

Newsletter
Twenty-Nine



*American
Typewriting
Fellowship*

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This *ATF Newsletter* is published *occasionally* for enthusiasts of hot metal typesetting and linecasting by Richard L. Hopkins, P. O. Box 263, Terra Alta, West Virginia 26764. You may become a subscriber by sending \$20. U. S. which will entitle you to future issues, which are assessed at \$5.00 U. S. each for U. S. and Canadian subscribers, and \$10.00 each for all others (to offset the cost of additional postage and handling).

Institutions are encouraged *not* to attempt to subscribe unless they are able to do so with no associated paperwork. *Ye ed.* is too thinly spread to worry about filling out equal employment, fair play, and vendor applications, coupled with such nonsense as invoicing in triplicate authenticated by the state's attorney general as to accuracy and validity. If you can send me ten bucks, you can be a subscriber! OK?

This issue was prepared utilizing Adobe Pagemaker for all inside pages. The work all was output direct to plate, sidestepping the need for stripped negatives. The covers were printed letterpress from ornaments and type I have cast myself excepting the 48-point Garamond Bold Italic, which was cast by ATF many years ago.

ATF Newsletter

Published for the American Typcasting Fellowship

NUMBER 27

MAY, 2004

Conference Re-scheduled to Sept. 3-5

Almost in the “eleventh hour,” the Biennial Conference of our American Typcasting Fellowship has been re-scheduled from Leipzig, Germany, to Terra Alta, West Virginia. The Conference is now scheduled for Friday, Sept. 3, through Sunday, Sept. 5, 2004.

Further details behind the need for the Leipzig meeting to be cancelled will be found on page 4 of this issue.

Toward the end of March, those individuals who had previously hosted Conferences were quizzed about what options were available with regard to relocating the meeting. Three things were apparent: (1) there was precious little time to get a new location established, (2) a great deal of the “momentum” of our organization would be lost if we were to cancel the Conference for 2004, and (3) there was a very strong sentiment toward “returning to our roots”—by revisiting the basics of running, caring for, and using typcasting/linecasting equipment.

Having hosted two previous Conferences, and having operational equipment to “fill the bill” for hands-on operation, *ye ed* offered to again host a Conference; no one objected.

Before the Conference itself, many subjects will be covered during Technical Sessions on Sept. 2 and 3, with several “helpers” volunteering on hand as early as Sept. 1 to get equipment set up, classroom settings, etc. Details on Technical Sessions will be found on page 6.

In anticipation that several persons might be coming to Terra Alta via commercial air, it is noted the closest large airport is Greater Pittsburgh (Pa.) Airport. If you plan to fly in, please read the article on page 2 containing information on how best to travel to Terra Alta.

Specific details of the Conference program are yet to be firmed up. However, it is highly likely most of the presentations will be made by “associates” of our own group. After all, the ATF list of “associates” is a virtual “who’s who”

in typcasting today! (Note the use of the word “associates.” This is necessary, for our infamous bylaws prohibit memberships!)

Some of the subjects being negotiated for presentation include (1) availability of matrices and other equipment for linecasters, (2) evaluating matrices, molds and pump bodies for the Monotype, (3) a hands-on discussion of historic pivotal casters, (4) financial aspects of doing commercial letterpress work in the 21st century, (5) the status of printing museums today in the U. S. and abroad, (6) breathing life into the Lanston Monotype Company (U. S.), and (7) the fall of American Type Founders.

Conference sessions will be *dignified* by pop quizzes prior to most sessions, wherein unique typcasting and letterpress components will be displayed and discussed.

Likewise, the Conference will be scheduled in a way to allow as many persons as possible to get involved in the preparation and printing of our Conference keepsake. Time is set aside to assure everyone will have opportunity to prove (or *improve*) his/her abilities as letterpress printers, Monotype operators, etc. Please see details regarding how you should prepare your keepsake *form* on page 3.

Site for the meeting will be Alpine Lake Resort & Conference Center, one mile from my home at Terra Alta <www.alpinelake.com>. Special Conference rates are established at \$70.20 per room per night plus tax. Each room is outfitted with two double-sized beds. Reservations should be made directly with Alpine Lake. Phone (800) 752-7179. A detailed map of the Terra Alta area is found on page 5.

A Conference registration form is included with this *Newsletter*. You are asked to complete and return the form as quickly as possible—and also make your reservations at Alpine Lake Resort, because lodging is *limited*. Please return the form no later than Aug. 1, 2004.

