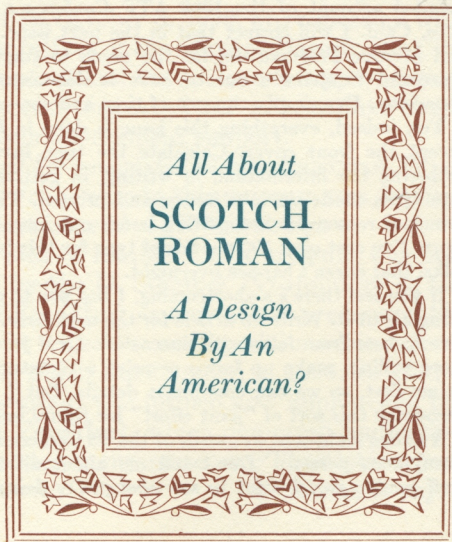


**Kastenbein**  
*Seeking A  
Typesetting Relic  
In Swedish Archives*



*All About*  
**SCOTCH  
ROMAN**  
*A Design  
By An  
American?*

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## Comments & Acknowledgements

It's been over a year since I last put out an issue of the *Newsletter*. That last one was a big effort for me because of all the color pictures and, of course, the digital color reproduction. Believe it or not, I take flack from people when I do the *Newsletter* by offset and there is some good reason for that, though it's obvious when there's a lot of photography involved, letterpress is not the way to go.

So I simply had to do Number 24 by letterpress—to satisfy my detractors, and to satisfy myself too, because I truly love to work with my trusty Monotypes and Heidelbergers and see what I can do with them. During the past year, one thing and then another got in the way. But once I got Monroe's interface (see page 34) up and running, I had no further excuses.

My biggest weakness in this issue is failure to provide a detailed account of the 1998 ATF Conference at Palo Alto, Calif. I will correct that in the next issue. Freddie and Monroe Postman did far too much to stage a very successful Conference not to have it documented in a *Newsletter*. I've simply run out of time and space.

Yes, indeed, everything this issue is done in *hot metal* except the front cover. Calculate the time involved in gathering the information, in writing, in getting it cast into type, made up into forms, and printed. That's my principal reason for not getting issues out more often. I figure I've cast over 500 pounds of type for this issue, and folks, that doesn't happen overnight.

If you feel there's a shortcoming, I beg *you* to do something about it. Write an article for the next issue. I would love to hear from folks with linecasters. Or if you're even more willing, make up forms or print a signature. Write to me first, so we can coordinate details. But I strongly encourage this sort of "joint effort" for future issues.

A strong statement was made at the '98 Conference by an anonymous person: "Don't tell me about all the neat stuff you've got. I want to see *what you're doing with it*."

And if you're not using it, then it's time to stop hoarding and share it with those of us who would dearly love to have access to the 'neat goodies' you are hanging onto."

We all say "long live letterpress." The best way for it to *live* is for you to make it live by using it.

THE COVER of this issue was designed by Vance Gerry of Pasadena, Calif., using border elements recently revived from their grave of neglect since the 1930s. Greg Walters of Piqua, Ohio, saved the mats from destruction during the American Type Founders auction. Vance rediscovered them and persuaded Greg to send them to Theo Rehak's Dale Guild Foundry in Howell, N. J., for a new casting. They were cut in the 1920s, issued by ATF under the title "Modernistic Borders," but apparently they didn't sell well, for soon they were discontinued. Vance provided repros of his forms and the color portion of the cover was printed offset. All other pages in this issue were printed direct from metal forms in the traditional fashion on a 10x15 Heidelberg windmill.

The face used throughout this issue is American Monotype Scotch Roman with Italic. I am indebted to John Hern of Coeur d'Alene, Idaho, and Greg Walters of Piqua, Ohio, for lending to me display matrix fonts not available in my own collection.

Also, I am indebted to the various people who wrote articles, and also to Ms. June Anderson Evanoff, who translated the Kastenbein article. Without such help, this *Newsletter* never would have happened.

The *ATF Newsletter* is written, typeset and printed as time will allow by Richard L. Hopkins at his Hill & Dale Private Press and Typefoundry, P. O. Box 263, Terra Alta, W. Va. 26764. You may get on the mailing list by sending \$10.00 in advance for future issues. Overseas readers please send \$20.00 U. S. Sorry, but institutional subscriptions are discouraged because of paperwork. You may e-mail Rich at [WVTypenut@aol.com](mailto:WVTypenut@aol.com).

# American Typecasting Fellowship NEWSLETTER

## *New Hampshire to be Site for 2000 Meet*

The 2000 Conference of the American Typecasting Fellowship will be June 14-16, 2000, at the Woodbound Inn, a small resort near Rindge, N. H. The site is a 90 minute drive from Logan Airport in Boston and an airport shuttle connection can be arranged with the resort.

Registration and a get-acquainted hospitality session will be held the evening before, June 13, with sessions starting the next morning. This Conference begins on a *Tuesday* and ends on a *Friday*, somewhat at variance from previous meetings, all of which spanned a weekend. This is done for two reasons: (1) the resort can better accommodate our group by avoiding weekends (which are in heavier demand) and (2) the dates accommodate persons also attending the Amalgamated Printers Assn. meeting near Hartford, Conn., the previous weekend.

The Conference program itself is yet to be worked out. But attendees can expect another information-filled meeting with emphasis (as always) on finding, preserving, and using typecasting and slugcasting equipment, along with all associated technology such as typesetting, type design, type history, matrix making, type and mat collecting, metallurgy, etc.

Coordinating the 2000 meeting will be John Kristensen of the Firefly Press, Somerville, Mass., and Dan Carr and Julia Ferrari of Ashuelot Village, N. H., who together run the Gongolooza Press and Letter Foundry. It is noted that the Conference location is only 35 minutes from Gongolooza.

Technical sessions also are in the planning stages. First thoughts are for sessions on punchcutting to be held just *prior* to the Conference, and concurrent sessions *after* the Conference on Monotype keyboard, Comp Caster and Supercaster at Gongolooza, and Linotype at Firefly.

The Woodbound Inn was picked for two specific reasons. First, it will provide a cozy,

intimate setting so Conference participants will be able to mingle nicely without the distractions of a huge, busy hotel setting. Secondly, the location gets ATF away from the big-city pricing which is unavoidable in the Boston area. Our nightly room rates are expected to range in the \$70 to \$90 range.

The Woodbound Inn, located on Lake Contoocook, has historic country inn rooms, lakefront cabins with fireplaces, and modern rooms in the Edgewood building. Activities include golf, tennis, arcade, hiking, skating and more. Address: 62 Woodbound Rd, Ringe, N. H. 03461. E-mail Woodbound@aol.com. Toll-free (800) 688-7770.

Reservation forms and additional details will be forthcoming. It is *not necessary* to book room reservations at this time.

## **Darmstadt Museum's Fate Resolved 'at Last Minute'**

Those devoted to the preservation of printing as both an art and an industry gave a great sigh of relief on October 8, 1999, after meeting with representatives of the State of Hessen, the City of Darmstadt and the museum's support group. The museum was saved and will continue to operate from government support.

A visit by associates of our American Typecasting Fellowship to this museum was detailed in the last issue of *ATF Newsletter*.

The idea of establishing a museum was first floated by the D. Stempel Typefoundry to the City of Frankfurt as a means of preserving the huge mat collection and special machines from the firm which was founded in 1895. In 1981 a Friends group was formed and approached the City of Frankfurt, which demurred, indicating they had too many museums. They later recon-

*Continued to page 6*

## Correspondence

"I had several Monotypes back in the '70s and probably will again, whenever I get rich enough to build an addition on my barn. In the meantime, reading the *Newsletter* keeps my fire going." *Ross MacDonald, Newton, Conn.*

LINO MATRIX REPAIR DEVICE by Star Parts called "Star Matrix Repair Tool—the most complete and accurate repair tool ever designed." *Needs a new home.* Write to Hugh Woodruff, 7300 N. 51st Avenue, No. A-276, Glendale, Ariz. 85301.

Fred Woodworth of Tucson, Ariz., writes expressing a sincere interest in knowing how they cast steel type for old strike-on typesetting machines such as the Friden Justewriter, a device he's preserved and still uses. Does anyone have the inside track on either steel, or brass typecasting? I know ATF made zinc type and it had many special problems, but I know nothing of casting in other metals.

A note with a subscription renewal from Jack Leach of Central Typesetting Company of Detroit, makes this brutally frank observation: "The world of Monotypes and Linotypes is long gone except for the few of you guys that keep history alive. Thanks for your efforts."

Word has been received that Richard E. Huss, author of *The Composition Matrix* and also *The Development of Printers' Mechanical Typesetting Methods, 1822-1925*, passed away in September of 1997. He was a retired printer, and participated actively in matters of our American Typecasting Fellowship. Notice came from his son, R. E. Huss, Jr., who is continuing to operate the printing company his father founded.

Phrase at the top of the piece: "Type that puts across your message—You can't do business with empty cases any more than you can with an empty bank account—Fill 'em up—start the wheels spinning." That interesting quotation was pulled from an item in the ATF keepsake bundle distributed at our 1998 Conference. It was from a piece by George W. Mackenzie, established in 1915 in San Francisco as the Monotype Composition Company. The firm became MacKenzie & Harris in 1924, when Carroll T. Harris became a partner. Reissued by Mackenzie & Harris, 460 Bryant Street, San

Francisco, in 1998. Interestingly, the firm in 1915 sold 6 point fonts at \$1.00 per pound.

Michael Denker of Potomac, Md., writes: "You have put together a very handsome issue. A builder by trade and a printer when I can, I live vicariously, a typecasting fantasy life via your publication and organization."

"Let me introduce myself: I am a dinosaur—a Linotype operator. I do enjoy romping around in the past, getting filthy-dirty, sweaty-hot, and happy in direct proportion to discomfort. I learned the Linotype at the age of 14, when my parents quit schoolteaching and bought a small-town newspaper. We all learned together."

*Hollys E. Heer, 1326 Duff, Ames, Iowa*

From Timothy Trower, Springfield, Mo.: "Perhaps I can shed some light on the thin-space attachment in use on German Linotypes: The Germans use letterspacing for emphasis, and I would imagine that the rather tedious task of adding thins and then collecting them from the drop box spurred some creative shop into inventing a wonderful labor saver."

Charlie Hinde of Santa Clara, Calif., who contributed one of his legendary wood-type posters for the Palo Alto Conference keepsake packet, reports he was absent from the Conference only because he and his wife Frances had already planned a cruise which took them from Vancouver all the way to Ft. Lauderdale. They departed Vancouver the very day the Conference started. "We missed you!"

Bruce Anderton of Shipley, West Yorkshire, England, reports with glee (and accompanying photograph) the installation in 1998 of a new Intertype C4 with four side magazines in Collisons Ltd., joining another C4. Both machines are used for generating slugs for hot foil work.

Arvind M. Patel of the India Type Foundry, Ahmedabad, writes regarding the status of letterpress printing in his country. "The offset technology is not viable economically in India, but small screen printing processors have become real competitors. The marriage cards were formerly printed in small quantities in letterpress, but the screen printing processors took over the main resource of letterpress printers. The small-town letterpress printers still buy types. The small-scale typefounder like myself can supply types, cast by hand—pivotal casters

which make stronger type which wears better than Monotype-cast type. The big typefounders cannot afford more helpers, so they cast by Monotype and their clients switch over to us, when they hear about our better quality hand-cast types."

"I am a self-confessed lead addict, with my own newly acquired Monotype Composition Caster which I hope to have up and running in the New Year."

*Andrew Dolinski, Reading, Berkshire, England*

Bradley Hutchinson reports from Austin, Texas, that "Randolph Bertin continues to put his degree from Monotype University to use. He's cast a 100-plus page book of Latin aphorisms, with explications by Erasmus translated into English. 11 pt. Poliphilus & Blado. My British Comp Caster is in fine form these days, casting excellent type. My mat collection is still limited and is likely to remain so. I'd rather fill out my existing holdings before branching out into new faces."

And in that regard, Randolph Bertin, a graduate of Monotype University II, demonstrated this typesetting expertise recently in a bundle of the Amalgamated Printers Assn. Therein he had a four-page signature of work beautifully composed and cast on the Monotype and exquisitely printed on nice deckled paper. Only problem? Pages were imposed incorrectly. OK, so he's not perfect yet. Who hasn't done that?

"Howard Bratter was here a couple weeks ago (in Fall, 1998) for some 'post graduate' work on the Thompson. His machine from Yale University was a case of abuse. I fitted him with a couple parts, a pattern of the pump spring ratchet and pawl and a pump lock that we manufactured in a couple hours. Then we started casting type on my machine—and it promptly broke. Apparently a spill of type metal clogged a spring on the high-low speed clutch shifter shaft. This led to breakage of the pivot bolt for the little thumb lever that locks the shifter into low-neutral-high gear positions. The bolt was hardened steel and I couldn't drill or otherwise get it out. 'In deep kimshi,' as a Korean would say. During Thanksgiving in Massachusetts I dreamed up a fix (I rigged a pin and keeper bracket to avoid the need for getting the broken screw out and it works just fine)."

*Jim Walczak, Oxon Hill, Md.*

A subsequent communication with Jim relates that he's still aggressively thinking about how to make his backyard shop work (better)? He had a problem with the motor and drive on his American sorts caster when Mike Anderson, an understudy in his shop and now a graduate of Monotype University III, noticed the belt shifter could be moved from the right to the left side of the machine.

"After some quick mental calculation about pulley rotation and service accessibility, I started winching the caster to within two feet of my English comp caster. I made a drive belt from two old leather belts, installed it and tensioned it. Initial tests look good. Lots of power and a wide speed range." Jim concludes, "Ever heard of anyone else running two casters from a common motor?"

When our old buddy Gene Autry died in October, 1998, they made much of the fact that he got his start while serving as a telegraph operator and a customer named Will Rogers dropped by his worksite. The Associated Press sent out a wirephoto of Gene sitting at his "telegrapher's keyboard," all smiles. *Tsk, tsk*. And we hear so much about how the AP goes to great lengths to verify its information. So quickly they lose sight of their own history. Gene obviously is sitting at a *Linotype* keyboard. Sorry I have forgotten who sent the *Marin* (Calif.) *Independent Journal* to me with the picture. But don't get too excited. It's obviously a publicity shot, for Gene has all his fingers on the top row of the center of the keyboard. No self-respecting *Linotype* operator ever would have all his fingers in that position!

Received is an October, 1998, clipping of the *Skagit Valley* (Wash.) *Herald*, which featured a selection of color photos and an article about Jules Remedius Faye and Chris Stern and their private press at Sedro-Woolley (that's really the town name). Also this couple received an eight-page writeup in another and highly unlikely place—*u&lc*, the trade publication of the International Typeface Corporation. It begins by quoting from their prospectus: "The beauty and appeal of a letterpress printed book goes far beyond any of its individual visual components. A handmade book encompasses the skills, the devotion, and the perseverance of the bookmaker, who must constantly maintain standards which could slip or vary in the blink of an eye."

*This message arrived in August—*

"I have just set up a Monotype Supercaster and looking over the machine I doubt that I can figure it out on my own. I need to get hold of a book describing the machine functions. Better still, maybe you know some good-hearted Mono operator who may like to write to me or e-mail some instructions?" You may e-mail John at: utility\_press@bigpond.com.au

*John Setek, Queensland, Australia*

*Then this e-mail message arrived in October—*

"I have reached Toni Reggi, an Italian Mono expert. Indeed the Supercaster is his specialty. After many years in industry Toni taught Mono setting at the Brisbane Technical College and after that ran Monotypes from home until 12 years ago. We are separated by about 80 kilometers, nevertheless we came to the agreement I would pack the Mono mold boxes into my car and he would review them in his workshop and answer all my beginners questions.

"As is so common, in the last few days I have heard many stories of composition matrices having been dumped in recent times—I guess one simply has to be at the right place at the right time. Undefeated, and to get on with things, I have swapped a large German cylinder proof press for a heavy box of pied Nebitype matrices of dubious quality. They'll be my first attempt at casting from non genuine mats.

