.0259	.0283	.0306	.0330	.0354	.0377	.0401	.0424	.0448
12	12¼	.013375	.4717	.4815	.0193	.0217	.0241	.0265	.0289	.0313	.0337	.0361	.0385	.0409	.0433	.0457
12	12½	.013650	.4717	.4914	.0197	.0221	.0246	.0270	.0295	.0319	.0344	.0369	.0393	.0418	.0442	.0467
12	12¾	.013922	.4717	.5012	.0200	.0226	.0251	.0276	.0301	.0326	.0351	.0376	.0401	.0426	.0451	.0476

$$28976 \times \left(\frac{25}{53}\right) \times \left(\frac{8.25}{8}\right) =$$

$$28976 \times \left(\frac{.4717}{53}\right) \times \left(\frac{1.03125}{8}\right) =$$

$$28976 \times \left(\frac{.4864}{.4717 \times 1.03125}\right) = 14095 \text{ chargeable ems.}$$

Now, $.4717 \times 1.03125 = .486440625$; therefore the constant for changing typewriter characters to chargeable ems for 8-point, $8\frac{1}{4}$ -set, is $.486440625$. For all practical purposes a constant of four decimal places is sufficient. We will therefore make it $.4864$.

$$28976 \times .4864 = 14093 \text{ chargeable ems.}$$

By the use of this constant we have simplified our calculation and obtained a product within two ems of being correct—close enough to be considered accurate.

One step more. By the use of another constant we can determine from the copy how much to charge for the composed type. Still using the same problem, let us determine the amount to be charged for the above type at 60 cents per thousand:

$$28976 \times \left(\frac{.4717}{53}\right) \times \left(\frac{1.03125}{8}\right) \times \left(\frac{.06}{1000}\right) =$$

$$28976 \times \left(\frac{.4864}{.4717 \times 1.03125}\right) \times .06 =$$

$$28976 \times \left(\frac{.0292}{.4864 \times .06}\right) =$$

$$28976 \times .0292 = 846 \text{ cents, or } \$8.46.$$

This result tallies exactly with that obtained by multiplying the number of chargeable ems, 14095, by 60 cents.

The subjoined table gives the constants for all sizes of type from 6-point to 12-point inclusive, in four different sets, and in price from 40 cents to 95 cents inclusive; also a constant for changing typewriter characters to square inches, if it should be desired to calculate on that basis.

If a constant is desired for obtaining the selling price for type for any rate not given, the same may be obtained by adding two constants whose rates equal the price desired. For example, adding the constants for 40 cents and 45 cents gives the constant for the 85-cent rate: $.0189 + .0212 = .0401$. The constant for \$1.20 would be twice the 60-cent rate ($2 \times .0283 = .0566$) or the sum of the 50-cent and 70-cent rates ($.0236 + .0330 = .0566$).

By the use of a constant from the above table, we can determine the cost of composition of typewritten copy for any size and set of Monotype type; we can determine how many square inches copy will make in any size and set of Monotype type; or we can determine the number of set ems or the number of chargeable ems that copy will make.

The first step is to determine the number of typewriter characters in copy. If the copy has been prepared on the average 12-point typewriter, there will be ten characters in each linear inch. Look over the copy, measure an average length line in inches, multiply by ten to obtain the average number of characters to a line, and multiply this by the number of lines in copy. The result will be the number of characters in copy (including spaces).

Suppose copy contained 46927 typewriter characters, and we wanted to know how many square inches it would make if set in 7-point, $7\frac{1}{2}$ -set. Look at the table for 7-point $7\frac{1}{2}$ -set. The constant for square inches is $.004777$. Multiplying 46927 by $.004777$ will give the number of square inches.

$$46927 \times .004777 = 224.17 \text{ square inches.}$$

(See below for proof of this.)

How many set ems will the above copy make if set in 7-point, $7\frac{1}{2}$ -set? The constant for set ems is $.4717$.

$$46927 \times .4717 = 22135 \text{ set ems.}$$

How many chargeable ems will the above copy make if set in 7-point, $7\frac{1}{2}$ -set? The constant for chargeable ems is $.5054$.

$$46927 \times .5054 = 23717 \text{ chargeable ems.}$$

How much would the matter be worth at 75 cents per thousand ems? The constant for 7-point, $7\frac{1}{2}$ -set, at 75 cents per thousand, is $.0379$.

$$46927 \times .0379 = \$17.79.$$

We can prove this by multiplying the number of chargeable ems by the rate per thousand.

$$23717 \times .75 = \$17.79.$$

There are 5184 square points in one square inch ($72 \times 72 = 5184$); there are 7×7 or 49 square points in one em of 7-point type.

$$\frac{5184}{49} = 105.8 \text{ ems 7-point in 1 sq. in.}$$

$$\frac{23717 \text{ chargeable ems}}{105.8 \text{ ems in one sq. in.}} = 224.17 \text{ sq. ins.}$$

When the set of any type is the same as its body size (*i. e.*, 6-point, 6-set; 7-point, 7-set; etc.), the number of set ems equals the number of chargeable ems. In such cases the multiplying factor is $.4717$ for all sizes, and the constant for each rate per thousand is the same for all sizes. These constants are given in heavy faced type in the table, and have been repeated in each case to keep the table complete and avoid confusion.