Conference Travel Options Are Limited

Perhaps the only true drawback to having an ATF Conference at Terra Alta, W. Va., is the fact that there is virtually no public transportation into the area. A majority will come to the meeting in their own vehicles.

If you live too far away to drive, here are your travel options as best I can report.

The closest Amtrack (rail) connection would be Pittsburgh. The closest Greyhound bus connection would be Morgantown, W. Va.

The principal air link is Greater Pittsburgh (Pa.) International Airport. There is a commuter connection to Morgantown, W. Va., via US Air Express, but recently the cost of this link has become prohibitive. Driving time from Pittsburgh to Terra Alta is about 2½ hours; from Morgantown driving time is about one hour.

Other possible connections? Dulles in Washington, D. C., is about 3½ hours from Terra Alta, and BWI in Baltimore is a little over four hours. Surprisingly, Columbus, Ohio, is only about 4½ hours from Terra Alta.

A Limousine Connection

In recent years, a reliable limousine service from greater Pitt has developed and I have had discussion with owners of this service. They're eager to meet Conference travelers at Greater Pitt and bring them to Alpine Lake Lodge in Terra Alta. They have a 10-seat mini-bus, the cost of which is most reasonable, if there are enough riders to fill the bus.

Tentatively, I have established a 3 p.m. Thursday pickup time at Pittsburgh, and a return to the airport on Monday (with arrival at the airport about noon). *It is most important for you to let me know of your needs regarding the limousine, for it will not be arranged unless there is sufficient demand.* It is my best guess that if we fill the van, cost will be about \$45.00 per person *each way*. If fewer users, costs will go up.

This is a desirable option, for once you are here, there will be minimal need for transportation. The hospitality suite is a 300-yard stroll from the motel. Conference meeting rooms literally are across the street from the motel, and the Hill & Dale Private Typefoundry is only about a mile away. Surely members will be anxious to carpool for those times when visits to the Hill & Dale will be made.

Driving Directions to Terra Alta

Half-jokingly, I have told many that you simply can not "stop by" Terra Alta. You must come here *very intentionally*, because it is definitely off the beaten path. Frankly, that's one of its principal charms!

Most of you will log on and get Mapquest® guide to direct your travel. That's OK, but Mapquest does a lousy job on directions once you're close to TA. Get a good map and follow these suggestions.

From Pittsburgh Airport. Exit the airport and be very keen in searching for Interstate 79 *south* (I often miss the exit and I supposedly know where I am going). Follow I-79 to Morgantown, W. Va. See detail map on page 5.

From the West and North. If using the Ohio-Pennsylvania turnpikes, proceed east to New Stanton, Pa. Then follow U. S. 219 south to Oakland, Md. See detail map on page 5.

If you're traveling via Interstate 70, exit *south* onto Interstate 79 at Washington, Pa., and proceed on I-79 to Morgantown, W. Va. At exit 148, proceed east on Interstate 68.) See detail map on page 5.

From the East. Interstate 70 to Hancock, Md.; exit *left lane* onto Interstate 68 and proceed west to U. S. 219 south (exit 19). Note that 219 north departs one exit *before* 219 south. Proceed south to Oakland, Md. See detail map. We're about 1½ hours from Cumberland, Md.

From South. Follow Interstate 79 north to Morgantown, W. Va., taking exit 148 onto Interstate 68 east to Bruceton Mills, W. Va. See map on page 5. We are about one hour from Morgantown.

American Typecasting Fellowship Newsletter

This publication has been issued *occasionally* since 1978 for the American Typecasting Fellowship, an informal group of hot metal typecasting and linecasting enthusiasts, by Richard L. Hopkins, P. O. Box 263, Terra Alta, West Virginia 26764. You may be added to the mailing list by sending \$20.00 U. S. to the editor. Cost per issue is stated at \$5.00 for U. S. and Canada, \$10.00 elsewhere. A recap of your "account" should be found on the face of your mailing envelope.

Institutions (and their associated paperwork) are urged not to attempt to subscribe unless they are able to avoid the paperwork, which *ye ed* refuses to accommodate.

Joint Conference Keepsake To Be Printed at Terra Alta

Traditionally, a marvelous packet of individually printed keepsakes has been the hallmark of an ATF Conference. This year, our keepsakes are to take a different twist. All persons attending the meeting are asked to bring *completed metal forms* for printing at the Conference, rather than printed pieces. Bring composed cast type and/or slugs—much preferred over engravings or polymer plates. All forms will be imposed and printed during the meeting by volunteers.