"I converted my Mono to single-phase using all the original electrics, then I made a closed loop cooling system using automotive rust inhibitor. Indeed, I had to drill out the brass plugs in the mold to ream out the accumulated rust caused by years of tap water. I am getting close to casting for the first time!"

*Much earlier this year, I received word that some Monotype equipment was available at General Printing in Detroit. First I confirmed it really was available and then I set out to find someone interested in acquiring it. My candidate ended up being Paul Brown of Bloomington, Ind. He did all the right moves, but came up empty handed, as his e-mail message below reports:*

"Thought I'd send an update on the Detroit fiasco. On my first trip, I had left a list of items I was interested in purchasing. After some negotiation, I had a verbal agreement to purchase about half dozen of the items on that list and an agreement I would travel to Detroit to pick up those items for an arranged price and they would

throw in some of the Monotype equipment (stop bars, pistons, tools, etc.). I rented a cargo van and traveled to Detroit a few days after these arrangements had been agreed upon.

I got to General Printing and the equipment broker I had been negotiating with wasn't there. After numerous phone calls and a two-hour wait, the broker calls to say he had forgotten about our meeting and that he had sold the entire contents of the shop to someone else. As you can imagine, I was angry, frustrated and disappointed. The broker said he would make good on our verbal agreement and ship the equipment to me. I do not expect to see any of the stuff and, in addition, the Monotype material was long gone. Oh well, live and learn."

"I stumbled across the ATF web page this afternoon and have enjoyed looking at it very much. Glad to have found it! Perhaps you can help us with a problem. I have a friend who has a late model Elrod (is it style K?), electric pot, in excellent condition, many molds and only one slight problem. He's in his 80's and hasn't seen one operate in years and I've never seen one operate. Do you know anyplace we could get some information on getting it up and running? My friend is sure he can remember once it is up, but he thinks it was pretty tricky to set it up and get it started without suffering a squirt or two." Mike Supcoe, phone (410) 643-6383 daytime at Annapolis Md. or e-mail him at fmes\_99@yahoo.com.

Tom Conlon of Honolulu, Hawaii, is responsible for putting together an Internet site for the American Typecasting Fellowship. He did the work immediately after the 1998 Conference in Palo Alto, Calif., and now maintains it for all to see. *Check it out.* The web address is [www.pixi.com/~tconlon/~atf/index.htm](http://www.pixi.com/~tconlon/~atf/index.htm). Information that's now on the site is not etched in stone. If you feel things should be added, corrected, deleted, etc., please contact Tom directly at P. O. Box 12012, Honolulu, Hawaii 96828. Get his e-mail address at the ATF site.

"Why is there so little written history about American Type Founders? What precious little I have learned has been picked up through accounts such as yours (*in ATF Newsletter 18*) of the final days. I'd like to learn more about ATF and its history. Any ideas?"

*Chris Paul, Durham, N. C.*

"Funny thing about the APL (All-Purpose Linotype)—I mentioned to my dad that I'd one day like to find and buy an APL—and he had a fit. He said they were lousy machines and to avoid them if possible! Shucks, I have never even seen one, but, like a Model 9 Linotype, it would be a nice curiosity to have."

*Tim Trowler, Springfield, Mo.*

EDITOR'S NOTE: *Tim has been asked to get his father's first-person commentary on the APL. There are precious few who have had exposure to this rare machine.*

I'm gracefully (no, make that disgracefully!) rambling into the sunset of my career as a designer and have re-discovered, with relish, my wood type collection. I have more time now to devote to my press, several layouts and poster proofs and other wood letter projects have suddenly appeared pinned to my studio walls. I'm looking forward to carrying these through to completion next year.

*Tony Smith, Aylesford, Kent, England*

"We have developed 'new recruits' in the Museum of the Occidental Hotel in Buffalo, Wyo." David Romtvedt has taken a leading role in acquiring equipment for what he intends to be a working museum doing posters, fliers, programs and some book work in letterpress. To their collection of Vandercooks, Washingtons and C&Ps they now have added a Monotype Composition Caster & keyboard, formerly owned by Jim Bourland of Santa Fe, N. M. David hauled the equipment 750 miles in a horse trailer, has now placed it in a new room and is in the process of getting it hooked up and ready for action.

Steve Heaver, 500 Woodlawn Rd., Baltimore, Md. 21210, has contacted *ye ed* regarding his efforts to spread knowledge of letterpress printing, hand composition, and printing with the hand press, by offering apprenticeships to truly interested parties. Please contact him directly. He already has employed a few individuals for specified time periods with great success. He does require that the prospective apprentice have a good working knowledge of typesetting and letterpress printing before joining him at his "Hill" Press. Call (410) 235-6144.

"I am a newcomer to the typecasting hobby," writes Bob Corrigan of 115 East Spring-

town Road, Long Valley, N. J. 07853. "I am in search of equipment, specifically a Ludlow typecaster and Supersurfacar. Information relating to the Ludlow, such as manuals and specimen books, would be of great interest to me as well."

FOR SALE—American Monotype Sorts Caster with molds 14 through 36 and some matrices. Contact Ruth Armstrong, 374 Westwood Road, Lancaster, N. Y. 14086. Phone (716) 681-5430.

As to typecasting, my interest aims toward the days of Ben Franklin and casting type one piece at a time. I guess you might say that is my speed." *Frederick Smith, Framingham, Mass.*

"I am interested in learning how to make matrices—hand methods, engraving machines, whatever. Do you have any suggestions?"

*Jan Sager Jr., 2485 Hwy 62, Blanch, N. C. 27212*

"Our comp caster is hooked with power and air—we turned the pot on and waited for it to melt. At 550° we got impatient because it seemed nothing was happening and started messing around with a ladle—*Pssst*—we got our first squirt. What fun! The nice thing about hot type metal is that it doesn't really hurt when it hits you. The stuff is so hot it kills nerves before they can send a signal to the brain. It turns out the folks before us left about two inches of dross on the pot and I think the hot metal underneath built up pressure that pushed out when given the opportunity. The pot is cleaned off now and the metal has a nice shiny surface."

*Rob Buchert, Provo, Utah*

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### *Internet Site for Typefounders*

Rob Buchert from Provo, Utah, reports: "I've set up a type casting *listserv*. At this point it's hosted by a commercial site that sends a little advertising with each message. This'll stop when I send them \$50. I will probably try and set up on a private host before that. I believe it a little thing I can do to promote type casting. If you're interested and/or know other interested persons, please sign on. I have set it up to run the same way I believe ATF runs—no rules, no dues, no promises that it will continued." The address is [www.onelist.com/subscribe/typefounding](http://www.onelist.com/subscribe/typefounding).

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## Marvelous Darmstadt Museum Narrowly Avoids Auction Block

(Continued from page 1) sidered, but they were too late; Darmstadt had already agreed.

A building was located and the Friends persuaded the City of Darmstadt to provide 3.5 million DM and the State of Hessen 2 million DM for its purchase. In July of 1994, an architect was retained and planning for the restoration began. An additional 2 million DM in the form of a bank loan made possible restoration and also covered moving costs.

Called "The House for Industry/Culture," the museum was to be a "working museum" whose typefounding and other activities appro-

priate for graphic arts would sell the products of its museum demonstrations.

The museum opened in December 1995 with the typefoundry and a copperplate studio in situ, and anticipated additions of papermaking, book binding, and stone lithography. The incidental expenses of staff and moving, however, ate up the repayment of the loan. At one point the Heidelberg Printing Press firm management considered moving the entire museum to its proposed Media Center along the Neckar River. At this time, the Chairman of Heidelberg was also the Chairman of the museum's board. Then Heidelberg withdrew and in September the bank called in the loan.

On October 5, 1999, the various parties met and, as one of the first actions, the Friends Group was dissolved. Under German bankruptcy laws, the title to the building and its contents revert to the State for sale to satisfy the accumulated indebtedness. People in the graphic arts field were aghast at the possibility this collection might be strewn to the four winds. But ultimately the State agreed to support the museum and retire the debts.

*This report was translated from various German news releases and submitted by Paul Duensing.*

## Components of Cherished Lino Turned Into Museum Display

When he came to the inevitable day when he had to get rid of his beloved Linotype machine, Bill Royall of Williamsburg, Va., still could not bring himself to completely trash it. Having worked with Linotypes since he was 20 years old, he had a particular affection for the machines and the junkyard simply was not the answer!

Bill had been a practicing printer in Williamsburg for several years and his shop progressed as did all shops as new technology was introduced. After he sought retirement, the new proprietor said the Linotype was taking up valuable space.

He came up with an ingenious method of preserving the machine. He took the most important parts, the keyboard, the distributor, and the first elevator, detached them from the machine and mounted them as attractive working displays which now are housed with the University of Virginia book arts program. These true-to-life items help explain the Linotype machine—how it assembled matrices, and how it eliminated the tedious task of distribution.

"To make it really authentic," Paul Duensing commented in reviewing photos of these items, "they should have a full magazine and show students what happens when one forgets to lock the magazine before taking it off the machine."

Not to remain idle, Bill also has been testing theories about Gutenberg's true invention—trying to answer the question as to whether he worked from individual types or something else. Bill has been working with plaster-of-paris casts of *lines* of type and has come up with convincing evidence that this process could have been used.

## Do Caster Pots Ever Explode?

When I started messing with typecasters and linecasters *way back then*, an idea I had planted in my mind was that a cold metal pot would *explode* when heated. Obviously that is not the case for I have heated them thousands of times since then. But was it poppycock?

Correspondence from Bill Royall, 233 Christopher Wren Road, of Williamsburg, Va. 23185, revisits the question.

"I learned on the first Lino I had to myself at age 20 to adjust the flame for blue color. But no one told me why the burner had metal drippings on it every morning, and it was years before I learned that heating a metal pot from bottom would force a metal pot to crack under the pressure. Some folks had a 'dibble'-like cone they forced down into the metal at night, which floated up in the morning and relieved the pressure."

Let us know if *cracking pots* is a concern of yours and how you avoid the problem. Note I did not say 'crack' and 'pot.' I said *cracking pots!*



# German Linotypes Altogether Different

Bruce Anderton of Shipley, West Yorkshire, England, took exception to my discussion of Linotypes in the last NEWSLETTER. Obviously, he has a far better understanding of the machines, so I asked him to submit an article to clear up the matter. That he has done very well, as you are about to see for yourself.

BY BRUCE ANDERTON

ATF Newsletter 23 carried fascinating news concerning hot metal preservation in Germany but was incorrect in stating "German Linotype was able to develop four different models of the Elektron while in the U. S. we had only one." Wrong on both counts. The German Linos were not variations on the Elektron (and there were more than four versions). Also, there was more than one version of the Elektron—but that's a story which will have to be discussed on another occasion.

One fact is inescapable, however: the collection of linecasters at the Haus fur Industriekultur in Darmstadt is outstanding—probably the best of its kind in public view in the world today, and congratulations to the Germans for providing such a spectacle. One has to realize that to the man in the street one Linotype looks very much like another—or like an Intertype or even a Neotype for that matter. A display such as the one at Darmstadt is an enthusiast's delight—but are there enough enthusiasts to justify it? Many would say not, so we must offer our thanks for the enlightened attitude which has allowed the Darmstadt collection to be established.

However, to get back to the purpose of this article: in a late flowering of enthusiasm for hot metal casters, Mergenthaler Linotype GmbH (German Linotype) set to work in the mid-1960s to engineer a range of machines suitable for all classes of work, from a standard manually-operated machine, through high-speed tape-operated straight text machines, to a very specialized and highly impressive six-magazine 72/90-channel mixer which surely stands out as being the ultimate in linecaster sophistication. The range was known as the "New Line" series, and comprised the following models:

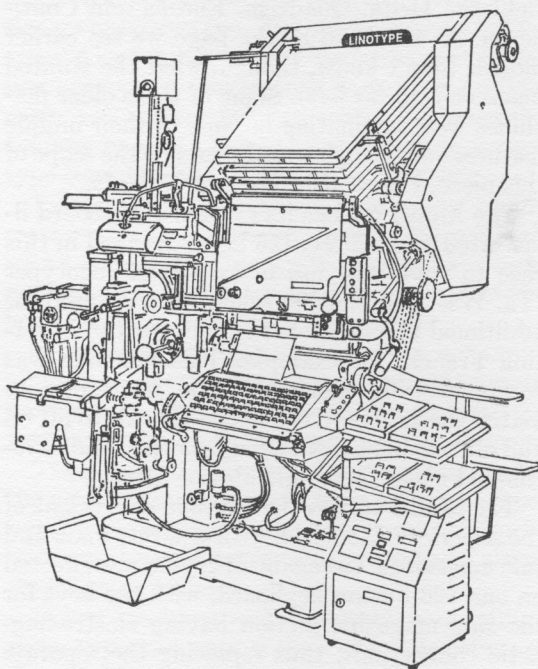
**DELTA**—The basic model: a manually-operated four-magazine machine, normally fitted

out for 6 to 12 pt. operation, though could also cast larger sizes if needed. Weight: 1730 kg. Comparable to American Model 31 or British Model 78.

**QUADRIGA**—Four magazines set at 54-degree angle (and thus similar to the Comet); rigged for tape operation. Casts up to 15 news lines per minute (news measure)—a flier! It weighed 2100 kg.

**EUROPA**—A tape-operated machine, this time a mixer able to utilize mats from all four magazines at any time. Five sets of distributor screws—wow! (I have worked some machines where it was a struggle to keep one set turning.) Speed: 8 to 14 lines per minute. 2000 kg.

**EUROPA G**—Similar to the previous model, but this is a four-mag mixer which can be fitted with a mixture of 72- and 90-channel magazines, thus enabling setting of, for example, classified advertisement work with agate text combined with 18 or 24 pt. display (German Linotype had elaborate computer programs



German DELTA Linotype

enabling this—and much more—to be done on tape without manual intervention).

CONTINENTA—A two-magazine mixer; 10 to 15 lines per minute; 1850 kg. High-speed basic text setter with useful mixing capability.

UNIVERSA—Weighing in at 3000 kg., this is the big boy of the range—and what a machine! Six magazines, with the ability to mix from four simultaneously; five sets of distributor screws. Mixture of 72- and 90-channel magazines as required, *i.e.* three of each; two 90s and four 72s; or one 90 with five 72s. Six-pocket mold wheel, with molds from 6 to 42 pt. Casting speed: 8 to 12 lines per minute. Manual operation only, needless to say. This is the machine shown in picture 2, page 4, of *Newsletter* 23.

All “New Line” machines had water-cooled molds, Mohr saw (if required), hydraulic quadder, and tape-operated models had an electro hydraulic magazine lift, automatic knife block and more buttons, warning lights and gauges than you could shake a stick at! A neat free-standing tape unit and electronic control box stood alongside to facilitate tape operation.

To return to the illustrations on page 4: picture 5 shows some New Line machines—left to right the Delta, Quadriga, Europa and Continenta. At the head of the page we see earlier models (don’t know, though, what the stunted machine is at far left). Some of these older machines were fascinating because of their unique features and though strictly outside the scope of this piece, I must mention two variants.

The Model 4B has its extended keyboard illustrated on page 21: 126 keys arranged in this case to cover the use of two-letter logotypes (Ta, Wa, etc); another scheme can be used for additional accented characters—for use in setting French, for example. This machine was equipped with enormous wide magazines to match the keyboard capacity (difficult to lift on and off, one imagines), though normal width 90-channel magazines could also be fitted.

The Model 18 was the German equivalent of the American Model 32, with separate main and side magazines, but again all keying was effected on one 126-button keyboard, with the keys for the side magazine section having electromagnetic connections, thus replacing the separate side unit keyboard.

Both these machines featured the thin space inserter shown on page 21 and which was a fea-

ture of most of the machines of this era: this had to be filled manually with thin spaces which were dumped into the pie bowl after casting (or, more usually, scattered to the winds!).

To return to the New Line machines, it is misleading to refer to them as Elektrons: they were, in fact, the logical development of the standard linecaster without the novelties of the Elektron—no straight-line delivery, for instance, or the electronic tomfoolery which could (and so often did) go wrong.