In the above table the selling price per thousand is listed in prices varying by five cents. That is, 40 cents, 45 cents, 50 cents, 55 cents, etc. A constant for any intermediate price can be determined by taking the difference between any two given constants and dividing by five. This will give the

amount to be added to the lower constant for each cent of increase. For example: What would be the constant for 8-point, $8\frac{1}{4}$ -set, at 63 cents per thousand? The 60-cent constant is $.0292$, the 65-cent constant is $.0316$; the difference is $.0024$. Dividing $.0024$ by 5 equals $.00048$. This is the amount that must be added to $.0292$ for each cent of increase over 60 cents. For 63 cents it would be $3 \times .00048$, or $.00144$. Adding $.00144$ to $.0292$ equals $.03064$. Call it $.0306$. If the last figure had been 5 or more, it would have been raised to $.0307$. The constant for 8-point, $8\frac{1}{4}$ -set, at 63 cents per thousand is, therefore, $.0306$.

Let us prove this by our previous problem. We found that 28976 typewriter characters produce 14095 chargeable ems.

$$28976 \times .0306 = \$8.87$$

$$14095 \times .63 = \$8.88$$

This is within one cent of being correct.

The same result would be obtained by finding the cost of composition at 60 cents and at 65 cents. Take the difference in value, divide it by 5, multiply it by 3, and then add the 60-cent price.

$$28976 \times .0316 = \$9.16$$

$$28976 \times .0292 = 8.46$$

$$\frac{.14}{.70} \times 3 = \frac{.42}{.70} = .60$$

$$\frac{.70 \times 3}{5} = 42 + \$8.46 = \$8.88$$

Teachers of printing and teachers of mathematics to printers' apprentices will find the calculation of such tables of infinite benefit to students. It gives excellent practice in mathematics and equips the student for other calculations connected with estimating on type composition.

THE CYCLONE OUT OF SORTS

We begin the publication of the Rocky Mountain Cyclone with some phew dipliculties in the way. The type phounder phrom whom we bought our outphit phor this printing ophice phailed to supply us with any eph's or cays, and it will be phour or phive weex bephore we can get any. We have ordered the missing letters, and will have to get along without them till they come. We don't lique the loox ov this variety ov spelling any better than our readers; but mistaix will happen in the best ov regulated phamilies, and, iph the eph's and c's and x's and q's hold out, we shall ceep (sound the c hard) the Cyclone whirling aphter a phashion till the sorts arrive. It is no jouque to us; it's a serious aphaair.—*Denver Rocky Mountain Cyclone.*

The Monotype reduces composing-room costs by eliminating the greatest of them all—the time wasted in the distribution of used type.

The San Antonio Express

Down in the Lone Star State they are almost as hard to persuade to change their habits, and as insistent upon being "shown," as the typical denizen of Missouri. This makes it a pleasure to sell Monotypes in Texas, because it is easy to show that Monotype claims are real merits and not mere talking sales and advertising points, for the Monotype always makes good.

When the San Antonio *Express* installed Monotypes, it did so with some hesitancy and doubt, but now, after a six months' experience, its foreman and its proprietor are decided optimists regarding Monotype performances and the value of the Non-Distribution system.

The *Express* has two of the latest improved Monotype Type-and-Rule Casters, with a full equipment of molds for casting all sizes of type and borders from 10-point to 36-point, and rules, leads, and slugs in 2-point and 6-point sizes. It has in use 73 fonts of matrices and a complete storage system. Part of the storage cabinets are shown in our illustration.

Mr. Carnal, the foreman of the San Antonio *Express*, says that the Non-Distribution System has shown a considerable saving, and that the improvement over the old plan of trying to keep everything standing is very great, notwithstanding the fact that there has been a considerable increase in the amount of advertising since the Monotypes were installed.

The operator, F. H. Wall, has no trouble in keeping the ad room fully supplied with material from the two casters; while the advertisers are pleased with the clear-cut, clean ap-