For your keepsake, you may opt to prepare either a half-page form or a full-page form, composed to the specifications shown to the right. For this to work, it is imperative that you confine your efforts to the typeform dimensions indicated.

By doing this, those participating will get the opportunity to demonstrate their typesetting, typecasting or linecasting abilities and all will get the opportunity to view each other's work and, perhaps, learn a tip or two about makeup and printing. The forms will be imposed and printed on both a Vandercook repro proof press or on a 10X15 Heidelberg "Windmill."

Suggested topics: (a) recent activities at your private press/foundry, (b) your favorite type design, or (c) a specimen of your most recently finished casting project. You should include your name, pressname, and complete address within your form. And please, *please* keep your dimensions to the precise measurements indicated here. If you use an outer border, please keep it within the 21x31 (or 21x63) dimensions.

Please give adequate attention to making your form "lift." Lines should be uniformly justified and ready to be locked up and printed during the Conference. If you simply must have a second color, then you should bring both color forms to the same dimensions, fully made-up to accommodate quick imposition and printing.

If you are traveling by air, or if you wish to be included in the keepsake but can not attend the meeting yourself, you may ship your form to arrive *in advance* of the Conference (no later than August 31). Ship your form (properly tied up and packaged) to:

Rich Hopkins
Pioneer Press of W. Va., Inc.
102 Fourth Street (P. O. Box 28)
Terra Alta, WV 26764

Half-page typeform =
21 picas x 31 picas

Half-page units all
should be portrait (vertical)
orientation and
should include an
outer border.

*This
drawing is
not to size.*

Full-page typeform =
21 picas x 63 picas

Full-page units may
be portrait (vertical) or
Landscape (horizontal)
orientation.

An outer border
is optional.

*Please do not do a form which would involve
bleed dimensions.
Confine your work to the typeform sizes specified.*

Finished page (trim size) = 4³/₄ x 12 inches

Why the Leipzig Affair Was Scrapped

A misunderstanding of precisely what was required of an ATF Conference Coordinator, coupled with a significant change in the administration of the Museum of Printing in Leipzig ultimately resulted in cancellation of our American Typcasting Fellowship's plans to meet in Germany in September.

Our group had voted at the 2002 Provo, Utah, meeting to accept Eckehart Schumacher Gebler's invitation to have our 2004 Conference at his facility.

Little did we know, when dates for the event were set in late December, that Eckehart was having great difficulty securing arrangements because of a change in administration of the Museum.

He established the Museum soon after German reunification in the 1990s—for him it was the culmination of many years of gathering a tremendous quantity of excellent typesetting and printing equipment and paraphernalia, some of which dates back to the earliest years of printing technology in Germany. A better report on the contents and nature of his museum can be had from *ATF Newsletter* No. 23, which reported on a trip to the facility during an unofficial ATF group visit to Germany in October, 1997.

In order to secure a better future for the museum, Eckehart sought to recruit investors and advisors for the facility. Success of his effort brought the establishment of a Board of Directors and the employment of an executive director late last year. He was told a visit by ATF simply would not fit into evolving plans for remodeling and modification of the facility, coupled with the arrival of the new director.

With this major distraction, Eckehart was unable to focus on details necessary for the proposed Conference and reluctantly, he gave notice in late March that a Conference in Leipzig could not be arranged this year.

Several persons in our group were pressing for specific details of the Conference so they could make travel arrangements and concurrent vacation plans in Europe. When such details still were unavailable early in March, previous Conference coordinators were polled and it was agreed to begin immediately with plans for moving the 2004 meeting back to the United States.

The details you read elsewhere in this *Newsletter* all have evolved since the beginning of April. Though they have been made in haste, much cooperation already has been shown and great anticipation is building for the meeting as it now is developing.

Perhaps at some future time our group can again return to Germany. But for the present, all eyes are on the little village high in the hills of West Virginia—Terra Alta. Site of our first meeting July 17–19, 1978. If you haven't been to Terra Alta, now's your chance. *Plan now on joining us in September.*

Re-scheduled 2004 Meeting To Be 'Heavy on Machines'

There seemed to be a near-unanimous cry to "return to the machines," once the Leipzig Conference was cancelled. Our American Typcasting Fellowship historically has focused on the technology of typesetting and there has surfaced a strong desire to get back to the essentials of operating equipment.