Though a comparison could be made on appearance, it could not be made on mechanical grounds, and I would suggest that the German machines were more akin to the Intertype Monarch in this respect: a more streamlined look but retaining the standard mechanical parts.

An interesting twist to this story is provided by an article in issue 3/1966 of *L&M News*, house journal of Linotype and Machinery Ltd. (English Linotype). This states that an agreement had been signed between the German and English Linotype companies for the manufacture and supply by L&M Ltd. of no less than five hundred Elektron linecasters over a seven-year period, with an initial batch of 60 units then in course of delivery to Germany.

Whether this order was ever fulfilled, and, to what extent, is not known, but in view of the problems experienced elsewhere with these machines (despite extensive modifications carried out to the design by L&M engineers in England, which made the Elektron a much more reliable machine than had previously been the case), I would doubt that the original agreement was fully honored.

In any case, why would German Linotype need to buy 500 Elektrons from England when it already had its own range of New Line machines waiting in the wings? Were they encouraged by Mergenthaler in the U. S. to buy Elektrons, and told to sidetrack their own design? (This is what happened in England, where L&M had a brand new model ready to be launched, only to be told by the American parent company to promote the Elektron instead. The L&M machine, the Model 794, a four-magazine adaptation of the Model 79, England’s version of the Comet, was not released to the trade until November 1970: in some offices it replaced Elektrons which had proved unreliable or—dare

*Concluded on page 9*

## Dan Jones Finds a New Use for Ludlow Supersurfacers

A nagging problem at the Hill & Dale Typefoundry has been that of casting type from foundry matrices. Many matrix fonts are on hand from both American Type Founders and from earlier American foundries. Invariably the *drive* of these matrices is deeper than Monotype standards, meaning any type cast from these matrices on Monotype equipment ends up being taller than type-high.

A Hacker Block Leveler was acquired at the American Type Founders auction for purposes of milling the feet of type to get it down to type high. (It was understood the device was used at ATF to mill European fonts to .918", but I question that assumption.) Extensive experimentation with the machine produced unacceptable variances in height—three thousandths or more after the milling was done.

Dan Jones first became aware of this dilemma during Monotype University II, and it became his own personal problem when I traded to him a couple of fonts of mats from my Kelsey collection—primarily Saunders Bold Condensed.

As a trained engineer, Dan loves to confront problems of this nature. Here's the solution he came up with. I'm happy to report he modified a Ludlow Supersurfacers for me too, and students at Monotype University III were able to cast a Kelsey font and mill it too—and the results were quite pleasing as the attached specimen reveals.

Now the story is carried by Dan Jones:

To mill type to .918". I wanted to develop a simple, low-cost method. From a suggestion by Don Black of Don Black Linecasting, Toronto, Ontario, a Ludlow Supersurfacers was dragged back to my Pygmy Press shop. The machine itself has several important features. It didn't

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GERMAN LINOTYPES (From page 8)

I say it?—unworkable. I have personal experience of the latter!

Maybe some day we will find out what the full story was, but in the meantime we have an insight of the internal politics of the Linotype organization in the last days of hot metal. In the case of the German company, they continued to build their own designs of New Line linecasters until 1977 and thus provided the hot type era with a spectacular finale.

take up much room, it was simple, accurate, and proven by years of Ludlow use. The design allows for fine adjustment and accurate cutting. However, it is quite *labor-intensive* with a large amount of type to be milled.

For those not familiar with the Supersurfacers (including myself until Don Black demonstrated it to me), the machine was designed to mill a

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ABCDEFGHIJ  
KLMNOPQR  
STUVWXYZ  
\$1234567890

*Font specimen of CONCAVE cast by Monotype U students and milled to proper height on the Ludlow Supersurfacers. Matrices are from my Kelsey collection and date to the nineteenth century.*

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small amount of metal off the *face* of Ludlow casts. The purpose was to improve the printing surface of larger type. The machine had a holder about 6 inches long of hardened steel, with knife-like grooves to remove any flash from Ludlow casts. The holder was set up for the thickness of a Ludlow base (12 points), but seems to accept type from 12 point to 72 with no difficulty.

I designed a replacement holder and had it machined. It is a mild steel copy of the original, with two changes. The knife grooves have been removed and a stop is added on one end of the holder to keep the type in alignment.

It is important that the type does not move around, or the cut will not be square and produce useless type. But with proper care in inserting type in the device, great results can be achieved.

There must be a limit to the amount of metal the machine can mill away from a piece of type, but I have not found that limit yet—it works fine in cutting down type which measured about .923" before milling.

If you are faced with the problem of milling down type and want a copy of my drawings of the modified holder, write me, Dan Jones, at 1025 Wildwood Drive, Newmarket, Ontario L3Y 2B6 Canada.

## Building and Adjusting an American Monotype Bridge

One of the more interesting activities during the past year at the Hill & Dale Private Press and Typefoundry has been the construction of a new Bridge for an American Monotype Composition Caster.

The Bridge is the component which holds the matrix case over the mold and contains the centering pin which ultimately is responsible for the precise positioning of the matrix over the mold during the casting phase of the machine's operation. Obviously there are some very precise adjustments involved in the Bridge and that's the main thrust of this article, but first let me explain the term "building a Bridge."

No, I did not go out and have parts manufactured. All the components already were on hand at the Hill & Dale, having been acquired as spares from various shops I have purchased over the past 25 years.

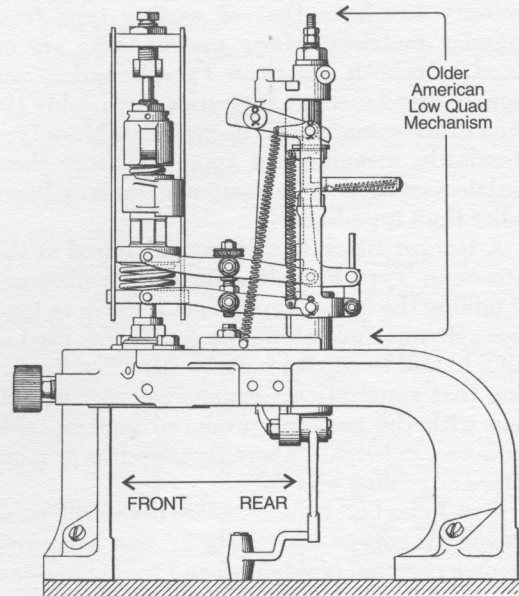
I opted to build the Bridge because every Bridge I had was worn and extremely dirty—Bridges I didn't trust for accuracy. The Bridge I had been using was showing excessive wear on the matrix case carrying frame, which affected squareness on the body. (Slop was causing crooked letters.) The mat case would rattle around in this frame by as much as 4 or 6 points, and I considered this a very convincing symptom of wear, especially after I tested a mat case in a brand-new frame from my spare parts.

This was truly another adventure in appreciation of the genius of the men who developed the Monotype. I strongly advise that unless you have a fully assembled Bridge on hand to serve as a guide, assembly from scratch will be next to impossible.

The American Monotype manual, *Casting Machine Adjustments*, details all the adjustments, but makes no effort to discuss theory of operation. I wish to correct that oversight.

Perhaps the most critical of all adjustments is the one where you establish precisely how much pressure will be exerted by the centering pin on the matrix as it seats on top of the mold.

They instruct that you should be able, in making this adjustment, to put two thicknesses of keyboard paper (about 20-pound bond paper) under the feet of the measuring tool provided for this purpose and have the paper clamped tight, but one thickness of this same paper



*Side view of an American Monotype Bridge showing the old-style low quad mechanism (top right) which, although temperamental, does work and work quite consistently.*

should be removable with only slight pressure on each of the two feet of the gauge. What this means is that you're setting an adjustment so critical that a single thickness of paper will determine whether it's right or wrong!

I testify that you can fiddle with the adjustments on the two rods holding the matrix frame for 15 or 20 minutes easily, trying to get them set properly, knowing full well that improper adjustment will, if too loose, allow metal to escape between the mold and matrix, making little fins all around the face of the letter. Likewise, if too tight, the Bridge will exert too much pressure on the matrix and cause excessive wear to matrices which are virtually irreplaceable.

Therefore, you can be sure I spent several extra minutes making sure this adjustment was precise when I assembled my new Bridge. Likewise, you can appreciate my disappointment when I cast my first type with the new Bridge. *Fins everywhere!*

Naturally fins will appear if the matrix isn't properly positioned over the mold—out of ad-

justment to the point where you're blowing metal between two matrices. I determined that was not my problem.

So I asked master Monotype operator, Bill Riess of Quaker City Type fame, what might be my problem. "You've got to realize," he said, "that the book was written to reflect conditions of new matrices, new molds, and new machines.

"We're long past that stage and therefore the adjustments must be altered to reflect the condition of the matrices and equipment we're now using." What he was saying in effect was that maybe I should remove one thickness of paper in making my adjustment. I did that and my problem did diminish, but didn't disappear.

I cast a couple galleys of type with this new adjustment in place and my fin problem demanded that I stop every 30 or 40 lines to clean the bits of metal off my matrices. Otherwise, the fin problem just continued to get worse.

Two comments about metal bits on matrices. First, you clean off the chips by using the edge of a slug made of type metal (never brass!), and what's left should be brushed off with a brass brush similar to the ones used to buff up suede shoes. I have found that the problem is worst when the matrices are cool. Second, the longer you run the machine, the hotter the matrices get and slowly the fin problem diminishes. Third, there is an air blast available in the machine which blows up diagonally from near where the mold hooks to the type carrier. This air blast should always be on, for it is intended to both cool the matrices and blow away the metal chips. It does help, believe me.

But now to another practical observation which just might save you a whole bunch of trouble with the fin problem. It relates to *wear* on both the mold and the matrices. You simply must run *worn matrices with worn molds*. A mold that's perfectly flat on its upper surfaces works only when you have matrices that also are perfectly flat (new). There's a degree of latitude here, of course, but if the mats are slightly rounded on their bearing surfaces, the concave surface of a worn mold tends to mesh with the worn matrices and reduce fins.

In the instance mentioned above, I changed away from a very good, relatively new mold to one which was slightly beat down on the top surface. The fin problem diminished very significantly. In fact, the type you read here was

cast under those specific conditions and obviously from the appearance of this *Newsletter*, I have cast a lot of type from those relatively worn 10 pt. Scotch Roman matrices.

I have a font of 12 pt. Della Robbia which one would assume to be useless because of rounded corners and other dings. To my great surprise, I was able to get type from these matrices simply by using an older mold. The converse of this theory also is true. Never use a worn mold with newer matrices. That also will invite fins.

Finally, I comment that one American machine I acquired was equipped with a trimming knife attached directly to its type channel block to shear off these little fins from the top edge of every cast letter. Likewise, the end of the rule mechanism (which drops after each successive line as it is pushed into the galley) also is tapered in a way which shears off the fins along the bottom of the face of each letter. I find these little additions very helpful because let's face it, I am going to be working more and more with worn matrices.

Oh yes, *if you're with me still*, I might suggest that before you do all the adjusting outlined herein, first adjust the pot temperature down five or ten degrees. Sometimes this simple adjustment will reduce or eliminate fins without all the other hassle.

In conclusion, I can't over stress the need for precise adjustment to preserve your machine and your matrices. However, allowances must be made to accommodate wear as it increases on the mold, the matrices, and the machine itself.

### *Making Mats for Euro Sign Accomplished by Monotype*

Duncan Avery wrote several months ago from the Monotype Trust in England saying "Last week we were pushed, backs against the wall, when asked for the new Euro currency mark in 6, 8, 10 pt. Gill. As you know, we have no way of making the Monotype copper patterns now, these being necessary to cut the punches. However, just today we have miraculously produced the matrices." Congratulations to Duncan and crew. The Monotype spirit is alive and well in England.

# My Life with Type

BY MAC MCGREW

My first actual encounter with metal type came when I bought a small hobby printing outfit from Kelsey, during the summer before I entered high school, in the 1920s. I had been inspired by several type specimen booklets given to me by my father, who was an architect with a specialty of inscriptional lettering. He had designed the inscriptions on a number of schools and other public buildings in the Pittsburgh area, notably the former Buhl Planetarium, and had used these specimens for reference.

I soon found out that the two fonts of type included with the outfit—8 point Caslon and 10 point Cheltenham Bold—didn't go far. Somehow I found out about the American Type Founders branch in Pittsburgh, and bought another font of Caslon there. Fortunately they gave me Caslon No. 540, which was close to the Kelsey Caslon though not an exact match—but near enough to be mixed. I hadn't considered that another source might not have the exact same style.

Later, during a summer vacation from high school, I got a job in a small printshop, distributing and sometimes setting type and making up forms. Aside from a few hobbyists, most of whom worked on a small scale, virtually all typesetting was done in print shops or typographic shops that had made substantial investments in equipment and in shop space to house it.

After high school I studied printing at Carnegie Institute of Technology (now Carnegie Mellon University). It had the country's leading school of printing at the time, so it was a natural goal for me. There I learned all I could about type and its use, including the Linotype, Monotype, and Ludlow machines.

At Tech I had developed the habit of reading trade journals, principally *Inland* and *American Printer*. They often had items about new typefaces, which particularly interested me. Around this time, or a little later, Linotype introduced its Caslon Old Face, a more faithful interpretation of the foundry face than previous machine-set Caslons.

Their ads featured lines of foundry type mixed at random with the Linotype setting, and chal-

lenged the reader to identify them. Later Linotype told me I was one of only a half dozen who correctly distinguished them. It hadn't been a contest, but as a "reward" I was given a subscription to *Linotype News*, which gave me information on new Linotype developments, as well as articles on quality in typesetting, which were helpful and inspirational to me for years.

After a few jobs in smaller shops (jobs weren't easy to come by in the depression era), I became production manager and typographer in a mid-size commercial printing plant (William G. Johnston Company, 1942-1952). There I specified type in detail for the men in the shop to execute. My shop experience came in handy, because I had first-hand knowledge of the possibilities and limitations of the equipment, and was able—when necessary—to explain a specification they may have considered impossible or impractical.

That shop printed newsletters, as well as general advertising, forms, and other work for a number of large corporations, including Westinghouse, Alcoa, Heinz, and others. At some point my employer decided that a Linotype would be advantageous, and gave me the job of selecting Linotype fonts to most nearly match the Monotype fonts they had been using for newsletters.

One morning I submitted my list, suggesting also Caledonia, then a brand-new Linotype offering. "No extras," my boss said summarily. In the afternoon of the *same day*, the company's top salesman came to me. "Do you know a typeface called Caledonia?" he asked. I assured him I did. "Alcoa wants to use it in all their advertising," he said. We got it.

Looking back, I think the shop crew planned problems now and then to test me. On one occasion, they showed me a galley proof of Monotype composition with improperly spaced quotation marks. I pondered it a bit, then said, "Your 5- and 7-unit quotes are transposed." (Monotype users will understand that.) I think they were impressed.

On another occasion, a Linotype operator showed me a slug with one character sticking up above the others. I know he expected me to say,

"What the heck happened there? That's impossible!" Instead I simply said, "Oh, a Rogers Tabular mat." (Linotype users might understand *that*.) He admitted I was right.

Some of our clients sent us jobs with a lot of tabular matter in them. I made sure my specifications would work, but left it to the Monotype or Linotype crews to determine such details as spacing of columns. Except once, when the only practical specification was 12 point Monotype Twentieth Century Medium for column heads in a series of tables, and 14 point Linotype Spartan Medium for the body matter. I took time to specify that in detail. Later a shop man told me they were betting the combination would never work, but they put the output of the two machines together and it fit perfectly.

At one of those jobs, a friend introduced me to the Pittsburgh Club of Printing House Craftsmen. I became a member, and attended some of the conferences of the International Association, which greatly broadened my horizons, and introduced me to some of the prominent people in the business.

Eventually, the job of type director in the city's largest advertising agency opened up, and I was recommended for it. I went to Ketchum, MacLeod & Grove as type director—later typographic director—where I worked until retire-

ment in 1979. That was a "dream" job for me, as it concentrated on my greatest interest.