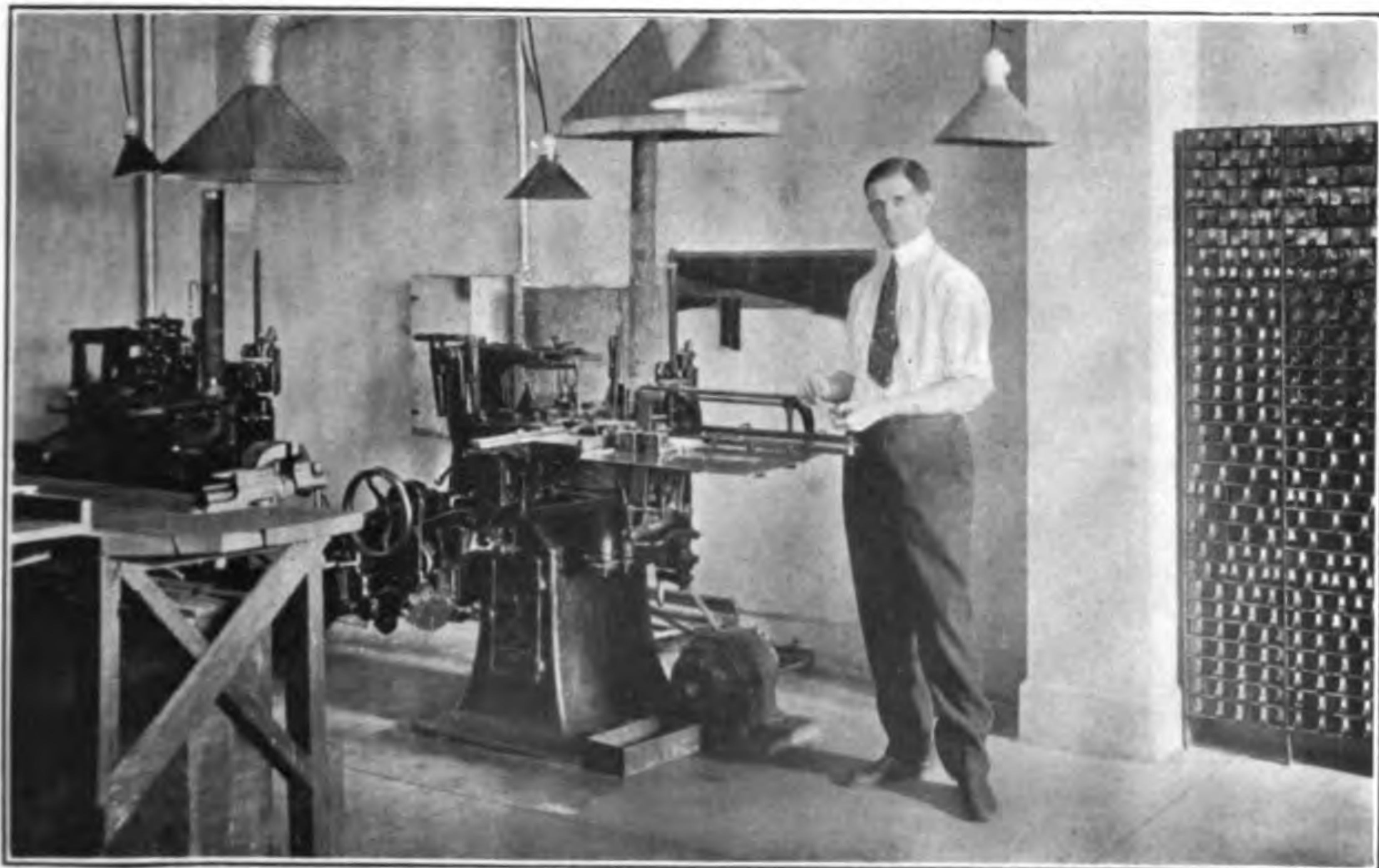


W. H. CARNAL
Foreman San Antonio Express

pearance of the *Express*, always all in new type.

The *Express* carries a large number of fonts in order to please its advertisers, who are particular, as well as to give variety to its pages.

The San Antonio *Express* adds another to the long and rapidly growing list of satisfied Monotype users, and helps to bring nearer the day when not to be a Monotype user will be tantamount to an admission that one is not up to date.



CORNER OF MONOTYPE ROOM SAN ANTONIO EXPRESS

THE MONOTYPE IN THE COUNTRY PRINT SHOP

Continued from page 26

builders' hardware and other metal industries; therefore the bulk of the work comes from plants with somewhat similar needs. The matter of matrix selection for this class of work was very simple. We use a plain modern roman and italic with No. 25 Bold for all work of this class, and these two series are used for it—nothing else. This makes for a uniformity of product that is very pleasing in more ways than one. For our 'factory jobs' we use Series 45, with Series 97 for display.

"So much for equipment. Now as to our way of handling composition. In the first place, the proprietor bought the Monotype to 'set type' and the logical conclusion is that when type is to be set, the Monotype is there for that purpose. But—how small a job is it profitable to set on the machine? that is, the average job work where, as a rule, there are three or four sizes of type and possibly only two or three lines of each size. That has been the sticking-point in many shops who regard the Monotype only as a machine to set work which would take too long to do by hand. A little observation will show that these jobs generally contain too many sizes of type, and that the majority will look better in fewer sizes. We use two sizes in jobs of this kind, with a six-alphabet arrangement which gives 12 alphabets for the job—certainly enough for commercial work—casting the larger size first and then the smaller without changing the mold—only the matrix case and wedge. This saves more time than would be imagined. If there are two or more jobs requiring the same type or same sizes, they are grouped so as to reduce change of caster to a minimum. The operator can do this if layout and sequence are left in his hands. Under this system we use the machine profitably for letter-heads, cards, statements, and other small work that the average shop does not think worth while to put on the machine.

"Ruled forms for the various factories are our 'pet' product. We handle a great many of these, and they are all monotyped. We use strip rule for down rules and keep all forms standing. A little investigation by proprietors as to the number of ruled forms reprinted absolutely without change ought to show convincingly that this is a great opportunity for them to 'phat' high-priced composition.