The selection of Terra Alta was made principally because—on such short notice—it was the only place where operational equipment was known to exist and could be made available readily.

The program and especially the technical sessions will be oriented almost totally to the actual use and operation of equipment. Here are some of the items which will be on hand for demonstration, use, and thorough examination during the September meeting.

Monotype Composition Casters. Two machines are fully operational. Both are 15x17 machines with a massive supply of spare parts, an inventory of over 1,000 fonts of composition matrices, and all associated equipment to make them work.

A Computer Interface. One comp machine now is being operated via a Macintosh computer. There is an ever-present "undertow" of interest in such interfaces, so during technical sessions and the Conference itself, time will be devoted to explanation and actual use of this marvelous addition to the shop (created by Monroe Postman of Sunnyvale, Calif.).

Monotype Keyboard, fully functional, with a great variety of keybars, stopbars, and keybuttons for both 15x15 and 15x17 arrangements. If there is interest, the keyboard will receive attention during technical sessions; it also will be available for explanation, and troubleshooting during the Conference itself.

American Monotype Sorts Caster, always a workhorse during Monotype University, this machine also will be on hand for the Conference for demonstration, thorough study, and actual use.

American Monotype Thompson Caster, complete with a variety of molds, matrix holders, and a tremendous array of matrices. The machine is fully functional and certainly will be studied, demonstrated and used during the meeting.

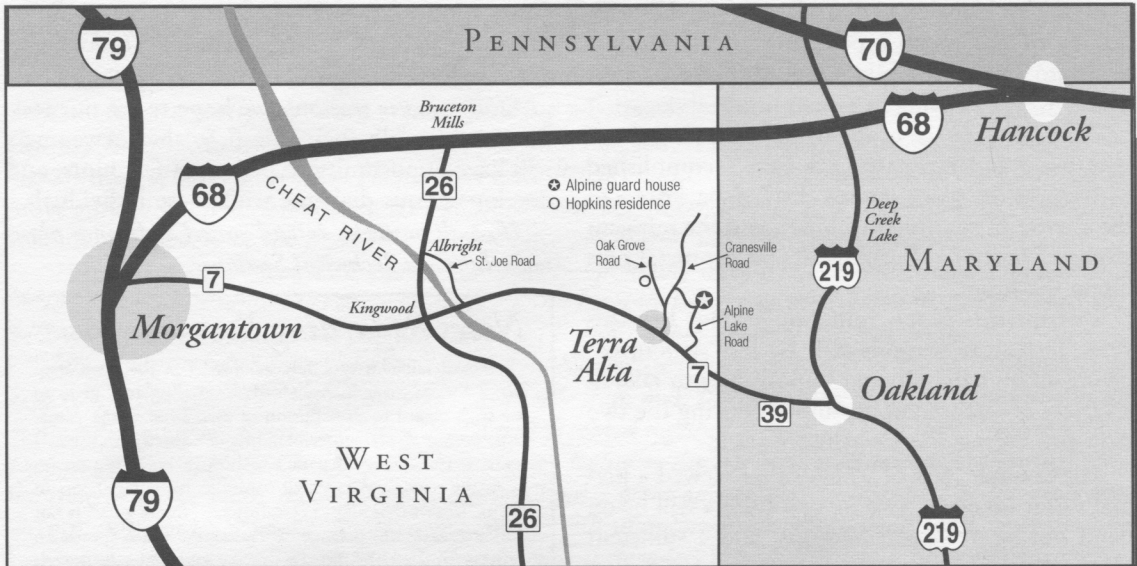
English Super Caster, with molds from 14 point through 72 point, and a variety of attachments, including my own mechanism for casting ATF foundry matrices on the machine. Again, all this will be available for use during the meeting.

American Material Maker. Not something we'll dwell on extensively, but the machine is here, is operational, and will be demonstrated if there is sufficient interest.