I already had some acquaintance with the advertising typographers of the city. In fact much earlier I had approached one for a job, but was told I could start as a messenger and work my way up; that I declined, as I thought I already had the experience for a better starting point.

As type director, I occasionally made ad layouts, but usually began with layouts and artwork from the staff of art directors (as many as a dozen of them in the agency at one time), and handled the typographic portion, sometimes making or recommending adjustments as necessary.

It is said that in early days, some small-town newspaper editors wrote their articles on a Linotype keyboard, which allowed them to go directly into type. That may have been true, but in my experience there was virtually complete separation between writing and typesetting during the metal type era. Writers did their work on a typewriter, or in some cases wrote in long-hand. Quite often the author retyped it several times, as he polished his sentences.

Perhaps then the writing went to an editor if it was headed for a publication, or to the client if it was advertising matter. When finally approved it went to a typesetter. These compositors—

One of the goals of this publication is to preserve knowledge of the technology of letterpress. Tied to that is knowledge of how business was transacted in the days of letterpress, so I approached Mac McGrew to provide reminiscences regarding his life-long career with type, principally as type director for an advertising agency.

What better person to approach? His long-running research project, *American Metal Typefaces of the Twentieth Century*, is testament to his devotion to and knowledge of the craft.

And now I'm doubly glad I approached him. He submitted his first draft in April. By October, he was unable to complete the project because of macular deterioration in his left eye (he had it in his right eye for several years). So Mac sent his disk to me for final editing and assembly.

Regarding his move into the present-day world of computer typesetting, Mac says "early work on *American Metal Typefaces of the Twentieth Century* was done on a manual typewriter. Most work on the preliminary edition (1986) was done on a primitive word processor, which had no monitor—it simply recorded characters, and was capable of playback with very limited editing.

"By the time I was working on the revised edition (1993), I had an early computer, which had a monitor

and much more extensive editing ability, but only limited non-scalable type fonts. Later I added a program that allowed scalable fonts, but at very low resolution.

"Meanwhile, in 1974 I took on the volunteer job of production editor for *Trolley Fare*, the newsletter of the Pennsylvania Trolley Museum. Early issues (with no budget for commercial typesetting) were done on a typewriter, with rub-down transfer type heads pasted in, all done oversize and reduced by the printer.

"My early computer permitted scaled type heads, but the output was much too low-resolution for scaled type text, so heads were still pasted in with typewriter-like text, still done oversize and reduced.

"Finally, in 1996, I got a more advanced computer with full capabilities for scalable type and complete finished-size assembly (aside from halftones, which I have chosen to not do myself).

"Much of this equipment has come to me through the generosity of my son, Jon McGrew, while I have added a rather extensive type library.

"In addition to *Trolley Fare*, I have done other volunteer work, plus some writing and hobby printing. Now, eye problems have forced me to curtail much of it."

Our best wishes to Mac, and many thanks for this peek back into his busy years with metal typesetting.

“comps”—were usually a good backup at correcting ordinary spelling errors and at following standards for other details such as punctuation. Most of them were making a life-time profession of the work. They had studied it in trade schools or even in college courses, or worked under foremen who guided them.

Most of the ads in my earlier days on that job were comparatively simple—an illustration, a headline, text, and signature, usually in that sequence. Although the advertising typographers we dealt with had a much larger selection of typefaces than the printers I had worked for previously, they were still quite limited compared to later times.

Most machine-set typefaces were held only in 8, 10, and 12 point sizes; some in 6 point and, on Linotype, 14 point. Odd sizes such as 9 point were very rare. Of course headlines were set by hand, in Monotype or foundry type, or on Ludlow from one or two sources. Sometimes even *text* was set by hand, when an art director wanted a particular typeface that was not available otherwise. Of course, this slowed production and increased costs.

The agency had a production department of three or four men who actually ordered the typesetting after I had specified it, and a traffic department whose members moved the work from one department to another. This made sense in the days when type, halftones, electrotypes, and other details had to be coordinated.

Most printing was still letterpress, and the larger national magazines required quality plates for the ads we produced—electrotypes of type forms rather than engraved type, for example. So this involved at least three sources for the physical production of each ad—typesetters, electrotypers, engravers (for illustrations), not to mention writers, photographers, artists, and others who did the preliminary work.

When I joined KM&G, the firm sent almost all of its typesetting to one supplier, even though another could have handled a specific job better. So it became part of my job to determine the best source for doing each ad and I initiated little slips on which I checked off all the local suppliers who had the typefaces necessary for the order.

This system usually worked smoothly, but I remember one occasion when it seemed everything that could go wrong did. The art director had prepared layouts for a series of six booklets,

and he had gone so far as to have dummies prepared by an outside art studio, with a few pages set in type to establish style.

This all was approved by the client, and brought to me one afternoon, with instructions that the client had to see proofs of everything the next morning. One glance told me we were in trouble, for the art studio had used a typeface that at the time was available only as imported foundry type. And the three local suppliers that had the face had it only in 18 point and larger—but the studio set it oversize and shot down to about 10 point! The typographers would have been glad to order more type if I had asked them to, but shipping it in from New York would have taken several days.

Immediately I contacted the account executive and urged him to let us select a more readily available typeface. But he wouldn't try to get the client to agree to that. “It has been approved this way,” he said, “and we have to do the best we can.”

I talked to the production man who was listed on the order, and together we contacted the three suppliers who had that style, found how much each had, arranged to send two booklets to each one, and alerted them to have the night shift ready to set as much as possible, pull repro proofs, distribute the type, set another batch, etc. I quickly wrote specifications allowing for the oversize settings, and turned the whole thing over to the traffic person, then went back to other work for the rest of the day.

Proofs didn't always come first to me, so I didn't worry when I didn't see them—at least partial proofs—early the next day.

It was *three days* before we saw proofs. What happened? Because I had discussed the job with the production man, I didn't put a supplier designation slip on the work. But the order had the wrong name on it, and the production man I had talked to never saw it again. Another production man, blithely unaware of the problem, sent all six booklets to a single supplier, who did his best.

I had developed a reputation for accurate specifications, and ads almost never had to be reset, except for changes in copy. But several years into the job, art directors began to produce more sophisticated layouts, with text running around the contours of objects in photos or drawings.



A few times I tried to anticipate everything, and write specifications in enough detail to get it right the first time. But I discovered this was not only extremely time-consuming on my part, but that the slightest miscalculation could disrupt all the rest of the specifications.

So I developed the system of ordering a first setting in the desired typeface without regard to runarounds. Then, using tracing paper, I could

### *Firm Deeply Involved in Press Building, Making Hand Molds*

One of the most encouraging presentations at the 1998 ATF Conference was made by an outfit with the unlikely name "Pratt Wagon Works," of Cove Fort, Utah. The firm's letterhead says "We specialize in antique replicas and restorations," and they were at the Conference to discuss their efforts at building presses.

A most fascinating letter was received from Steve Pratt in February, updating us all on the company's progress with regard to printing.

"We just completed construction of our 12th printing press. Next month we will complete our third Gutenberg Press, and soon thereafter, we will be completing an 1836 iron Ramage Press. Recently we shipped two completed "Army Presses" of 1861 to Harpers Ferry, W. Va.

"We adopted Stan Nelson's suggestions at the Conference and rearranged the geometry of our first hand mold. We then cut our second punch and made two matrices of a lowercase 'Gutenberg g.' After that we cast 120 pieces of type to see what a production run in a hand mold was like. A second hand mold is nearing completion in cast brass."

With Steve's letter was an excellent specimen piece of type cast in his hand mold. It amazes me that people with very little background in practical letterpress processes can so quickly adapt and master the craft. There is no doubt in my mind, however, that the kind of "networking" provided by our ATF Conferences is of immense value to persons with a sincere interest in gaining easy access to virtually everyone with special knowledge and experience in the craft—all at the same time and in the same place. How many times have I, for example, been asked a question by someone at a Conference. I didn't have the answer, but knew someone who did, and that person just happened to be across the room!

more easily and more accurately plot the fit of the entire ad. This was long before the days of computers and their possibilities for doing such work, and my ads had to be re-keyboarded. But they always fit the second time around, and were more cost-effective than trying to anticipate everything.

Another advance in sophistication brought demand for a greater variety of typefaces. At times, when the situation seemed to warrant it, I encouraged local typesetters to buy additional fonts. At other times, for one-time purposes, I developed an extensive list of out-of-town sources and their resources.

Technology began to change, too. For five hundred years, the technical aspects of type and typesetting had changed little, except for the development of machines to set it around the end of the nineteenth century.

The first big change was the introduction of photolettering, with paper or film reproductions of typefaces assembled by hand and photographed to the desired size for headlines. I tried to resist this for a while, but eventually had to go along with it. Again, local sources developed, and again I supplemented their offerings with knowledge of possibilities elsewhere.

Another big change came with the introduction of phototypesetting machines. These early machines had no advantage I could see, other than the ability to set letters closer together. Some people, especially art directors, it seems, thought this was great, and demanded it.

Often it was a pain in the neck to me, though, for resources were limited from any supplier, not only in the few styles available, but in the few sizes of each style. Results often were not what they would have been in traditional metal typesetting, and even new data didn't always give me the results I expected. Sometimes spacing was so close that clients and even art directors were not happy with it.

Gradually these machines were improved or replaced, but they all had the limitation of needing re-keyboarding for changes in specifications.

One of the last big jobs I handled before retirement was an unusual challenge, but one which I enjoyed handling. It consisted of a series of 90-some ads—actually that many variations of one ad, for it consisted of an ad of two or three pages, to run on the last pages of the national section of *TV Guide*, with an additional page or more list-

ing local dealers, to run on the first page(s) of each local edition of the magazine. And we had three days to produce it. In addition to our (my) usual daily load of ads.

The dealer lists took as little as a half page in a few editions, and two or three pages in others. It would have been impossible to determine accurate point sizes and other details of all that type for setting by conventional means, within the time limits, but one supplier had just installed the first computer-like typesetting equipment in the city. I had not used it yet, but a quick conference with him convinced me that it was our best bet—fortunately the desired Helvetica was among the few type styles available.

So we made an initial setting of everything in one size (except for heads). Then it was easy to re-figure a new size, where necessary, to fit pages to best advantage in each case. Since his equipment permitted settings to be resized without re-keyboarding, as any present-day computer can do, that saved the day for us.

\* \* \*

Sometimes I wonder what my job would be like if I had not retired when I did. (And if I was still young enough to keep up the pace.)

But in retirement—thanks in great part to the generosity of my son—I have come through several generations of computers right in my home, and now have more typefaces on my desktop than my suppliers had in their large shops 30 years ago. Not only more *styles*, but almost unlimited *sizes*. Not just a dozen sizes (few shops had metal typefaces in more than that), but almost 10,000 sizes *each!*

Any size up to 999.9 points, by tenths of a point! But I say *almost*, because 2 and 3 point sizes aren't very usable. (That's on my present computer, not necessarily on *all* computers.) And in unlimited quantities. If for some strange reason I want a page-full of 9.7 point swash Q's—no problem; I can have them ready to go in a minute or so.

Caledonia is not part of my font library. But if I get an irresistible urge to add it sometime, I can get two weights and italics in all those thousands of sizes for far less than my employer paid for each size of Linotype matrices fifty years ago. Or *four* weights and italics for a little more. And, incidentally, without the non-kerning restrictions of Linotype matrices. Furthermore, I can get them on diskette by overnight express, or—if

I'm in a *real* hurry and have Internet access—within minutes of placing the order.

Of course there's a down side to this. I don't get the third-dimensional bite of metal type into paper. That's curable with polymer plates, but that's a big extra operation and expense. I don't get the subtle differences from one size to another of metal types. And most unthinkable of all, to some letterpress folks, I don't get any f-ligatures, except in a few typefaces, and then by a rather time-consuming special operation.

By and large, in the days of metal type, typesetting was done by people with technical training or an apprenticeship. They were supervised by foremen who maintained the level of quality of the particular shop, and were double-checked by trained proofreaders.

Now, anyone with a computer is a desktop publisher, with or without any training. Computer classes may emphasize use of the equipment, with all its wonderful possibilities, but without explaining the difference between a hyphen and a dash, for example, or customs in the use of punctuation marks, abbreviations, and a myriad of other details. Who cares if he or she chooses to set a paragraph of Old English type in all caps—aside from you and me?

There was good and bad typography in the metal type age, and there's good and bad typography in the computer age—only it's now available to a lot more non-professionals.

Metal type is heavy. At a quarter pound per square inch of printed area, a 7x10-inch ad with some surrounding metal, for instance, will weigh 20 pounds, and several of them will quickly add up. The type for a small magazine or book can run into substantial poundage, if not tonnage. By contrast, hundreds of pages of computer-set type can be stored on a diskette or compact disc weighing an ounce or two.

What's next? Computers accepting spoken words and turning them into printed matter.

So now, please excuse me; I must go and practice my Caslon accent.

#### YOUR THOMPSON HEADQUARTERS

I buy and sell Thompsons, parts, and mats for same. What do you have or need? JOHN HERN, Coeur d'Alene, Idaho. Telephone (208) 667-4043. E-mail hern@nidlink.com.

# Historic Scotch Roman

## *A Design Originated by An American Printer?*

Little tidbits of information shedding light into the murky and distant history of type designs always fascinate me, and I've come across one which opens a most interesting discussion of the famous SCOTCH ROMAN design, the Lanston Monotype version of which is used throughout this *Newsletter*. Presumed the handiwork of a Scotch type foundry, it may well turn out that the design was conceived by an American. Its popularity served as the impetus for establishment of one of the United States' early successful type foundries.

You've heard stories of folks who passed over an invaluable coin only because they weren't looking for it or didn't recognize its value? Well, Stan Nelson, our standard-bearer at the Smithsonian Institution, passed the "coin" to me in an obscure article he Xeroxed and sent as another source for the familiar text "a walk over our typefoundry," best known as coming from Thomas MacKellar, a principal in the MacKellar, Smiths and Jordan foundry of Philadelphia, and author of *The American Printer: A Manual of Typography*, published in 18 editions from 1866 to 1893.

The article, simply titled "Type," was from an obscure periodical, *The Paper World*, published in March, 1889; the article commemorated the 50th anniversary of the Dickinson Type Foundry of Boston. Sorry, Stan. You were looking for typefounding history. I found *type* history veiled in a discussion concerning the firm's namesake, Samuel Nelson Dickinson.

First we'll take up the history of Scotch Roman as revealed in our two most popular sources on type history, Jaspert, Berry and Johnson's *Encyclopaedia of Type Faces*, and Mac F. McGrew's *American Metal Typefaces of the Twentieth Century*. First the English reference, which, on page 203, says Scotch Roman is "an important type and a revival of some 90 years ago of a series of types which appear in the specimens of William Miller, of Edinburgh, for 1813. The type in its original may be the work of Richard Austin. It was for a time perhaps the most favoured of English faces in use for literary texts, because it avoids some of the extremes."

The *Encyclopaedia* notes the (English) Monotype version was cut in 1907 and was a recutting of the Miller & Richards type. Unfortunately, none of these type specimens is available to me.

Next we check Mac McGrew's invaluable addition to our type reference library, where we find on page 281 that "Scotch Roman is derived from a face cut and cast by the Scotch foundry of Alexander Wilson & Son

ABCDEFGHIJKLM  
NOPQRSTUVWXYZ  
Z& \$1234567890 .,:;!?

abcdefghijklmnopqrstu  
vwxyz fiffiffiffi fiffiffiffi

ABCDEFGHIJKLMNO  
PQRSTUVWXYZ& \$1234567890  
abcdefghijklmnopqrstu  
vwxyz!?

*Specimen showings of Scotch Roman in 36 point and 24 point Italic. These castings are from American Monotype matrices but I must admit to having reduced the set widths somewhat to overcome what I considered excessive white space built into the font. This, of course, is applying 1990s ideas on a design which originated well over 100 years ago. Is that 36 point \$ a bit too large or what?*

at Glasgow before 1833. The modern adaptation of the face was first made in 1903 by the foundry of A. D. Farmer & Sons, part of ATF." Further, he notes when (Lanston) "Monotype copied Scotch Roman in 1908, display sizes were cut to match the foundry face, but in keyboard sizes, the face was necessarily modified to fit mechanical requirements, the caps were lightened and the entire face was somewhat regularized."