"Labels for boxes of builders' hardware presented quite a problem before the advent of the Monotype—now it is all very simple. They are set on the machine, five or ten up, with the exception of one line on the large labels,

and completely set on the smaller ones. We make them up in gangs and run on cylinders. These forms also are all kept standing. As these labels range from 1/2 by 1 inch to 4 by 6, with a uniform margin of 1/8 inch, the spacing proposition was severe, especially as we had about 120 forms and half that number of different sizes, varying by 1/8 inch. Monotype quads are used for spacing, and out of this stack of forms, containing possibly 800 pounds of metal, the leads and slugs could easily be held in one hand."



LIEUT. JAMES B. SCHOCH

ONE OF OUR HEROES

Lieutenant James B. Schoch, of the 109th United States Infantry, has shown what kind of men we are sending "over there." He has been cited for bravery by the French staff because of his splendid courage and coolness in reforming his company under fire when they had become separated from the main body of the troops, and then step by step fighting over to the new position and taking part in the further charge.

In civil life Lieutenant Schoch was assistant manager of the Technical Publication Department of the Lanston Monotype Co. He is a graduate of the University of Pennsylvania, where he took the electrical engineering course, and is a member of the Engineers' Club of Philadelphia.

As one of the Pennsylvania National Guard, he saw service on the Mexican border, and when his regiment was taken over by the National army, held the rank of first sergeant. His promotion has been rapid, the rank of second and first lieutenant following in quick succession.

These are the days which try the soul of the foreman of the plant run on the old lines—distribution and picking.

LIEUT. W. A. HUNTER

William A. Hunter, Sr., foreman of the Advertiser Job Printing Co., London, Ont., has two sons in the Royal Air Force in France. Recently he received word that William A., Jr., had been wounded while on duty with the 19th Squadron, R.A.F. "Billie" was flying over the German lines to head off some enemy planes that had flown over the Allies' lines and would soon return, when he got too close to "earth" and within range of the anti-aircraft gunfire; before he could get away he was severely wounded in the leg. Fortunately, he was able to bring his plane back over the home lines, and was taken to a dressing station. The last word from Billie is that he is doing nicely and expects soon to return to France.

Lieutenant Hunter is a native of London, Ont., and learned his trade



LIEUT. W. A. HUNTER

in the Advertiser shop as a printer. Later he attended the Philadelphia Monotype schools, and at the time of his joining up with the R.A.F. was combination operator with the Dominion Loose Leaf and Printing Co., Ottawa.

Among the men who will return from the battlefields incapacitated for military service there will be a number of printers who will still retain their knowledge of the business. Such men make good Monotype operators, and you will benefit them and the trade by sending them to the Monotype schools.

Non-Distribution is a word coined by the Lanston Monotype Machine Co. to describe the most profitable system of composing-room management that was ever invented.

Monotype versatility is without limit, there is no composition it cannot do.

GEORGE W. HOLTMAN

The death, on July 4th, of Mr. George W. Holtman, superintendent of the printing department of Braunworth & Co., Brooklyn, N. Y., removes another good printer and a good fellow.

Born in Central Covington, Ky., in 1880, and beginning his education in the village school, he graduated into the printing office. At the age of eighteen he was working on the Pittsburgh *Chronicle*, and from this time his advance in his chosen craft was rapid.

In 1906 he became a partner in the firm of Knowles & Holtman, Cincinnati, and developed that business in his capacity as composing-room manager.

He retired from this firm to take a position with the Lanston Monotype Machine Company, being attracted by the rapid development of that machine and having great faith in its future.

Later the call of the printshop caused him to accept the superintendency with the Braunworth Company, a position that he held at the time of his death.

He leaves a wife, three daughters, and a son, the oldest being sixteen.



GEORGE W. HOLTMAN

A. J. McDONALD

The death of Mr. A. J. McDonald, president of the McDonald Printing Co., Cincinnati, removes another of the old guard of printerdom, one who had built up a large and successful business noted for its fair dealing and generous co-operation with its customers and the printing trade. We shall miss him as a Monotype booster. The business will be continued under the old firm name by his son, Mr. Andrew McDonald, who has been in charge for some time.

Install labor-saving machinery now when its savings are greater than they have ever been in the history of printing.

V. D.

THE ENEMY AT HOME

Here is a story with a thrill in it, of how Uncle Sam suddenly rolled up his sleeves and decided to hand the knock-out to an invisible enemy—an enemy taking a greater toll in men than all the German gas, guns, grenades, and other products of "frightfulness" combined.

At the request of the War Department we are giving you this story, that we may play our part in the plan to reach every man and woman in the country with the truth about this unseen enemy threatening our military forces and our civilian communities. *You must, as a loyal American citizen, actively enlist in the fight.* You as an individual are faced with the opportunity of a lifetime to play a big patriotic part by simply backing up your Government and standing for the clean things in your community—openly, frankly, and avowedly for the good of your country and your home.