Two Pivotal Casters, both dating to the mid nineteenth century, these two machines came from New York when ATF began consolidating facilities before 1900. They were used by the Kelsey Company for over 30 years and had been on loan to the Smithsonian Institution. These machines soon will be relocated to printing museums here in the U. S., but for the Conference, they will be on display and interested persons will be encouraged to study the machines, the numerous molds available for them, as well as other associated early typesetting

Continued to page 5

Local Driving Instructions



Western Approach: Interstate 79 exit 148 onto Interstate 68. At this point you are about one hour from your destination. Drive to exit 15 (Bruceton Mills). Turn right (south) on W. Va. 26. Drive about 12 miles to Albright. Do not cross Cheat River. Turn left onto St. Joe Road (which parallels the river) and drive 7 miles until you come to a high bridge crossing Cheat River. Head up to the bridge, but then turn *left* up the hill and drive about 5 miles to Terra Alta. Alpine Lake is on eastern end of town. Pass Hopemont Hospital and turn left onto Alpine Lake Road. Drive to guardhouse.

Eastern Approach: At Hancock, Md., exit Interstate 70 (left lane) onto Interstate 68. Proceed east to exit 19, U. S. 219 *south*, at Keyser's Ridge. At this point you

are about one hour from TA. Head south past Deep Creek Lake recreational area to Oakland, Md. In Oakland when U. S. 219 turns left, you should turn *right* onto Md. 39. Head west on 39. Md. 39 becomes W. Va. 7 at the state line. Terra Alta is about 7 miles from Oakland. When you come into large open farmland area, prepare to turn right onto Alpine Lake Road (well marked). Go about one mile to Alpine Lake guardhouse.

Within Alpine Lake: All traffic must pass the guardhouse on the way in. There are signs pointing to the lodge, which is on the right side of the roadway. You will sign in there and a registration packet will be given to you which will include a detail map showing where the various Conference sites are located.

List of Equipment Available at 2004 Conference

(Continued from page 4)

equipment with them. They will not be used to cast type for two reasons: (a) they are not in sufficient good repair to allow this, and (b) they were heated originally via charcoal and it's not considered advisable to try to re-establish this method of heating for the brief duration of the Conference.

Hand Molds, Hand Engraving Tools. Stan Nelson (and maybe others) has assured us a good sampling of equipment and tools will be on hand; Stan will provide an ongoing and thorough demonstration to all persons interested.

Matrix Engraving and Electrodepositing Equipment. Mike Anderson has volunteered to bring a sampling of his equipment and will have it set up during the technical sessions and conference for demonstration and use.

Matrix Collection. The Hill & Dale matrix collection now encompasses nearly 5,000 fonts of matrices, including over 250 fonts from American Type Founders, nearly 200 historic pivotal fonts from the Kelsey Company, perhaps

one of the most extensive collections of American Monotype display and composition matrices to be found anywhere, many English display and comp mats, over 100 fonts of Victorian "revival" matrix fonts, and many proprietary matrix fonts made by the Baltoype foundry of Baltimore, by Monsen Typographers of Chicago, and by Triangle Type Foundry of Chicago, a few original Thompson matrix fonts, Compositype mats, and others, including many matrices made by our own Paul Duensing.

Molds, Spare Parts, Paraphernalia. Everything necessary to make a Monotype foundry operate is available, well inventoried, and will be on hand for demonstration, examination, and thorough discussion.

Heidelberg Windmill, Vandercook Repro Proof Press. Both will be on hand for demonstration and use during the printing of our keepsake volume (see page 3 for a complete explanation of how you can prepare a hot-metal form for inclusion in the printed and bound keepsake to be completed during the Conference this year.)

A New Approach to Technical Sessions

A stated goal for ATF is to preserve the technology of hot metal typesetting and letterpress printing. This isn't easily accomplished sitting in a lecture hall listening to someone talk about what he or she does "back at the shop." Learning about letterpress and typesetting is best accomplished with apron in place, hands dirty, a backdrop of the chatter of running machines, and the pungent aroma of fresh ink, burning oil and hot metal pots filling the room.

Perhaps this is too romantic a view, but this year, Technical Sessions will be less structured, giving all on hand a better opportunity to take in a variety of featured opportunities during the two days preceding the Conference itself.

For example, few of us have ever viewed a pivotal caster up close. Two pivotal casters will be on hand during Technical Sessions, and a sufficient block of time will be set aside for interested persons to view and fiddle with the machines, under the expert guidance of two or more persons who have experience with pivotal casters. No, the machines (which presently are equipped for charcoal heating) will not be fired up, but in every other aspect, they will be ready for very close hands-on observation.