Both the Farmer foundry and the Dickinson foundry were part of the merger which formed American Type Founders. McGrew indicates the Farmer design to be a "modern adaptation." Perhaps it was an adaptation of the earlier Dickinson design. Obviously the Farmer adaptation was used by ATF in preference to the original Dickinson design.

The American Monotype design in display sizes (see McGrew note above) is far more "rough" and undisciplined when compared with the English Monotype rendering. The American design likely was a literal copy of the Farmer interpretation. The English Monotype design went

ABCDEFGHIJKLMN OPQRSTUVWXYZ  
Z& abcdefghijklmnopqrstuvwxyz \$123456789

*ABCDEFGHIJKLMN OPQRSTUVWXYZ&*  
*abcdefghijklmnopqrstuvwxyz \$1234567890 .,-:;!?*

ABCDEFGHIJKLMN OPQRSTUVWXYZ&!?  
abcdefghijklmnopqrstuvwxyz \$1234567890 fiffilff

*Here are same-size showings of 18 point Scotch Roman, along with 18 point Bell and Bell Italic. Historians say that Richard Austin likely cut the punches for both these faces in the 18th century. The Bell is likely a fairly direct interpretation of its original. It is unknown how well the Scotch resembles its predecessor.*

back to the original and clearly was “regularized” to a far greater extent. This entire publication is done in American Monotype Scotch Roman No. 36. For comparison, the English Monotype design, which was adopted by its digital successor, Monotype Typography, is shown as a specimen via offset reproduction. The ATF (Farmer) design now is held by the Smithsonian Institution.<sup>1</sup> Linotype did a Scotch Roman for its system in 1903, retaining the heavier capitals. In 1931, by arrangement with Lanston Monotype, the Mono version was issued by Linotype as “Scotch No. 2.”

Next, we dig into another well-known and now re-published reference on typefounding history, *Type Foundries of America and their Catalogs*, by Maurice Annenberg, updated and amended by Stephen O. Saxe. Annenberg’s history of the Dickinson Foundry, found on page 128, reveals some of the same information in Stan’s *Paper World* article. Unfortunately, Annenberg does not reveal his sources, but since he includes facts not in the *Paper World* article, his likely was a different source.

Samuel Nelson Dickinson was first a printer. Born in 1801, he started his printing establishment in 1828 and quickly became known as an a master printer with an excellent product. Now we quote extensively from the *Paper World* article:

In the pursuit of his business as printer, he necessarily imported type from England and Scotland, the wretched condition of American founderies precluding good printing from their imperfect productions and meager varieties.

<sup>1</sup>Barbara Henry of the South Street Seaport Museum Printing Office knows Scotch Roman to be a face her “original” printing plant used extensively. One of her principal goals in helping the Smithsonian with transferring materials from American Type Founders prior to the 1993 auction was to assure that the Scotch Roman matrices would be preserved. Some re-castings have been done since then for the Museum by Theo Rehak’s Dale Guild Foundry.

Mr. Dickinson's correct taste exacted the best from every source, and when unable to find that which he required, his energy and resources supplied it. Disappointed in his search for a better series of plain Roman letters than he had been able to find among foreign founders, he modeled a style of type that his judgment as a printer had evolved, and submitted the design to the famous Edinburgh foundry of Alexander Wilson & Sons. The result was the celebrated Scotch-cut series, which a prominent letter-cutter claimed advanced typefounding 25 years: the introduction into this country of the series, which was of exceptional grace and clearness, and from its peculiar cutting specially adapted for stereotyping, added largely to Mr. Dickinson's reputation.

Annenberg says this design was done around 1837; the *Paper World* article fails to provide that detail. But it's clear that the Wilson foundry got its inspiration to do the face from Mr. Dickinson. Further, the face obviously was a success. So much so, our newly found reference notes, that Scotch Roman served as the impetus for the establishment of the Dickinson type foundry in the United States, a foundry which began in 1839 and continued until merged into American Type Founders in 1892.

The extensive demand by American printers for the Scotch-cut series, and the difficulty of procuring fonts and sorts from abroad, finally induced Mr. Dickinson to project the plan of manufacturing type, and of a style and quality never before attempted in this country. Securing matrices of his new series for an initial effort, and a few necessary tools (how absurdly paltry the list reads to the modern type founder!) the enterprising printer merged himself into the type founder, with characteristic force and patience. In March, 1839, the first type was cast "Brevier Scotch-cut, precisely the same face as shown in the Dickinson Type Foundry's<sup>2</sup> specimen book of 1888—Brevier No. 2.

Surely some of the banter in this article was an intentional slur against the foundry's home-town competitor, the Boston Type Foundry, which had been established in 1817 and, according to Annenberg, unwillingly provided key personnel to Dickinson when he chose to set up his own type-making organization. Surely all type-making in this country could not have been "wretched." And to note other inaccuracies in the article, the Bruce Type Casting Machine was first introduced with the Boston Type Foundry. One would deduce from the *Paper World* article that its development was more at the hand of Sewall Phelps, one of the successors to the firm when Dickinson died in 1848.

There is a thread of relationship here—a punchcutter. The man's name is Richard Austin, who began working for John Bell around 1786, and the individual credited with executing most of the modern fonts produced by

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<sup>2</sup>This peculiar spelling of "foundry" is found throughout references to the Dickinson establishment in all its advertising and catalogs, Annenberg notes. The *Paper World* article carries through on this anomaly.

ABCDEFGHIJKLMNOPQRSTUVWXYZ &  
abcdefghijklmnopqrstuvwxyz \$1234567890 !?

ABCDEFGHIJKLMNOPQRSTUVWXYZ &  
abcdefghijklmnopqrstuvwxyz \$1234567890 ;:-!?

These lines and the specimens above are composed in Scotch Roman from Monotype Typography; the design is derived directly from its hot-metal predecessor issued by the English Monotype Corporation. *There is no doubt the face is related to the Lanston Scotch Roman used in this publication*, but it is far more “regularized” than the Lanston display sizes. Reproduced via offset.

both the Wilson foundry in Glasgow and Miller of Edinburgh (later Miller & Richards). Since the Wilson foundry produced the original Dickinson design, Austin very likely cut the design.<sup>3</sup>

A very closely related design is Bell, with the modern version being modeled after still-available punches for a face originally cut by Richard Austin,<sup>3</sup> the punchcutter just mentioned. Perhaps because the 1930 rendering, first issued by English Monotype, came from such a *direct source*, it might be more representative of Austin’s work than any other.

In earlier years, the English and American Monotype companies worked independently of each other with regard to type design. As time progressed, they worked together more frequently. Thus, ten years after the Bell design was issued by English Monotype, the very same design was released by American Monotype. For comparison, both American Scotch Roman display specimens and American/English Bell are shown.

There is something altogether “letterpress” about Scotch Roman. Perhaps it’s because the face is found so often in old texts. A better reason is that the face generally is very undesirable when reproduced via offset methods and digital composition. This is true, to an extent, because the heavy thick-thin emphasis of the design is exaggerated in anticipation of “squeeze” and “spread” inherent in impression of type *into* the paper.

It’s interesting that the Dickinson type foundry got its start by issuing Scotch types which were, to some degree or another, modeled after drawings by Samuel Nelson Dickinson. But since specimens of that design are not readily available, it cannot be determined whether the designs you see here—developed many years later—closely resemble the Dickinson face. Since the same punchcutter likely rendered the face issued by the Dick-

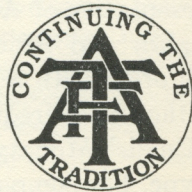
<sup>3</sup>Richard Austin’s BELL punches have survived into modern times, being held by the Stephenson-Blake foundry of Sheffield, England. Information regarding Austin is derived from Reed’s *A History of Old English Letter Foundries*.

inson foundry, along with various similar faces for the Wilson and Miller foundries in Scotland, the claim of "originality" for any modern "Scotch" design would be argued. The purpose, therefore, of this discussion has been to provide a little historic insight into the *source* of the design and the many different directions the design has taken in getting to its modern-day version. It's lamentable that Scotch Roman is so rarely seen today.

Though a respectable rendering of the English Monotype version of Scotch Roman has been issued digitally by Monotype Typography,<sup>4</sup> its thick/thin traits and general "lightness" will likely prevent the face from ever reclaiming the popularity it had 150 years ago. Perhaps, though, Samuel Nelson Dickinson will better rest in peace now, knowing his role in the face's development has been brought to light once again.

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<sup>4</sup>Monotype Typography was created as a spin-off of the type design arm of English Monotype just prior to the complete dissection of the company into nothingness. The design organization, a mere shadow of what Monotype Corporation once was, nevertheless continues to compete successfully in world-wide digital type markets, with U.S. offices in Chicago. A much less-visible company, the Lanston Type Company in Canada, attempts on a far more restricted scale, to offer designs which had been originated by the long-defunct American Monotype company.



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## Fretting About a Thompson Choker Valve Gone Astray

By PHILLIP DRISCOLL  
Clinton, Michigan

I worry too much, mostly about things that can go wrong. While this has certainly saved me from some terrible mistakes, it has also held me back from some great opportunities. When casting type I always worry about things going wrong with the metal pot. What'll I do if the plunger sticks? If the nozzle comes off? *Worry.*

Some time ago I was casting 30 point ornaments on my English Thompson caster, and I decided to change to 24 point. Mine is a center-jet machine, so besides changing the mold pieces to 24 point, the pot must be lowered so the nozzle is in the center of the body. This is accomplished by changing shims under the two bolts on the side of the pot. I did this without a problem, but the nut holding the choker valve lever needs to be loosened as well. When I loosened the nut, the choker valve lever popped out of its slot in the choker valve. I simply could not get it back in.

What to do? I contacted Paul Duensing, professor of Thompson operations at Monotype University. He advised me to drain all the metal out of the pot, clean everything up, and then reassemble it. Oh, no! I can't do that! I have no idea what the inside of the pot even looks like.

First I removed the plunger (called a "pump" in Thompson manuals). It was rather stuck, so I swung up the two "pump links" (which hang on the side of the plunger) and twisted it back and forth until it came out. Then I positioned two long pig molds under the pot and used a punch to tap the choker valve open a bit. The metal just about filled both pig molds. When the pot was almost empty, I twisted the nozzle off (it's a pressure fit, not screwed in).

At this point I could, see my original problem. Although the picture in the manual shows the choker valve lever and the pin at the bottom as one piece, at least on my English Thompson they are two separate pieces. The pin rides in a hole in the bottom of the lever. Apparently it had fallen out. I let the machine cool for a week.

I removed the screw at the front end of the pump lever and swung it up out of the way. Then I removed the choker valve lever. Prof. Duensing suggested I clean the well and the holes between the nozzle and the well, so I used a small wire brush on the sides of the well. I did the

same with the plunger and wiped all surfaces off with a clean rag.

[EDITOR'S NOTE: *It is good to be cautious at this point, for the orange crud found caked in the pot is hazardous lead oxide and should not be breathed or carelessly brushed about.*]

With the nozzle removed, three small holes can be seen going back to the well. I found a long drill bit in the box of tools which came with the machine. It was just a bit smaller in diameter than the holes, and the right length.

I ran the bit on slow speed back and forth until the holes were clean. I wirebrushed the choker valve and cleaned out the hole in which it rides. I worked it back and forth by hand in its hole until it worked smoothly. Finally, I used my vacuum to suck out the dust and loose dross in the pot.

I waited another week before reassembling so I could worry some more. Then I inserted the choker, the choker valve lever, and its pin. (Prof. Duensing advises that the choker valve lever be raised a point or two so it doesn't bind, because it moves on an arc.) Using the tripping tool, I checked that the choker valve moved back and forth with no resistance. I released the tension on the choker rod spring, and using the nozzle driving tool, I tapped the nozzle in where it was before. I increased the spring tension and again checked that the choker valve moved freely.

From here, there's no going back. I turned on the heat and filled it with small pieces of old type. An hour later I was ready to test. Using the tripping tool, I tried opening the choker valve. It worked. I let go, and it snapped shut. I tried it several times. It worked great. (Did I once worry about this?)

Now the plunger. I have heard a lot of horror stories about people putting a cold plunger into a hot well and having it become permanently stuck, so I put the plunger loosely into the pot for about fifteen minutes. Then I placed it into the well and watched it gracefully float down by itself to where I could replace the pin.

And now the final test. I locked the pot into casting position and cast about 24 inches of various ornaments. Everything worked just fine. In hindsight, the procedure wasn't so bad. It was much easier than I had imagined.

*Now I have time to worry about the pot on my Linotype machine!*

## A Typecaster's Log

Those who observe typesetting from the sidelines probably assume all is simple and straightforward with type marching out of the machine automatically. Not so, as these two journal entries from the "log book of a casterman" will reveal.

BY DAVID BOLTON  
Oxford, England

March 1, 1998—

Another burst of activity has seen the last three afternoons casting (or trying to cast) 14 point Didot Spectrum on 14 point body. First, we found the 14 point insert on the mould produced type some 4 thou greater than 14 points. This would have been handy for the Didot face, but was going to cause problems if any spacing got mixed with other founts. So had to change to a different (and newer) mould and 14 point insert. Found one that was true, but it then gave rise to water leaking between mould base and adaptor base. Several cleaning and remounting attempts finally solved this—but now day two of the exercise, and still *no type* for the case.

Finally, got going, but the alignment of the face took a bit of try-out, with tall ascenders and descenders all slightly overhanging the body. Sought out the likely worst offenders, then made a compromise between the two. Hope that it will be ok once it reaches the stick! So on with the casting of the small set widths. Oh, oh! Suffered type twisting in type channel (casting 3 point set and under). Not a real hindrance, just meant progress was rather slow. Off with type channel for cleaning, type carrier for re-alignment, type support for cleaning, and on to day three.

Type now casting fine, with hardly any turning in the channel—am not convinced that all that cleaning and re-alignment really cured the problem. Got the fount finished, despite time out to attend to Claire's problems with sticky pistons on her keyboard. But moral of the tale, apart from keeping things clean and adjusted, is that once a caster is running fine, don't stop for lunch, sleep or *anything*! For certain, some new problem will arise to hinder you the next day.

March 14, 1998—

Just for a change, have spent the last three days casting (or trying to cast) 12 on 13 point Bembo for our next prospectus. With the room temperature around 50 degrees F, progress was a

bit slow. But first I had to remind myself about all the little needs of the Composition Caster when changing face and size. Almost forgot to change the wedge. How much easier it seems to use a Supercaster! First half day mostly taken up with cursing the caster because its motor kept cutting out. This happens when it is cold—takes four or five hours before the caster has warmed up enough for all its oil to run smoothly.

It may well be that it has a bearing somewhere set too close, it is certainly far stiffer to turn than its 15-year-old brother beside it. Second half day, same problem, but at least the caster eased up as the day wore on. The trouble with the motor cutting out is that it does not always re-start instantly, and also the nozzle tends to freeze (and of course, the type width will change whilst it is out of action). As the day wore on, stop-casting problem arises, with casting stopping after the first few characters in the line. Re-started ok, just rather a nuisance. Changing the piston for a cleaner (?) one had no effect. Then there was the problem of thin (almost ultra thin) spacing turning in the channel—but usually there was time to turn it back before the end of line was reached. Another nuisance was short lines on roman but not italic. The keyboard operative denied all fault, and blamed the caster operative—perhaps the wrong wedge, or had not set the galley correctly. Both untrue!

Finally revealed that the keyboarder had forgotten to set the variable space bar correctly, so everything on the left keyboard was working on one less unit than it should have been. (No wonder the spacing was a bit on the thin side!)