The name of this invisible enemy is Venereal Disease—and there you have in two words the epitome of all that is unclean, malignant, and menacing.

A shocking thing to think of and talk about? A tabooed subject? Not at all. The thing that can defeat armies—the thing which, unchecked, can destroy the race—must be discussed *now*. The Government is showing the way.

Here are a few of the facts corroborating the foregoing statements. It is vitally necessary to your future and to that of your country that you know these things. There is no cause for panic, but there is cause for the awakening of every one to the situation; there is cause for abolishing the apathy of the general public, which has proved such an obstacle in the past.

During the first year and a half of the war one country had *more* men incapacitated from venereal disease than from *all other causes put together*.

Prostitution is the cause of nearly all venereal infection.

Prostitution does not exist in the army today, but it does exist in civil communities visited by soldiers.

Gonorrhoea and syphilis are "camp followers" where prostitution and alcohol are permitted.

They form almost as great an enemy behind the lines as do the Huns in front.

A soldier with a venereal infection is not only disabled as a fighter, but is extremely dangerous to his comrades.

It costs the Government hundreds of dollars to make a soldier of a man; this is wasted if the soldier becomes disabled from venereal disease.

By far the largest percentage of venereal disease in the army is brought in by the men leaving civil life.

To safeguard the soldier and the soldier-to-be, all communities must be freed from sources of venereal disease.

To protect our future man power; to keep production at the highest point; to protect the workman and thereby his family—the workman must be reached through his employer.

These few paragraphs should be enough to convince you of the importance of this undertaking.

Uncle Sam, knowing all this at the outset, and having the terrible experiences of the European countries before him, decided to

fight the thing from the very start. It meant doing a thing never before attempted by *any country*. It meant that the leading nation of the world, on whom all eyes were turned, was to deliver the first great *open blow* against an age-old curse.

Experience with troops has proved time and again that prostitution is not necessary and that its abolishment comprised the real problem. So the Government went to work. The result was the establishment of the five-mile zones surrounding all military and naval stations and camps in which prostitution and the sale of liquor were prohibited. It then became necessary to supply healthful recreation in abundance; libraries, reading rooms, vaudeville entertainments, athletic games, and numerous other forms and methods of diversion and amusement. These measures proved most effective; but communities outside the zones, to which the soldier went on leave, were contaminated. Here the Government had no jurisdiction, and was forced to rely on the hope that these communities would "clean house" themselves when the nation's needs were made clear to them.

It was also definitely proved that the real fight would have to be conducted by *civilians* in their *own communities*, with the aid and suggestions of the national Government.

To facilitate this matter the Division of Social Hygiene was formed, under the *War Department Commission on Training Camp Activities*. Three branches of the Division handle Army and Navy Work, Men's Work, and Women's Work respectively. Every form of publicity is being used to acquaint the soldier and the civilian with the real facts concerning the subject. Motion pictures, literature for general distribution, lectures, and other media for spreading a complete knowledge are being provided.

Do you want more information along this line, so that you can get shoulder to shoulder with your Uncle Sam? Do you want literature, produced under Government supervision, for distribution to your employees or friends? Do you want to cooperate in making your home town the safe place it should be for your family and for the soldiers who visit it or who come from it? Do you want to get into a really big fight against the Huns of the disease world?

Don't make a mistake—it's a man's size job.

To signify your desire to fight with Uncle Sam right here at home, and to go on record as a broad-gauge, patriotic individual, write to