Getting the 2004 keepsake printed will be another driving force during Technical Sessions. Text will be composed and cast on the Composition Casters (utilizing the Mac-Mono interface) and bystanders will be given the goal of getting this type into forms and actually printed on either the Vandercook or the 10x15 Heidelberg windmill. (See further commentary on keepsakes on page 3.) Again, the goal is actually getting work done. Lookers-on will get a great opportunity to see how others approach the many issues of form makeup, lockup, and letterpress printing.

Depending on interest expressed via the Registration Form, sessions will be arranged on a variety of operational Monotype machinery, plus sessions on matrix engraving, electrodepositing mats, the hand mold and its use. Thus, it is most important for you to express your interests beforehand, so that necessary manpower and setup can be done before Technical Sessions begin.

Observers have been quick to note that virtually all aspects of linecasting, typesetting, and matrix making, as well as letterpress printing, are represented by *bona fide* experts attending ATF Conferences. This year, we are making a special

effort to not only recognize these "experts" but to put them to work during Technical Sessions and the Conference.

During 2004 sessions, we hope to see our resident experts "do their thing" so that newcomers will have opportunity to pick up a few hints, and develop serious dialogue with these individuals.

If at all possible, extend your Conference plans to include the Technical Sessions.

Notes Regarding Previous Issues

I have failed to publicly acknowledge the great help TONY SMITH, over in Aylesford, Kent, England, gives to me with regard to distribution of each issue of the *Newsletter* to our many subscribers in the United Kingdom. I send all pre-addressed copies to him in bulk. He breaks open the pack, and posts all copies to his compatriots in the U. K. For that help, I certainly say "thank you." It not only decreases our postage expenditures, it also speeds up delivery in the U.K., for the one package generally travels much faster than a bunch of individual envelopes.

LEE SHRUNK, who operates his "Nineteenth Century Letterpress & Bookbinding Operative Museum" at Salem, Oregon, forwarded to me a copy of his own setup on the Declaration of Independence following my discussion of same in Issue 28. Though he didn't have Caslon fonts, he says "the type styles and sizes are as close as my inventory would allow." He works closely with the local community college and says students enjoy work with his three hand presses and enjoy "taking home printing from real type."

JIM FITZGERALD, who once was with English Monotype and came to the U. S. to work with Hartzell Machine Works and (with Dick Hartzell) attended our first Conference in 1978, recently contributed a large number of Monotype technical references and manuals, along with some tools. These materials will be distributed to future Monotype University students as the need arises. Jim and his wife Monica make their home in Lakewood Ranch, Fla., half the year, and in Ireland the rest of the year.

"It is one of the great pleasures of my life to receive the *ATF Newsletter*. There is no other publication like it except *Matrix*. Esoteric, to say the least, but that is what it is all about. Thanks to you, interest is still cultivated in typesetting." —VANCE GERRY, Pasadena, Calif.

Responding to the discussion in the last issue of *Century Expanded*, ARLEN PHILPOTT of Fairfax, Calif., notes that he has used the face on several books he has designed. "Almost any 19th century decorative type goes well with it, being a modified 'modern' of a neutral character. The typographical printing surface holds up well under cylinder letterpress impressions. I also find the foundry italic more refined than the Monotype version."

"Computer typesetting is tailor-made for invalids. It is hard to see how anyone using just two fingers and a cup of coffee could be regarded as a craftsman."

—JOHN SETEK, Paradise Point, Australia

"Dear sir: I won't even pretend to understand your arcane yet beloved system of subscription tracking for your splendid periodical, but here is \$15.00 for my account anyway." —MARK CARROLL, Bethesda, Md.

American Type Founders' Immeasurable Contribution to Modern Typography

Knowing an author's inspiration sometimes helps one to understand why an article has been written. Most recently my brain started focusing on American Type Founders in the context of the *Century Expanded* article in the last ATF NEWSLETTER, for ATF certainly played a central role in the introduction of this type design. Then I read Theo Rehak's manuscript for his upcoming book (something you're sure to want to have, once it's published later this year) providing a first-hand account of the pathetic atmosphere of the final years of that once-proud and successful organization.

For years, I have coveted all knowledge of ATF—probably since the fortuitous time in 1965 when I visited Steve Watts (once sales director of ATF) and his wife Ginger at their home in Front Royal, Va., for two days of continuous story-telling about ATF and its many wonderful type faces.