Day three first devoted to drilling and cleaning the nozzle and pump body, wrestling the pot to get the pump body back in the right position, with hot metal swilling about. Also, cleaning the type channels, etc. All proved in vain, as the stop-casting problem continued, always after 5 or 6 types in a line had been cast! Was the nozzle staying in contact with the mould too long? Then light finally dawned when I remembered I had lowered the pot temperature to 660 degrees, because there had been some type with blisters on the first day. Taking the temperature up to 700F (and also slowing the water flow), resulted in all the problems going away. Pity this was when there were only a few lines left to cast—but one lives and learns. Sunday is our next Open Shop for casting, so *must get my act together*.

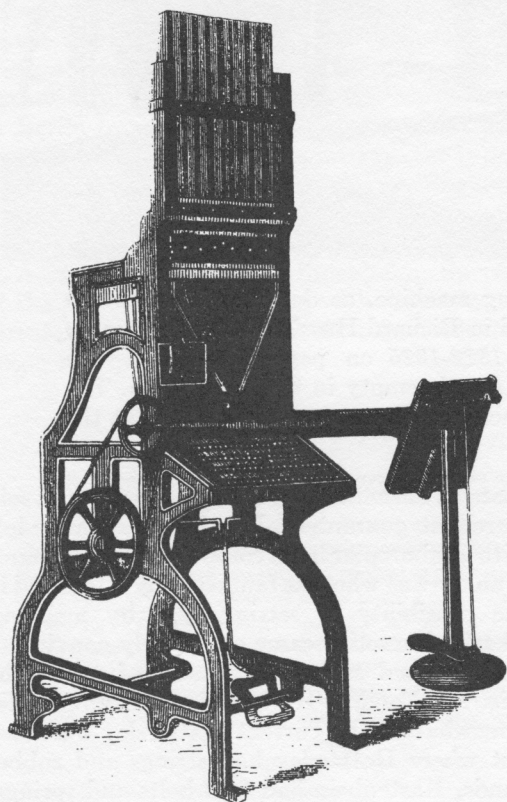
# Kastenbein's Typesetter

*Story of A Successful 19th-Century Machine and a Tale of One Man's Quest to Locate One Which Supposedly Was Saved*

BY BO BERNDAL  
Bandhagen, Sweden

## MY PERSONAL BACKGROUND AND INTERESTS

My training included four short terms in the School of Printing. After working as a hand compositor, training for machine composition and working as a layout man, in 1948 I became the teacher in the School of Printing. And at the same time I helped with the handwork and marketing days in the printing shop in Skansen, "Officina Typographica." In the mid 1950s various work assignments aroused my interest in earlier typesetting systems. J. G. Nordin's



*Detailed drawing of the Kastenbein Typesetting Machine showing the type magazine at top, the 84-character keyboard, and at right, a justification galley.*

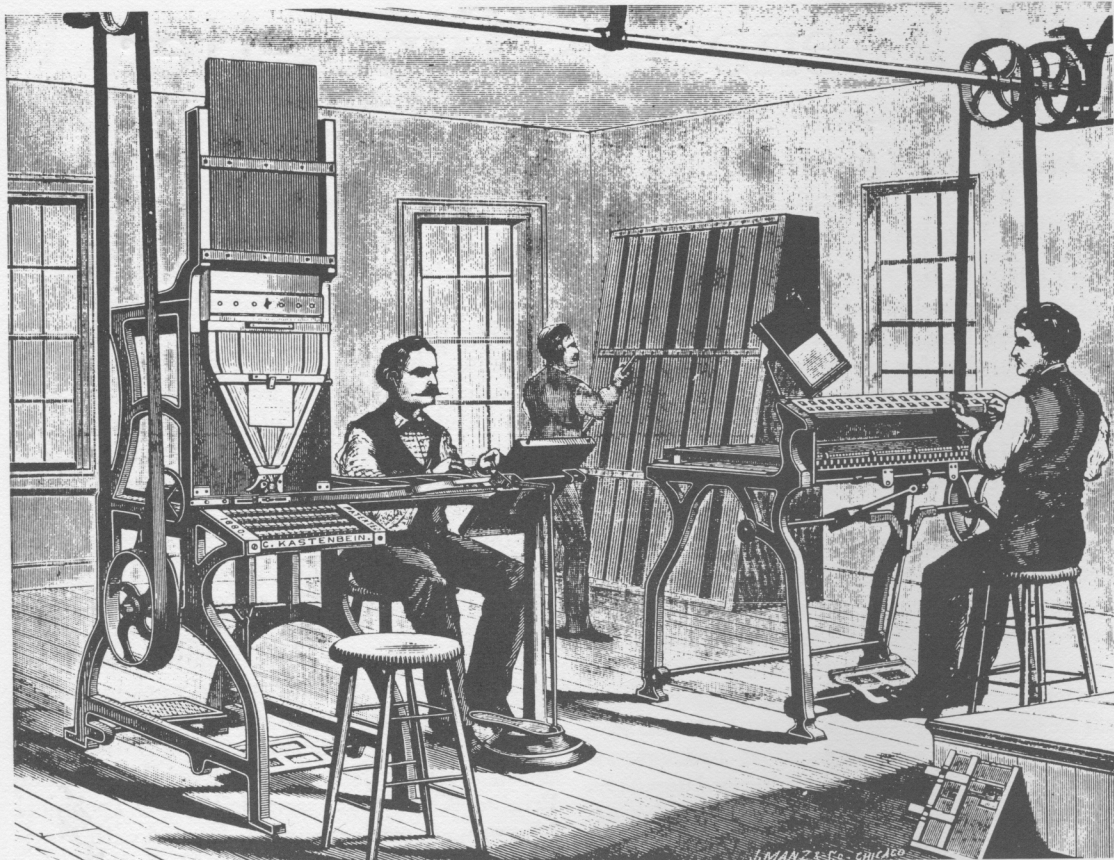
*Handbook in the Art of Book Printers* (Nordstedts 1881), included a fascinating discussion of Kastenbein's machine for composing text,

Most workers at Skansen\* changed their clothing in the rooms of the "Swedish Book Museum," high up in the Tottieska mountain homestead. Magazines were found there with early printed materials of the districts, and interesting proofs of type styles. Up in the attic of the printshop, materials of the Swedish Book Printing Assn. were found. Among other things, a cabinet of book-binding stamps, typographic tools and materials, also parts of different machines. There were even some languishing iron castings, which Gunnar Lundh believed were "end pieces of an old calendaring machine."

I also had the good fortune to work in Rosenlof's Printing Museum in Kungsgarden and with the dedication of Helsingborg's Printing Museum, in 1986, the permanent exhibition "The Printed Word" was assembled by the Technical Museum. A work group was formed with Marianne Landqvist, at that time the information manager of the Royal Library as project leader, Helene Broms, display architect, and with me as graphic foreman. While reading, I came across Nils Wessell's *Swedish Typographic History* of 1917 which discussed the Kastenbein machine.

In the 1880s, a Kastenbein machine was in the employ of P. A. Norstedt and Sons. Therein, it reports "this machine was afterwards turned over to the Swedish Book Industry Museum." Could the calendar machine's old end-piece in the Printing Office have been the Kastenbein I read about in Nordin? It never will be known. In 1986 the museum was dismantled and everything in the attic was done away with. Marianne and I, among other things, went through the museum's records of "machines with unknown purposes," but we came across nothing!

\*Skansen, Bo Berndal, reports, is an open-air museum with a lot of different buildings. The printing shop from 1830 is situated in a small cloister of old city buildings. Within a year they will add a "modern" printing shop with a Linotype and other printing equipment dating to 1925.



The Kastenbein Composing and Distributing machine, as depicted in *American Model Printer* of April, 1881, and reproduced in Richard Huss' *The Development of Printer's Mechanical Typesetting Methods, 1822-1925* on page 68, along with technical discussion. The compositor's stool stands empty in the illustration. The man facing us is justifying lines from the machine. The man on the right is at the distributing machine, a separate apparatus.

During the year I tried to find the Kastenbein without any special feeling about it. In July of 1998, I visited printing historian Christian Axel-Nilsson and the Werkstatt und Museum für Druckkunst in Leipzig. His lyrical stories about typesetting, matrices, hand molds and all the old typesetting machines and printing presses there inspired me with a last surge of energy to learn more of the Swedish Kastenbein machine.

#### KASTENBEIN—THE MAN AND HIS MACHINE

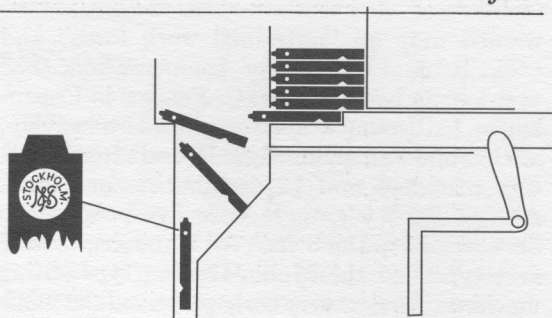
Karl Kastenbein was born April 3, 1880, at Markstrasse 696 in Kassel, Germany. His father was the archive assistant at the High Court-house and hoped that Karl would become the purchasing agent. But Karl traveled to Paris,

changed his name from Karl to Charles and sold merchant guarantees. He shared an attic loft with a tubercular hand compositor (whose name is unknown) who was fantastically interested in the possibility of setting type by machine. Charles himself became completely convinced, and outlined such a machine to interest the *Times* in London. His machine was a reminder somewhat of the current Hattersley machine, but where Hattersley had strings and rubber bands, Kastenbein had firm bolts and springs.

On July 6, 1869, he made an application in the patent office with the help of his English agent, and on January 1, 1870, he got patent number 2031 for machines for "Composing and Distrib-

uting Type." Kastenbein remained in Paris while the first machine was constructed. But soon he moved to Brussels and there started his first typesetting machine company. With good fortune, he demonstrated that his machine had a capability of setting 9,470 pieces of type per hour, and in 1871, the London *Times* bought its first Kastenbein. The first distribution machine (a separate device) was troublesome and about 1880 a new model was introduced. The *Times* used the Kastenbein until about 1908; until 1886 the distributing apparatus was used but thereafter, composed type was discarded and only new type used with the typesetter. A number of Wicks Rotary Type Casters furnished the Kastenbein with a permanent supply of new type, which performed quicker and became cheaper. In 1908 the Kastenbein machines were replaced by Monotypes.

Kastenbein machines received extensive distribution and were shown in exhibits and fairs. At the World's Fair in Paris in 1878, the German General Mail Director, Herr Stephan, was so enthusiastic he luckily got the Reichsdruckerei in Berlin to procure a Kastenbein, which first was used for setting of 12 point Fraktur types. The machines were sold in Germany, England, France, Italy, Belgium, Spain, Denmark, and even in the U. S. A. In Sweden it was found at P. A. Norstedt and Sons in Stockholm. Success of the Kastenbein coincided with expansion of virtually everything else involved in producing larger newspapers.



*Schematic showing how type was stored in the machine and how it was ejected to travel in channels to a line assembly area. Pinmark is from the Norstedt & Soner foundry in Stockholm, though the type was not specially nicked for this machine and therefore, the same as standard hand type.*

Normally, Kastenbein's system employed four people: (1) An apprentice, who changed and refilled the type magazine with types of the same sort, say "A" in one channel, "B" in the next and so on; (2) A "writer" who "set" the text using the keyboard on the machine; (3) A "justifier" who filled out and justified the lines to the measure; and (4) A "distributor" who, on a separate machine reversed the process—that is to say, returned the printed text to separate channels, A, B, C and so on. The drive of the distribution machine was with a foot treadle similar to that of a treadle sewing machine.

Did women come into the graphic branch via Kastenbein? Absolutely. It was suggested that

### *For a Great Kastenbein Ending, You Must Read This Note*

This wonderful article started with a Christmas and New Year's greeting to me from the author, Bo Berndal, for the 1998 holiday season. It was a handsome, illustrated booklet. An accompanying printed greeting in English said "sorry the enclosed booklet is in Swedish only." The subject fascinated me so much I asked Paul Duensing to see if he could translate it for us all.

Paul was rough on Swedish, but he had a good friend, Ms. June Anderson Evanoff of Seattle, a second-generation American with Swedish parents, who agreed to tackle the project. She (and Paul) had difficulty with the technical phrases in the article, but largely the translation is hers. A big "thank you" is extended to Ms. Evanoff for her wonderful assistance.

Of course I contacted Bo Berndal directly for permission to have his article translated and be reproduced in the *ATF Newsletter* and he graciously agreed to let me do it. Further, he handles written English well himself,

and agreed to review and make necessary revisions of the translation. In that process, we were able to avoid clumsy literal translations here and there.

In his Christmas Card attachment, he says of the Kastenbein (as also detailed in the article) "the last one was donated to a Swedish museum. As a result of moves to new locations, reorganization, lack of knowledge, all traces of the Swedish Kastenbein have disappeared."

With little fanfare in a note penned on the edge of my last text proof to him, Bo Berndal revealed this marvelous news: "This Spring some Danish typographers found a Kastenbein stored with several other machines of 'unknown capacity.' They plan within two years to restore the Kastenbein and place it in the Printing Museum in Odense, Denmark."

*That's wonderful news!* It appears that one of these fascinating machines has, indeed, survived after all. Do you suppose restore means to "make operational"?

women were an "untrained work force" and could be paid with lower compensation! The well-known book printer, C. Ferslew in Copenhagen, had young women employed exclusively, so that one woman manager looked after 10 setting machines and 17 distribution machines. Also at Ferslew's, there were five people who first "rendered the text." All manuscripts were first typed on the Mallin-Hansen typewriting machine. Ferslew very early perceived the value of clean manuscripts, for the young female Kastenbein operators were unaccustomed to deciphering the authors' different hand-written styles. In Copenhagen, this was the first time so many setting machines of the same manufacture were found in the same operation. Another plant, Dresdener Nachrichtens, employed five setting and nine distribution machines from 1882 until 1900, operated by 22 women. In 1900, the machines were replaced with Linotypes.

In 1885, Kastenbein moved to Hannover where in 1883 he had moved his typesetting machine company. He died February 12, 1906. About that time both Linotype and Typograph machines—which didn't need distributing—forced out Kastenbein's typesetting machines.

The Swedish Bookprinter Assn. Museum mentioned earlier has been moved, organized and reorganized on various occasions, now residing with the "Old Printing Shop" at Skansen. The Kastenbein (if it ever did come to Skansen) most likely had been sorted out and *scrapped* during the course of years. Yet one can hope that maybe it still lies and prints in some dark corner?

#### KASTENBEIN METHOD OF OPERATION

On the setting machine lie the types in the upright holder. A close-up view of the keyboard shows how the types are stored and forced out of the holder. When the letter is forced out of its holder, it rests with the upper part on a little shelf and, with a backward thrust, drops by its own weight in its right place down one of the conducting channels. The guiding channels run gradually into each other until they finally discharge at a common opening. Because the type falls of its own weight—and so that two types would not hinder each other—letters are arranged with the heaviest (falling with the largest velocity) being furthest away and consequently goes the longest way through the leading channel. Afterwards, the type through speed and its own weight, opens a closure mechanism and

comes to a guiding groove, and is conveyed to the justification stage. Justification was done by hand but the machine apparently did determine where the line ended.

The first distribution machine proved unsatisfactory so Kastenbein built a completely new distribution machine. Though it worked better, it still was not totally satisfactory. Types without combination nicks could be used in the distributor since the operator manually sorted the dead type into small square openings, nick from him and feet downward.

Reports were that the composing machine could set an average of 6,800 types and distribute 3,600 types per hour. And curiously, the *Times* editorial staff had a Kastenbein in the dispatch room in 1877. There telegraphed messages, which came from Paris, were read aloud to a boy (according to the *Nordic Bookprinters* newspaper). This boy set 200 lines per hour and thus, matched the same speed as the telegraph apparatus. It was even used, with the help of Edison's telephones, in reporting Parliament's verbal reports directly to the compositor at the Kastenbein machine.

The *Nordic Bookprinters* newspaper also says that Kastenbein equipment would have cost 5,000 Swedish crowns in the year 1877.