The War Department Commission on Training Camp Activities

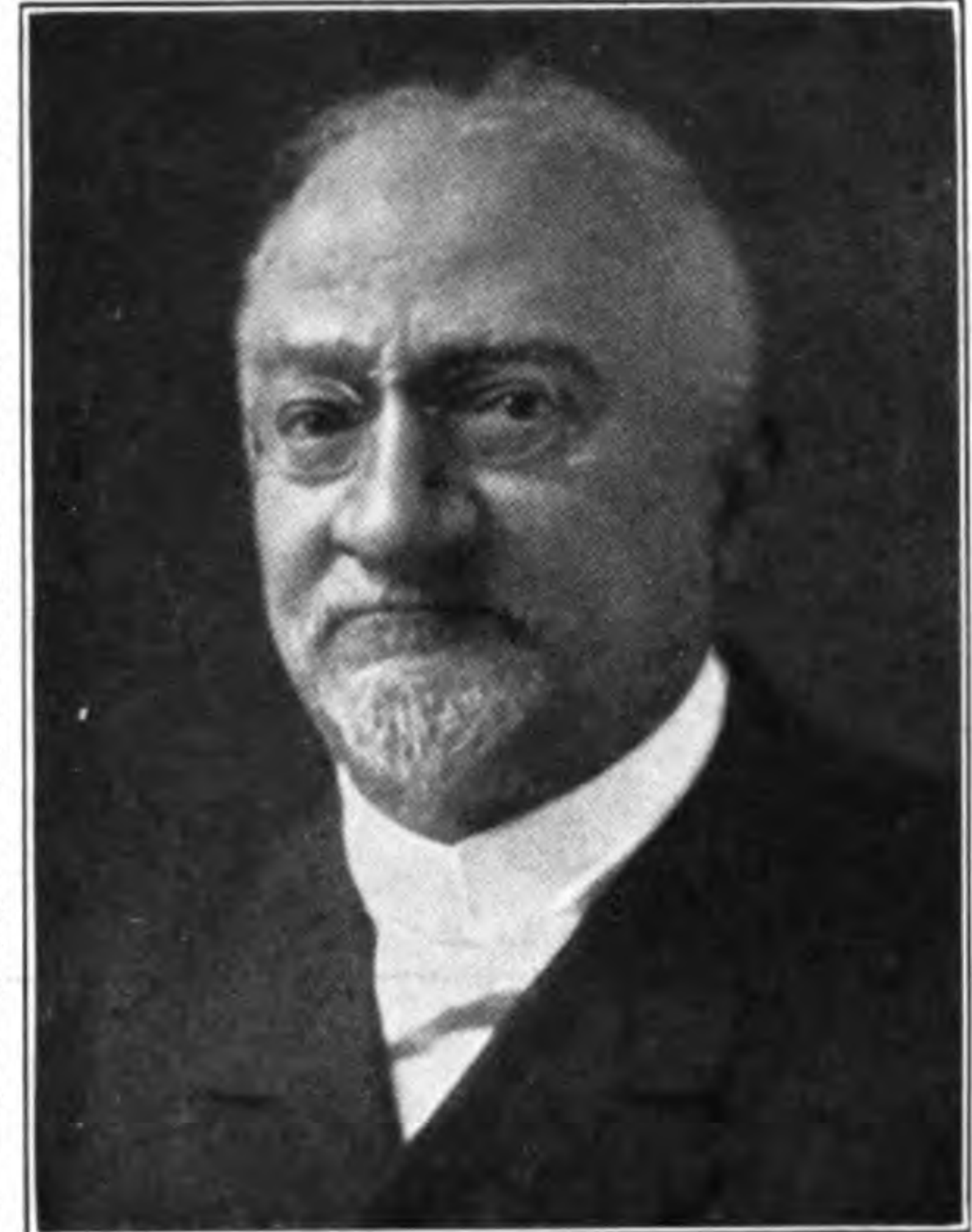
Social Hygiene Division
105 West 40th Street
New York, N. Y.

Ask for information. State what you can do. Offer your help. Write fully. You'll be supplied with *real ammunition*.

THE EDITOR.

Co-operative organization for the general good is now undergoing the crucial test in the fight against compulsory crushing of the individual for the pride of possession. You can help to hasten the victory by supplying your workmen with an abundance of material so that they will become so efficient that you will be able to spare some of them for the big battle. The Monotype, by eliminating the non-productive operations, will help you to do this.

The printer who succeeds in business sells more than a combination of paper and ink and labor—he sells satisfaction. The Monotype is a first aid to the making of satisfied customers.



DR. WILLIAM H. GREENE

DR. WILLIAM H. GREENE

The printing industry of Philadelphia received quite a shock at the announcement of the death of Dr. William Houston Greene, president of the Stephen Greene Printing Company, which occurred suddenly on the morning of August 8, 1918. He had not been ill and was at his place in the office every day, therefore it is thought that the intense heat of the previous day caused a collapse and his death while he peacefully slept.

Dr. Greene was active in the business and educational world. He graduated from Jefferson College as a doctor of medicine, but specialized in chemistry and became demonstrator at the University of Pennsylvania. In 1880 he was professor of Chemistry and Physics at the Boys' Central High School. In 1892 he began his active business career by associating himself with his father in the printing business. At his father's death he carried on the business and increased it largely.

Dr. Greene took an active interest in science and music and was president of the Musical Art Club of Philadelphia. He was also a member of prominent scientific societies in America, Great Britain, and France.

A clear-headed thinker who lived up to his convictions, and a believer in the value of economic machinery, such as the Monotype, he will be missed in the trade as well as personally.

Pity the tradesman who boasts that he can make low prices because he does not spend money for advertising and for salesmen. There are a few printers of this kind, but the successful ones take their own medicine in generous doses, and you can see their advertising all over town.



WM. L. WEATHERLY
Caster

WM. E. HUMPHREY
Keyboard

W. T. GALYOU
Caster

D. FRAZER
Keyboard

DAVID S. CONNELL
Caster

JOS. R. KIERNAN
Combination

Good Words From Monotype Students

WHO HAVE MADE GOOD AS OPERATORS
AND WHO APPRECIATE THE GREAT WORK
THE MONOTYPE SCHOOLS ARE DOING

It is a pleasure to be able to show in these pages the portraits of a few of the many students of the Monotype schools who are making good in actual service, and to give them an opportunity to express their appreciation of the great benefit they have derived from the course. There are many more of these letters in our files, and we are always glad to receive them, even though we cannot always publish them.

WILLIAM L. WEATHERLY, caster operator, with the *Saskatoon Phoenix*, says: "It would be impossible for any one who had been privileged to graduate from the Monotype schools to say too much in praise of them. My own experience impels me to urge all compositors who are tired of the toil of hand work to take up the Monotype and attend the Monotype schools. The results will pay them a hundredfold. I also urge printers returning from the battlefield to take up the keyboard."