When I wrote my book on the ORIGIN OF THE AMERICAN POINT SYSTEM OF TYPE MEASUREMENT in 1976 (the book's still in print, by the way—available from me), I became very aware of the nature of the many type foundries across the United States which joined together to form ATF in 1892. I spent a lot of time with their specimen books and house organs, trying to discern how each foundry interacted with the concept of the point system. In that process, I got a great opportunity to take note of the types they were manufacturing, and I certainly got an ear full of information about how some founders and many users of type scorned the merger of independent founders into that single ATF organization.

My personal collection of specimen books includes ATF's first combined book, done in 1895, the 1906 volume, the huge 1912 edition, and of course, the triumphant 1923 volume. It is to be noted that I have over 250 fonts of original ATF matrices including M. F. Benton's Cloister family, along with other equipment acquired at the disgraceful auction which ended ATF's 101-year existence in 1993.

No one who has viewed various 18th-century specimen books can come away without noticing the marked difference between what typefounders offered then, when compared with what ATF was manufacturing in 1923. But never before had I truly focused on precisely how such a major design transition came about.

My curiosity was piqued when Jim Daggs sent me a Xerox copy of two articles from the *INLAND PRINTER*, published in July and August, 1924, written by Henry Lewis Bullen. Therein, Bullen discusses the origin of the "type family," which now is the acknowledged standard of the typefounding industry world-wide. The whole story needs to be told, for it's a story of how a few strong-minded individuals working together at a very embryonic ATF company, literally changed the typographic face of the world.



IN TYPOGRAPHIC TERMS, moving from the 18th century to the 19th century brought about changes which were monumental, to say the least. To a very large extent, the direction of these changes can be credited to the principal players involved in bringing into focus the new American Type Founders organization, which came about in 1892 as a merger of 23 independent type founders. The process of radically re-defining typography—which these men espoused—was building up a good head of steam almost exactly 100 years ago!

No one who has ever dabbled in letterpress equipment has managed to avoid the charm and novelty of coming across a font of type lov-

ingly called "Victorian," or "Gay 90s." Such designs, though certainly now out of the mainstream of typography, still can be found as original metal fonts, as metal "revival" fonts, and now as digital fonts. Because these gems are so far-removed from the mainstream of typography today, one wonders how we got "from there to here," for at one time, the hodge-podge called "Victorian" dominated the typographic scene. This article, and the one which follows, are an attempt to answer the question.

First we must move before 1900 and look at the typographic scene as it then existed. In the 1880s, there still was a throbbing need for a typefoundry in nearly every city big enough to

have a daily newspaper. All type still was hand-set type. Wear and tear mandated that a constant supply of new type be provided to each newspaper. But new technology was on the horizon—machinery for setting type. Mergenthaler's Linotype was the start of it all, followed closely by Tolbert Lanston's Monotype system, as well as other now-forgotten systems which were modestly successful in the early years of this "mechanical revolution."

These machines quickly eliminated the need for body type as newspapers installed Linotypes. "All this business (casting type for newspapers) vanished as suddenly as the dew before a July sun," as Thomas R. Jones, ATF president in the 1940s, said. The diminished demand for hand-set type resulted in cut-throat competition between founders desperately groping for their piece of the shrinking market.

Just before this crisis developed, the entire typefounding industry was consumed by a rush to eliminate archaic type sizing systems which never made much sense. The American Point System, the brain-child of a man named Nelson Hawks, was first adopted by Marder, Luse & Co. typefounders of Chicago in 1877. In less than 15 years, the majority of American foundries had become part of this revolution. For the first time (in the English-speaking world, at least), every size of type manufactured had some measurable relationship to all other sizes. An overwhelming investment in re-tooling was re-



Joseph Phinney
in 1902.
Manager of the Dickinson
Typefoundry in Boston and
later Director of Type Design for ATF.

quired, but it was extremely popular. For the first time, there was opportunity for the printer to mix types from different founders without the likely prospect of disastrous results.

But this effort toward conformity of sizes certainly had not yet moved to conformity in design. Each typefounder remained an island to himself, trying to seize a greater share of the market by bombarding it with a continuous stream of decorative and often eccentric designs which we now loosely classify as "Victorians."