### *Pittsburgh Newspaper Bids Farewell to the Composing Room*

Mac McGrew has sent a clipping from the *Pittsburgh Post-Gazette*, April, 1999, with the heading "All over but for the computers." It details the fact that the area called the composing room was being dismantled and done away with. "When printers were people, the third floor of the building was the workplace for almost 450 printers and it was called the composing room." All the letterpress machinery went out years ago (I remember getting a call saying I could have any or all of their 65 Linotypes if I would come and get them before Monday. It was Friday!) The room was refitted for pasteup operations. Now just 43 union printers, spread over three shifts, work for the newspaper—in front of computer monitors off to the side in the newsroom itself. Thanks to computer pagination, pasteup no longer is necessary, so the composing room is being done away with. A photo showed a large, empty room with stained hardwood flooring.

# *Mono U III Was Something I Had to Do*

BY MIKE ANDERSON  
*Port Republic, Maryland*

I first met Rich Hopkins in 1997. Our first meeting was at Mount Vernon, Ohio, at the annual American Amateur Press Association's get together. Rich presented a program on type casting and showed a video tape of some of the Monotype University II activities. The "II" indicated that it was the second one held.

During the Conference I had the opportunity to talk with Rich and find out more about MU. Since I had just found a American Monotype Composition Caster, I knew that MU III was something I *had* to do.

Rich informed me that there was only a very limited number of students that could be handled during the intensive one week session. He encourage me to write him a letter telling why I wanted to attend, and my name would go into the pile of applicants.

Over the course of the next two years I kept in touch with Rich, letting him know at every opportunity that I still wanted to attend. Also, I continued to search for equipment to add to my typefoundry.

In March of 1999, Rich notified me that I would be among the six selected to attend MU III. By this time I had added a Monotype Thompson caster, an English Composition Caster and an Elrod material maker to the original caster. However, I had only started casting on the Thompson a few weeks before Rich's e-mail arrived. I was equipment rich and knowledge poor. I needed to attend MU III.

Monotype University was started by Rich in 1995 as part of his American Typecasting Fellowship involvement. As Rich said, "I made a mistake and brought it up at a Conference, and Roy Rice and Paul Duensing said they would come help." And help they did.

The schooling takes place in Rich's home in Terra Alta, W. Va. Roy, Paul and Rich, with the blessing and kindness of their ladies, spend 14-plus hour days (and longer into the night) down in Rich's basement foundry transferring their years of hard-earned knowledge to hungry new enthusiasts. This year, Dan Jones, a graduate of MU I, came from his home in Canada and provided instruction on the Supercaster.

The students were Paul Brown of Bloomington, Ind.; Brad Benedict of Brooklyn, N. Y., Rob Buchert of Provo, Utah; Larry Raid of Denmark, Iowa.; Dan Waters of West Tisbury, Mass. and me (Mike Anderson) of Port Republic, Md. We all met at Rich's home Sunday, July 20, for an introduction and a get-acquainted bar-b-que. A quick tour of the facilities impressed all on the excellent, well equipped and clean foundry we would be working in.

Arrangements had been made for us to live in a rented private residence in the Alpine Lake resort community a few miles from Rich's. The place was great and accommodated all of us without problems. It was a brief 10-minute commute from there to the foundry and Monday morning found us on Rich's doorstep way before the allotted time of 8:30 a.m.

The three premiere instructors, Roy, Rich and Paul, knew all the machines—Composition Caster, Sorts Caster, Thompson and the Monotype Keyboard (the backbone of the Composition Caster). Dan Jones knew the workings of the Supercaster and the Sorts Caster.

As the days sped by, all fear and trepidation about the mysteries of the clanking monsters disappeared. Within two days each student had become familiar with at least one of the machines and was ready to move to another. The working parts became familiar as we adjusted and re-adjusted to cast better type.

The art of the keyboard became familiar to several of us as we punched tapes to run fonts or work on projects. The "kerchunking" of the Thompson as it spit out fonts of 24 point Bembo was heard over the "klicity klack" of the Composition Caster, making fonts of 12 point Italian Old Style. The "swooshing" of the Supercaster added its song to the foundry as fonts of 24 point Concave and some 60 point initials designed and cut by Paul Duensing slid onto the receiving tray.

The strange clanking and meshing of gears of the Sorts Caster could be heard over the others as it cast ornaments, dingbats and fonts of 24 point Bulmer. This caster is perhaps the most versatile of all the casting machines manufactured by Monotype.

*Continued to page 32*

## Student Outlines a Typical Day at Monotype University

BY DAN WATERS  
*Martha's Vineyard, Mass.*

Like most life-changing adventures, Monotype University crept up on me from the distant horizon. Years ago I had read with vague interest the announcements for the first session, and then the reports which followed, but I had no Monotype equipment. In those days our shop was in the throes of construction, and we had linecasting machines which were enough of a struggle. Also, there is a compelling completeness about the combination of a Ludlow and a Linotype: What else could one need?

What else indeed. Friends who run Monotype equipment had sometimes suggested, gently, that someday the limitations of the Linotype would become all too apparent (loose letter set, the difficulty of kerning), and that Ludlow's five basic book faces (True-Cut Caslon, Garamond, Eusebius, Bodoni and Goudy Oldstyle), while adequate, were hardly ground-breaking. Eventually, they said, I should at least contemplate getting a Thompson.

Eventually I did get a Thompson—two, in fact. The machines came with a library of tantalizing typefaces. They also came with a raft of warnings. My friends who have Thompsons point out that the caster's nozzle takes dead aim at the operator's gut. I have seen machines where the nearby ceiling and wall are spattered with evidence of old squirts. Theo Rehak's book *Practical Typecasting* describes the Thompson with words like "unfinished," "unforgiving," and "dangerous." Mr. Rehak writes, "One can always identify the career Thompson castor: he has a permanent area of scar tissue on his forearms caused by fending off its frequent sprays of hot metal."

I'm a printer, not a commando. Fear of excruciating pain is what keeps me from raising honeybees. The risk of personal injury, compounded by the high odds of irreparably damaging a delicate machine through my own native stupidity, made me leery of teaching myself to run our Thompsons. There I sat, paralyzed by the same syndrome I've seen in so many first-time computer users: the price of acquiring the machine is negligible compared to the inevitable anguish of becoming an operator. Mono U seemed the answer to my prayers.

Getting in wasn't easy. Two years ago I applied to attend Monotype University II, but the class was filled. This year I started early and pestered Rich Hopkins at regular intervals, realizing that competition was surprisingly strong. I later heard that there were over two dozen applicants to Monotype University III.

It is not without some sense of trepidation that a person from Massachusetts drives across the Mason-Dixon Line for any reason. The other students came from Iowa, Indiana, New York, Utah and Maryland, and I believe that none of us knew quite what to expect of West Virginia. Personally I was astonished by the sheer beauty of where Rich Hopkins lives. The country roads here are narrow, and their hilly hairpin curves plunge you into lush, shady valleys, then whisk you skywards to breathtaking vistas of mounded green grazing land, unspoiled meadows dotted with horses, sheep and goats. I drank in as much as I could of this idyllic farmland, knowing that most of the week would be spent in a basement.

The six of us students shared a rented cabin. Quarters were close but comfortable. I could go on for pages about this alone: the long conversations, the sensation of waking at dawn among new friends in a dewy wood far from home, the comedy of six grown men shopping for a week's groceries together in a small-town supermarket. But our purpose for being there, and the bulk of our time, revolved around the typefoundry.

Perhaps I can best convey the whole experience by describing a typical day at Monotype University III:

6:30 a.m.—Mike Anderson is making coffee. In the loft overlooking the kitchen, I crawl out of my cot. Hoping to be the first in the shower, I tiptoe past Rob Buchert, who finds the bare floor more comfortable than his mattress. By 8, all six of us are sitting around the breakfast table, bleary-eyed, already discussing type, passing around samples of work we printed back home, trading printers' horror stories. We pack our lunch cooler with bread, cold cuts, drinks and chips, pile into our cars, and head for Rich's house, ten minutes away.

8:30 a.m.—The day begins with a meeting in Rich Hopkins' living room. Seated in a circle, like a twelve-step support-group session, we



take turns giving progress reports and deciding which machine we would prefer to spend the day working on. Roy Rice and Paul Duensing then present a detailed lecture, complete with handouts about the mechanics, alchemy, lore and allure of making electrotyped matrices. (Note: Both men pronounce "matrix" *matt-rix*.)

10:00 a.m.—The pots downstairs are hot and ready to run. We head to the basement to resume yesterday's projects. Under the watchful eye and wry tutelage of Roy Rice, Brad Benedict and I work on the Thompson, casting a dozen fonts of 24-point Bembo. Paul Brown and Dan Jones confer quietly over the Super Caster, casting a bizarre 19th-century face called "Concave" using mats Rich rescued from the Kelsey foundry. Rob Buchert and Paul Duensing are only vaguely discernible through a veil of white smoke rising from the Composition Caster, which chatters away like a Mephistophelian jalopy. Mike Anderson puzzles over the Monotype keyboard while Larry Raid saunters to and fro, tending to the ancient five-speed Thompson he hauled here from Iowa. Nearly a century old, his caster spent weeks submerged in the Mississippi River floods earlier this decade. The machine arrived frozen, immobile, caked with rust and mud. Rich Hopkins, circulating among us like a concerned headmaster, cringes every time he passes Larry's machine.

12:00 noon—We break for lunch. Emerging from the basement into the fresh country air, we build sandwiches and pile potato chips on our plates. Then, sitting on Rich's deck, we eat and talk about—what else?—type. Specifically, the likelihood that young letterpress printers may automatically be drawn to photopolymer, assuming this is their only option. There is general agreement that hoarding of unused hot-metal equipment by established printers is a disservice to the next generation. Rich shocks us all with his grasp of digital prepress technology, holding forth on the consequences of sending PICT files to an imagesetter which have been mistakenly tagged as TIFFS.

1 p.m.—Back to the basement. Now it's Rich's turn to be shocked, as Larry demonstrates his progress on restoring the Thompson. In just a few days, this rusting, peeling hunk of useless metal has begun to behave uncannily like a caster: the gears turn, the mold slides as it should, and parts of it even gleam. "I want you

to send me the second piece of type you cast on that thing," Rich tells him.

The rest of us settle into our routines. Brad has moved over to the Orphan Annie, leaving me alone on the Thompson. My first act is to attempt to cast without the nozzle plate. Half an hour later, I am still cleaning up the squirt. Paul B. and Larry are in the press room, diligently gathering, tying and packaging fonts (a skill we all eventually become more or less adept at). Rob manages to get the comp caster to produce a poem called "The Lugubrious Whing-Whang," whose title provokes colorful comment from the peanut gallery. Having resumed casting, I now proceed to change set widths on the Thompson. This time I break a pin wrench in a thumb wheel. Patiently, Rich helps me make the best of the situation but still I feel like an idiot. If it's true that you learn from your mistakes, I'll have earned my Ph.D.

Already my initial misgivings have dissolved into a healthy vigilance. The Thompson is a slow, steady creature that lulls you into a false sense of security by churning out sort after sort at a stultifying pace. The very human temptation is to turn one's attention to something more interesting—say, one's fingernails—and it is then that the Thompson strikes. The primrose path to a squirt is strewn with subtle warnings, but this machine hypnotizes you into ignoring them. The trick is maintaining a fine-tuned relaxed alertness.

6 p.m.—Dinnertime. Seven of us—the six students plus Dan Jones—head for Terra Alta's finest restaurant: a truck stop called Corinth Service Center, where each table's salt-and-pepper rack holds a Biblical quotation. Experience has cautioned us to stick to the overcooked beef entrees drowned in brown gravy, so we watch with morbid fascination as Brad orders the fish. Dinner topics: the merits of Bulmer, the likelihood of ever owning a Super Caster, the feasibility of injection-casting type from plastic.

7 p.m.—Back to Hill & Dale, where the pots are still at casting temperature. It's my turn to tie fonts, while Mike takes over the Thompson. He begins the long and fascinating job of disassembling and removing large chunks of the top of the machine, setting it up to cast Linotype mats. The finicky, cramped task of setting the vertical mold blade height, especially, seems made for smaller hands than his.

Rich returns from having dinner with the faculty. From his face, he is delighted to find his shop alive with activity. All students are busy on one project or another, sometimes several projects at a time, and you can sense light bulbs going on in different heads as the night wears on. The learning process has taken on a momentum all its own, and teachers have become virtually invisible.

12 midnight—No one gives a signal, but midnight is when the group's energy finally seems to ebb. We mosey out to our vehicles, say good-night to Rich, and head back through the moonlit countryside to the cabin. Too wound-up to sleep, we flop in the living room, drinking soda and talking. The discussion is scattered, but always faithful to a certain theme: book-arts curricula, non-adhesive structures, printing museums, English versus American Monotype, mold-made versus machine-made papers. Somebody uses the word "pochoir." It is 2 a.m. before we hit the sack.

5 a.m.—(Epilogue.) I awaken in the pre-dawn dark, to the patter of rain on the sill of the open window. Here in the loft, the sound is restful and soothing. I wonder if I'm the only one under this roof who dreamt all night of metal-spitting machines that sometimes cast beautiful lines of shiny new type, and sometimes produce more questions than answers. Suddenly there comes a flash of lightning and the house shivers with an ear-splitting clap of thunder. A sleep-groggy voice comes from Rob's side of the room: "Did it cast?" he asks.

At the conclusion of Monotype University III, there were sad good-byes all around. An amazingly diverse bunch of people, we had come together for one intensely concentrated week and worked hard to a common purpose. Now we scattered to our various corners of the nation, taking with us what we had learned.

I was afraid I'd forget it all. The first morning back in our shop, I faced the Thompsons alone, but this time without fear. I turned on our first machine (ignoring the work that had piled up in my absence) and immediately set about solving basic problems, starting with the fact that this English machine had been wired to run backwards. There would be other dilemmas: a leaky mold, stuck cam rollers, a frozen choker valve, a pump stop that kept tripping. Every time, I managed to solve each problem properly and

permanently, using the skills but mostly the confidence and patient approach I learned at Monotype University.

Now, as I write this three weeks later, the second Thompson also is casting good type. Our Monotype display faces are already changing the shape of future projects planned for our press. Most frighteningly, I find myself wondering whether our shop is truly complete without one more small acquisition: Monotype composition equipment.

Sooner or later we'll undoubtedly take the Thompsons for granted, as one does with all familiar machines, but the memory of Monotype University will stand as one of those milestones by which I measure all other experiences. Three days after returning from West Virginia, I was casting my first successful type—string after string of solid, gleaming ornaments, whole pastures of printer's flowers, more than any sane person could possibly use or want. After the long and wonderful journey it took to get to this moment, who could have the heart to turn the machine off?

*With his partner Hal Garneau, Dan Waters owns and operates The Indian Hill Press on Martha's Vineyard. Visit their shop on the web at [www.indianhillpress.com](http://www.indianhillpress.com).*

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#### SOMETHING I HAD TO DO *Concluded*

In the end, each student had a handhold on all the machines, and far greater practical knowledge with a machine of his choice—the Composition Caster in my case.

With saddened hearts, the parting of once strangers, now friends, took place on Sunday Morning, August 1.

As I drove home I pondered over what I had learned and those I had met and wondered what was the most valuable part of the week. I have a much greater understanding of my machines. What a great gift from the four instructors. But! But, I have nine new friends that I will cherish far longer than I will retain the knowledge gained.

Learning usually always takes place—friendships take building.

*Since returning home, Mike has made splendid progress with both his Thompson and his Composition Caster making lots of new type, but getting very few projects ready for his press.*

# A Seven-Year Dream of Type Fulfilled: Monotype U III

BY ROB BUCHERT  
Provo, Utah

I spent my last seven years dreaming of casting type—from about the time I realized that someone somewhere still did such a thing. To have a foothold in the process and new friends and acquaintances to question seems almost unreal.

I cannot speak highly enough of the people with whom MU-III allowed me to associate. This was the most valuable aspect of the week. It led to the days ending at 2:30 a.m., but also a willingness and excitement at being back at Hill & Dale by 8:30 a.m.