WILLIAM E. HUMPHREY, keyboard operator with the *New Haven Union*, says: "I take pleasure in stating that I have been greatly benefited by the keyboard instruction I received at the Monotype school. I have found that there is always a demand for operators, which has enabled me to keep constantly employed since leaving the school and I do not hesitate to recommend that others take advantage of the free instruction which is given there."

WALTER T. GALYOU, caster operator with the *Flint Daily Journal*, Flint, Mich., says: "It gives me great pleasure to have the

opportunity to express my appreciation of your schools and the big opening that the Monotype affords union printers. Having done case work until it became monotonous, I decided to turn to the machine, and was admitted to the Monotype school in Philadelphia, where I was given a complete course on the casting machine, which was the start to success in my career in the printing business. I wish to thank the Monotype Company for the opportunity they gave me, and recommend the school to others who, like myself, have tired of the hard work. I now have charge of two casters, and it is more of a pleasure than work to keep them going."

D. FRAZER, keyboard operator in a commercial plant, Toronto, Canada, says: "A little over a year ago I took a short course in the Monotype school on keyboard work and consider the time well spent; in fact, I have made it up long since. No longer am I tired out at the end of the day from long standing. It gives me the shivers now to think of the days when, as a compositor, I hunted for sorts and picked the jobs to death. Those days are gone—for good, I hope. Keyboard operating is a cinch, and any compositor who will do as I did can enjoy the same kind of a job that I now have."

DAVID S. CONNELL, caster operator on the *Daily Star*, Montreal, Canada, says: "After spending three years as a runner I entered the Monotype school. Completing the course in eight weeks, I accepted a position on the Montreal *Daily Star*, of which plant I am now in charge. The method of teaching by which each student receives personal instruction enables one to start at any time and to go ahead without delay. The course completely covers everything pertaining to

the Monotype equipment. No printer can take a bigger step forward than to take up either the keyboard or the caster work of the Monotype through the school."

JOSEPH R. KIERNAN, combination operator with Searle and Dressler, Allentown, Pa., says: "I am about to enter my tenth year as a Monotype operator, and having been a student in the Monotype schools at three different times, feel competent to speak of the good work they are doing. During my first term I learned the old keyboard; returning again in 1910 I took up the duplex board, and came to the conclusion that there was no composition so intricate that the Monotype would not make simple work of it. More recently I again attended the schools and took up the caster. Aside from the fact that it is more remunerative than the other work in the composing room, I have found the Monotype very agreeable work—more so than the slug machine, with which I have had some experience. All printers should avail themselves of the splendid opportunity offered by the Monotype schools."

LOUIS T. KREN, keyboard operator with the Sears-Roebuck Co., Chicago, says: "At the time I entered the Monotype schools I had been operating a slug machine for a year. It was my idea merely to add some extra knowledge, but as I became interested in the operation of the keyboard I was convinced that the Monotype was the machine on which I wanted to work. Besides being clean and healthy, the work is attractive to any one whose ambitions are directed toward the best in the printing industry. I cannot praise too highly the thoroughness of the instructions in the schools and the aid extended to all graduates in securing positions."



LOUIS T. KREN
Keyboard

O. C. STRATHAM
Machinist

EDW. KREUTZBERG
Caster

J. S. HEAD
Caster

M. P. FISHEL
Caster

J. J. GOLDSTEIN
Combination



K. G. SCHUELER
Caster

C. P. MAHONEY
Keyboard

OLIVER C. STRATHAM, Monotype machinist with L. F. Dow Company, St. Paul, Minn., says: "I am certainly glad to make known some of the benefits I received from a course in the Monotype schools. The schools first became known to me through a circular describing the opportunities offered ambitious young men, an offer which seemed almost too good to be true. But after taking a course in the Monotype school I found that the circular did not show nearly all the advantages gained by this absolutely free course of instruction. Since graduating I have worked under better conditions, wages are higher, and I have steady employment. I find it impossible adequately to express my appreciation of what the Monotype schools have done for me."

EDWARD KREUTZBERG, caster operator on the *New York Times*, says: "Since my graduation from the Monotype schools I have found that your interest in the students does not stop when they leave the school. I regard the schools as the most complete of which I have knowledge, and can testify to the results in my own case. Without training in the printing business, I entered the school and am now able successfully to operate the plant of the *New York Times*."

J. S. HEAD, caster operator with the Fort Wayne Printing Co., Fort Wayne, Ind., says: "What success I have thus far attained as a Monotype operator I owe to the Monotype school, and my advice to any compositor who wishes to better himself is to take advantage of the opportunity offered and take a course in the Monotype school."

M. P. FISHEL, caster operator with the Caslon Press, Toledo, O., says: "The work of the Monotype school and the instruction received there are important factors to the printer starting in Monotype work. Instruction is given under actual working conditions. The instructors take a personal interest in the students, and the lessons are thorough and cover everything. Personally, I think the Monotype school is a wonderful institution."