Such friendships lead to networking, something vital in the pursuit of the 21st century type founder. I have become part of a pool of resources to draw from and to be drawn on. Conversations over the phone or via e-mail cannot develop the relationship and trust that 144 hours of close association do.

I arrived in Terra Alta almost a *tabula rasa*. I had no casting experience or equipment of my own, but conversations with the experienced led to believe I should purchase a Thompson. Because so many different machines were available to use, I was able to determine what I needed was a Comp Caster—the machine everyone (I had previously talked to) discouraged me from seeking.

An intensive experience like this helps develop the habits of casting—procedures that

should become automatic and are vital to the health and well-being of machine and operator (I personally learned that a Comp Caster can shoot type metal to the ceiling). Casting 12 to 14 hours a day allows your body to become used to the rhythm and demands of casting.

I would encourage anyone with a sincere interest to apply for MU-IV. It is well worth the week sacrificed. I would also encourage anyone with the inclination and the skill to start his or her own "Monotype University." I believe it one of the best ways of encouraging the continuance of hot metal.

## *Original Caledonia Drawings Surface in Glessner Collection*

Rodger Glessner of 914 West Market Street, Lancaster, Pa. 17404, has written sending several specimens and drawings of the Linotype face CALEDONIA. He says "Paul Bennett probably removed these drawings from Mergenthaler files once on loan to the New York Public Library. When I asked to photocopy, he merely sold them to me in about 1959." If you have a particular interest in these drawings, contact Rodger direct. He (Rodger), by the way, has suffered a bout with colon cancer, but seems to think things are stabilized at present.

Rodger was amongst our ATF delegation at our 1982 Conference at Oxford University in England.

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz \$1234567890 .,:;?!  
HimnRirnMindIllnessAmpBnEmTmhLimNxzk

Perhaps you have observed typefounders using terms such as *justified* or *aligned* to refer to the process of setting up and casting type. What's it all about? Above is an excellent example. I was in such a hurry to get the 18 point Scotch Roman cast for my headlines in this issue that I opted to *ignore alignment*—knowing such efforts *significantly* increase the time necessary to cast a font. I was assuming only a couple of letters would be out of alignment and I could fix them after the fact! To my total dismay, only about eight characters *were* properly aligned and I had to re-cast the entire font. What you see above simply was unacceptable!

## Mac-Mono' Aids Newsletter Production

Production of this issue of the *Newsletter* is once again via Monotype composition and letterpress printing. Obviously, the edition has required time and effort, but this edition's production has been speeded immensely by the addition of a computer interface to drive the Monotype Composition Caster.

With the interface installed on my standard 15x17 caster, I now am able to create text on my computer and, after hyphenation and justification, dump the entire file direct to the Monotype caster with no need to go through the process of punching a paper ribbon as has been previously required.

The interface I am using was developed by Monroe Postman, who with his wife Freddie hosted our last ATF Conference in 1998. At that Conference, I asked Monroe if he were able to offer the technology to anyone else. His answer was "yes, let's negotiate." Several months after the Conference, I told him I was ready for him to move ahead on the project.

He had originally developed the interface with much assistance (regarding how a Monotype operates) from Lew Mitchell and Andy Hoyem at M&H Type in San Francisco. Indeed, M&H has been using the interface for some time and most recently, has employed its services in composing a super-deluxe edition of *The Holy Bible*.

Monroe has addressed various ATF Conference sessions on development of his interface and, in 1998, he was featured alongside Harry McIntosh, who came across from Scotland to demonstrate the computer aspects of an interface he himself developed, which he has been using for several years in his "Speed Spools" Monotype composition service.

Harry commented that as for hardware, Monroe's interface is more refined than his own (which, in one instance, used many components from an old Monotype keyboard). Coming from a background of over 30 years running a Monotype keyboard, Harry had an upper hand in developing his software. He explained to the Conference that he has carried his software to the point where it will break for pages, insert headers and page numbering, hyphenation and justification (of course),

character pair kerning, and even set width alteration when necessary if the proper wedge is not available. He describes his software as "not too user-friendly" because he developed it for his own private use; it's all written in DOS-platform software for the PC.

Monroe's strength came from knowledge of the Macintosh computer. When he developed his software, he relied on the hyphenation and justification capabilities of Mac word processors. He modified set widths in standard computer fonts to mimic the sets of Monotype fonts. His software takes over *only* after H&J is done and hard returns are entered at the end of each line. His interface is a marvelous amalgam of air valves and plastic hoses neatly mounted on stock computer boards, controlled by a microprocessor he designed himself. That unit is driven via the modem port by a Mac.

The valve section is built on a sawed-off Monotype caster paper tower and is attached as a paper tower would be attached—with six screws. The only other modification to the caster is a timing sensor which is activated by the old paper tower stepping cam. I installed the entire device in only a few hours.

Coming from a PC background, it took a bit for me to learn the Mac, and I admit 90 percent of my computer work *prior* to sending copy to the interface still is done on the PC. Initially, I used a program developed by Roy Rice of Atlanta, Ga., to pre-test line counting to assure the best possible line justification, but now I have modified my own screen fonts for set, and do the H&J in WordPerfect on my PC. I've even written a neat little macro to find all ligatures and em dashes and substitute the proper ASCII codes for Monroe's program.

Roy's program cannot be discounted. It's extremely accurate in mimicking the counting done by the Monotype keyboard and I still use it to assure that I have line length set properly in my Windows word processor.

When a file is dumped to Monroe's program, it quickly goes through the entire file line-for-line to be certain all lines will fit. When it gets to the end of the file, it reports how many lines are in the job, and begins dumping code to the Composition Caster in reverse order, just as is

done with a keyboard ribbon. The difference, of course, is that I can take full advantage of spell check routines to assure there are no errors in my text before I go to the caster.

There's another great advantage. No opportunity to inject new keyboarding errors, and no "kill lines." (When the Monotype keyboard operator makes an error, he punches keys to disable the pump mechanism—so the caster just cycles through the bad line without making any type.) This period of inactivity often causes the mold to cool and thus, when the machine begins casting type again, often line length is affected. Since Monroe's program is constantly dumping copy to the caster, there's little opportunity for this to happen and as a result, consistency of line length off the caster is now better than ever before.

Yes, you can stop the program and move back or forward to any line instantly, should something go awry at the caster.

There is no doubt that I now have a "jet engine" hooked up to a "wooden wagon." But oh, what a delight to see it operate. No doubt, I someday will make a stab at correcting code problems I see in Monroe's software. But that is off in the future. For now, I'm just delighted I'm able to make it operate and operate so well with little need for additional instruction from Monroe.

Originally we had thought a visit to West Virginia would be necessary for Monroe, but installation was very straightforward, and all operational instruction has been conducted via numerous e-mail messages and just two phone calls. Not bad, I would say!

Monroe now has built three of these devices. One for M&H, one for himself, and one for me. He *may* be convinced to do others, but you must negotiate directly with him on this matter. Write Monroe Postman, 4546 El Camino Real, B10 #207, Los Altos, Calif. 94022-1000.

## Doing Things the Right Way: Fixing a 'Locked' Caster

BY JIM WALCZAK  
*Oxon Hill, Maryland*

In June, 1999, I set my English 16x17 Composition Caster to do a run of 10 point Ronaldson caps. Since I only occasionally use the caster, I had forgotten that "something" was going wrong just prior to shutdown of the last casting operation four months before.

Before swinging the pot into position, I noted an object floating on the surface of the hot metal. Flipping it to the floor, I saw it was a piece of cast iron. I could not find where it came from, so I moved on, hoping it got there via the metal bin.

As the machine was beginning to warm up, casting quads, it suddenly stopped, going "oomph!" The matcase was tight against the mold and the handwheel wouldn't budge. I tried turning the main drive pulley. Nothing would move. A crowbar applied to the drive pulley had no effect. Knowing that a machine can't weld itself solid, I surmised it was probably in the mold. An e-mail from Editor Rich suggested a jammed cross-block (in the mold).

My first step was to remove the bridge to get to mold and, hopefully, fix the problem. As it turned out, it was easier said than done. Usually there is an *easy* way and a *hard* way to do a repair. I chose the hard way, of course. There

was no way to easily get the bridge off as it was in the casting position with the centering pin firmly pressing the matrix case against the mold. Attempts to pry the pin out of the cone hole so I could detach the matrix case drawbar from its connection didn't work.

I started taking the machine apart, carefully, wondering if this is what our late colleague, and Monotype expert, Harry Wearn, would do. After a couple days of detaching layers of connecting rods, springs and other parts without names, it dawned on me that I was getting nowhere fast. The *hard* way wasn't working, so I tried the *easy* way. I removed the Centering Pin Lever Arm, a rather large casting at the top of the machine. This was done by loosening a set screw and tapping out a steel rod or "axle." Now that the pressure of the lever was removed from the centering pin, the bridge was free for removal. I disconnected the mold only to find it was not the source of the jam-up.

Reassembly of all the parts took some time, especially replacement of the powerful matrix jaw buffer spring (left side). I fashioned a spring compressor with a pair of vice grips, a wood-working clamp and blocks of wood. Luckily, the spring was reinstalled without it being fired as a projectile through the wall (or me!). The next

day I found the *easy* way to do it in the *English Manual* (covered in section 16.9.6 and plate 95). Again, I had elected the *hard* way!

With the machine still frozen in position, and after checking position of pump actuating levers for possible trouble, I decided to remove the handwheel, but not after removing a bunch of gear-guard parts, a support rod and, finally, the handwheel shaft bearing cap. As soon as the bearing cap was removed, I could see the source of the machine jamming. On the handwheel shaft (c80E) is a worm gear that provides rotational power to the galley mechanism above it. Under one side of the gear was a chunk of cast iron, wedging it solidly into a fixed position, thus preventing rotation of all the drive gears.

Suddenly the scenario became crystal clear. The chunk of iron and a few other matching pieces lying in the bottom of the gear housing all belonged to an oil-catching cup situated under the galley cam shaft gear or "worm wheel." The cup was discovered broken when I picked up the caster back in 1991. The machine was severely damaged in a warehouse; and I proudly showed off my repair of it when Harry Wearn came for its first tune-up and to get it (and me) casting. Harry applied his usual magic in getting the machine working and told me the broken oil catcher was not needed; in fact, it was an obsolete feature of the English machine. This made me feel better; it didn't occur to us to look for missing pieces. Hey, the caster was working fine.

To satisfy curiosity, I assembled the pieces of iron, eleven in all, including the chunk I fished out of the pot a half-hour before the jamming occurred. The reunited puzzle pieces spelled out the casting number, M4109. The official nomenclature for the part was found to be "Worm Wheel Oil Pan," Part No. a15F4.

With happiness, I can report the Ronaldson casting, all 60 pounds of it, was completed a few days later. The machine ran very smoothly. *Knock on wood!*

FOR SALE—letterpress hobby shop including 6x9 Golding, much good type. Send SASE for details or go [www.typematters.com/letterpress](http://www.typematters.com/letterpress) for inventory. Mac McGrew, 700 Bower Hill Rd., Pittsburgh, Pa. 15243.

## *The Perils of Lead Just Not an Issue If Facts Are Studied*

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BY STANLEY NELSON  
Ellicott City, Maryland

Lead constitutes one of my biggest pet peeves. I have endured questions about lead poisoning by well-meaning worriers for years and have explained the difference between *lead oxides* and "lead" type until I am blue in the face. Then they smile knowingly and say, "Well, you just don't want to recognize the obvious danger."

We live in an intrusive age, where people with the best of intentions but lacking knowledge, use "common sense" to make decisions that can really screw up other peoples' lives. In this case lead has become a popular environmental issue. Lead poisoning from lead oxide pigment in old paint or in some low-fired ceramic glazes has caused great harm, especially to children. While lead is a very useful metal, it has gotten a lot of bad press because of the specific situations where it has caused illness, and has become one of the environmental "boogy men," right up there with asbestos. Suddenly anything made of lead is BAD. Some people find a great deal of pleasure eradicating such evils, as long as such evils don't cause them pain personally. And it seems such a safe issue to become sanctimonious about. After all, who really needs to use lead anyway? Or so the thinking goes. People have even fretted over the lead wrapper used on some wine bottles! I'm sure that is a serious risk to me, considering all the wine I drink.

OK, it's time for a *reality check*. Type is made of a lead *alloy*. It is a blend of lead, antimony and tin *dissolved* together into a mixture called the *eutectic*. All of the lead in type is bound up with the tin and antimony with which it is dissolved. Any excess of tin or antimony that can't be dissolved forms what might be called a "saturated solution," and these metals form fine crystals

that are fixed in the "matrix" of the eutectic. Most mixtures of type metal have a percentage of these crystals, which can be seen when you break a piece of type metal. There may be traces of copper in the mixture. Some founders advertised "copper mixed" metal, but the amounts are very small. I was told by somebody that one foundry would throw a nickel coin into its alloy and claim "nickel alloy" type. But the nickel just floated in there. Arsenic appears as an impurity in extremely small amounts, and can be seen as a faint pink color on the surface of freshly cooled metal. It is not a health risk.

Type does not give off any form of lead that can be absorbed through the skin. I know of no case of lead poisoning in the printing industry that can be attributed to contact with lead type, or from breathing dust in a composing room.

Of course, good hygiene is a necessary part of our work. You must not smoke (*i.e.* lay cigarettes down on work surfaces and then put them in your mouth) or eat "sticky buns" while working in the shop—but then, your mother told you this when you were little. You always are supposed to wash your hands before you eat.

Lead poisoning in the trade could occur when metal was smelted and poured into ingots for the Linotype, or when preparing metal for type casting. Smelting involves higher temperatures and greater amounts of melted metal, but the problem lay not so much with fumes, but with the *dross* that forms on top of the metal. Dross is a gray powder full of impurities including poisonous oxides that need to be stored in a covered container and saved for reprocessing when sufficient amounts have accumulated to warrant the cost of shipping it to a refiner.

Normal casting temperature is far below the "boiling" point of lead and thus, lead fumes are effectively non-existent in the midst of type or line casters. In such cases I am much more concerned with carbon monoxide and smoke from organic impurities (like rubber bands!) that get into the metal melting pot.

As a personal note: I have taken the precaution of having my blood tested for both lead and antimony for the past 20 years, since I handle both type and melted metal. To date I have had normal readings with very low levels of lead. What little lead that has appeared was (I was told by the doctor) probably from fumes from leaded gasoline. No trace of antimony has ap-

peared. Any bizarre behavior on my part cannot be explained away as metal poisoning!

Generally, one is tested for *blood serum lead*. Such a test would only detect acute lead poisoning which is not an adequate test. You need to have them do a *zinc protoporpherin* test, which will show residual lead in the system. This is a much more meaningful test.

So, having worked for decades with lead, especially standing over a pot of molten metal and hand-casting type, I have had absolutely no problem with metal poisoning. This anecdotal evidence may not impress the "experts" since it is always easier and safer to make accusations than to prove something to be incorrect.

I know there have been many studies on lead poisoning in the printing trade. Unfortunately, I failed to make a copy of one article I did find. If you run across such a study I want to hear about it. We should keep a file of past research with which to answer a new generation of worriers.

While we must be responsible with our health and our environment, be aware that it is very easy to go off on a mindless and wasteful binge of paranoia that will ruin the art of letterpress if it continues to be carried to today's extremes.

## Job Opening Announced At M&H in San Francisco

It's not often we're able to list job opportunities in hot metal composition, but here's one that simply cannot be overlooked. I'd apply myself if I were 30 years younger.

Andrew Hoyem, proprietor of the Arion Press and M&H Type in San Francisco, is seeking to employ a typefounder's apprentice to work under Lewis Mitchell, a man who has nearly 50 years of experience in the trade and who is hoping to reduce his full-time involvement in the foundry in the not-so-distant future.

The position would be full-time and preference would be given to an individual who already has experience in operating Monotype Composition Casters and Thompsons. This definitely would be a "learning" situation for the person who wins the position, but it also has a challenging future too.

Interested parties should send a resume and a job application directly to Andrew Hoyem at M&H Type, 460 Bryant Street, San Francisco, Calif. 94107.