J. J. GOLDSTEIN, combination operator with the Winkler Printing Co., Springfield, O., says: "The Monotype course brought me



GEO. GOLDBERG
Caster

CHAS. F. RIBAH
Keyboard

such great returns for the small amount of time and money (room and board) put into it that I consider it a gilt-edged investment. The monetary returns have not been greater than the returns in personal improvement. After completing the course at the school I was sent out to run a Monotype plant. Here I was placed on my own merits. As a comp. I lacked confidence in myself, but with no one to turn to for advice I was thrown on my own resources and soon learned to think for myself and use my judgment. Now, confidence is my greatest asset. I enjoy my work and thank the Monotype Company for the opportunity the schools have given me."

CHARLES F. RIBAH, keyboard operator, Jefferson City, Mo., says: "Nothing better can be said of the Monotype Schools than that they have brought success in my case and enabled me to guarantee my employer a big string every day. Just to get the right start a fellow has to have a leverage on accuracy and speed, and the Monotype School is the place to get that start."

KARL G. SCHUELER, caster operator, with Western Printing and Litho. Co., Racine, Wis., says: "I have been working steadily ever since I finished my term in the Monotype School. My earning capacity has been increased about fifty per cent., and the work is much more pleasant than when on the floor. The increase of wages alone has more than paid me for the time it took from my work while taking the course."

GEORGE GOLDBERG, keyboard operator with F. H. Lounsbury & Co., Duluth, Minn., says: "I attribute my success on the Monotype keyboard to the course of instruction which I received at the Monotype Philadelphia School some three and a half years ago. The Monotype School is all that you claim it to be."

CHAS. P. MAHONEY, keyboard operator, now estimator with George F. Lasher, Philadelphia, says: "It is now about twelve years since I began 'hitting the keys', and I always look back with pleasure to my course in the Monotype School. To me the Monotype has been a stepping-stone to better things, and with a natural love for figures has led to my taking up estimating. The careful instruction received at the Monotype School has certainly been a big help, and I recommend it to all ambitious printers."

WHY NOT CHANGE?

You are sick of distribution,
You have wrecked your constitution,
In a printing institution
Picking sorts;
For your feet are sore and smarting,
While your backbone feels like parting,
And your work-sore hands are starting
To grow warts.
You're sick of doing dull things ev'ry day,
You're sick of getting just the same old pay.

Now I know that you're disgusted,
For you're nearly always "busted"
And I know because I trusted
To that road;
But, like me, why don't you leave it?
You will never, never grieve it,
Whilst your mind—you will relieve it
Of a load.
And if you wish relief without delay,
Just write to Philadelphia today.

State you want an application
To the school for education
In the proper operation
Of machines.
That will make your work congenial,
Your position far from menial,
And a greater increase in all
Ways and means.
The Monotype will prove a stepping-stone
To something better than you've ever known.

WILLIAM BAKER, Combination Operator,
Brown-Howlands Co., Boston.

The Monotype Schools are open to
printers returning from the war.



"PEE-WEE" LITTLE ——"JUMBO" DAVIS
AND THEIR BIG DAY'S WORK

A PAIR OF RECORD BREAKERS

This is not a well-balanced picture, but it shows a pair of well-matched record breakers in the caster room of the *New Haven Union*. On the right is the diminutive caster operator, "Jumbo" Davis, who weighs 105 pounds; on the left is "Pee-wee" Tom Little, the printer's devil of the plant, who is nineteen years old, weighs 376 pounds, and is six feet one in his stocking feet. Between them is the product of an eight-hour day's run on the Type-and-Rule Caster—645 pounds of six-point slugs, 21 inches long. This pile is ten and a half feet high, and practically hides the ten-foot ladder used as a support.

While these slugs were being cast Operator Davis did his regular day's work of taking care of the composition being turned out by two keyboards. Thus he kept three casters going—one on slugs and two on composition. In the rear is shown a portion of the storage cabinets three tiers high, and on either side is one of the casters, the third not appearing in the picture. It certainly kept "Devil" Little busy supplying the caster with metal and stacking the slugs as fast as made.

MONOTYPOGRAPHY

An unusual special souvenir edition has been issued by the Quebec Telegraph Printing Company, Quebec. It is a large pamphlet of 56 pages and cover, 12½ by 17 inches in size, and is excellently printed on coated stock, the cover being printed by the three-color process. Mr. Frank Carrel, the proprietor, and Mr. Smith, his manager, both have reason to be proud of this splendid sample of what a Monotype job and newspaper plant can do with the aid of a good pressman. The Monotype Company is proud, too, as this is an all-Monotype plant and publishes one of the best-looking newspapers in Canada, as well as good job work.

The *Baltimore News* has issued a pamphlet of 40 pages and cover showing reproductions of its automobile advertising pages on June 19, 1918. It is 9¼ by 12 inches in size, and the reproductions are of the whole pages, including the reading matter, and are excellently well done. Mr. Frank D. Webb, the advertising manager of the *News*, and Mr. L. F. O'Brien, automobile editor, are entitled to hearty congratulations on that issue of the *News* and the book that commemorates it.