When typefounders finally realized their ugly fate and in desperation joined to form American Type Founders in 1892, suddenly it

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48 POINT with Initials

3 A 3 A 6 a \$12 50

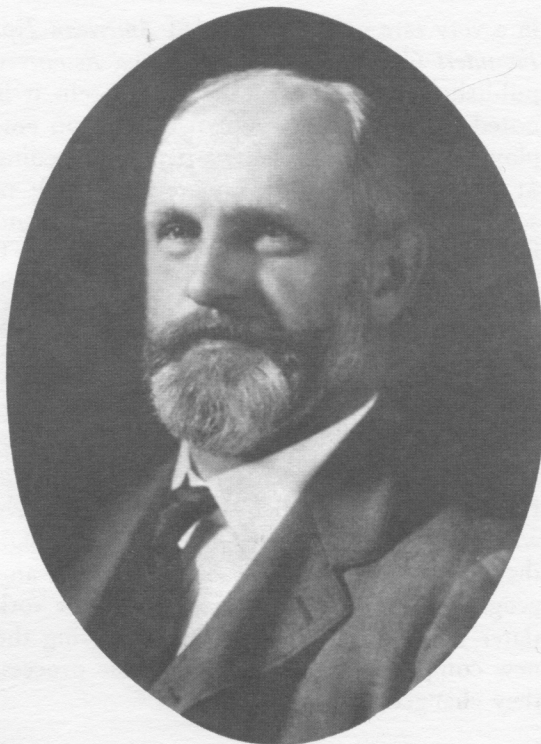
When RobberY Plunder
* in * Broad * Daylight *
When a robin I will Be

This specimen from the Cleveland Type Foundry, taken from the 1895 ATF Specimen Book, is an excellent example of the absurdity of many typographic "designs" being offered by the various foundries prior to the merger in 1892. The 1895 ATF Specimen Book displayed many of these designs, but they soon were to be discarded as Nelson and his associates took control of the new organization.

became obvious just how chaotic the American typefounding scene really was. It was such a formidable problem the first ATF management team made no effort to bring its various members and their plethora of fonts to some sense of harmony. Over half the foundries involved in the merger were closed in short order. But the 12 which continued to operate did so independently and with no apparent allegiance to the new organization. It was a loose confederation under the nominal presidency of Robert Allison of the Franklin Type Foundry in Cincinnati, and it was doomed for failure.

Joseph Phinney was an officer in the new company, coming from the Dickinson Type Foundry of Boston, where he was in charge of specimen printing and later sales manager. He had a keen interest in type design but that interest was overwhelmed by the financial disaster he saw looming for the new company. When it was at its worst, Phinney convinced his good friend Robert W. Nelson to not only look into the condition and prospects of ATF, but to become an investor and join the firm in 1894.

Prior to joining ATF, Nelson was principal stockholder and energetic promoter of the Thorne Typesetting Machine, probably the most promising of all typesetting devices on the market in 1886 when he became associated with that company. Over 2,000 Thorne machines were sold between 1886 and 1910; ATF provided the special notched type used by the device and thus, the Thorne company was a major ATF customer. It is noted in Bullen's biography of Nelson that had Nelson "known as much about the Linotype machine in 1886 as he did in 1890, he would not have invested in the Thorne company."

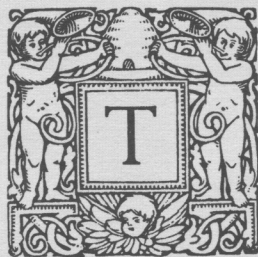


Robert W. Nelson in 1902. He joined ATF as general manager in 1894 and guided the company for 25 years. Prior to joining ATF, he was a principal stockholder in the Thorne typesetting machine company.

ATF had failed to publish a new specimen book, did no advertising, and was, indeed, in a dismal state of affairs when Nelson became general manager. One of his first acts was to make American Type Founders *the name* for all offices (the old names soon would be completely removed). ATF's "Collective Specimen Book" was published in 1895—the first major effort to provide specimens under the ATF name. The 12 manufacturing offices were listed in the front of the book with their respective older names.

This book contained literally thousands of typefaces, most identified as to which foundry manufactured them. This book was Nelson's effort to start promotion, consolidation, and give the company solid direction. (By the way, ATF was now acting as an agent for the Thorne typesetting machine, as noted in the specimen book.)

The diversity and wide expanse of the company is made clearer by information revealed



THIS American Line Type Book shows specimens of the latest and best in type designs; the faces popular with all leading advertisers and the large buyers of printing. One reason for the increasing demand for American Type—and which, by the way, makes it *The Best Type*—is the fact that the designs are brought out in Families.

The move toward more coherent design was firmly in place by the time the 1906 ATF Specimen Book was published. This quote is from that book.

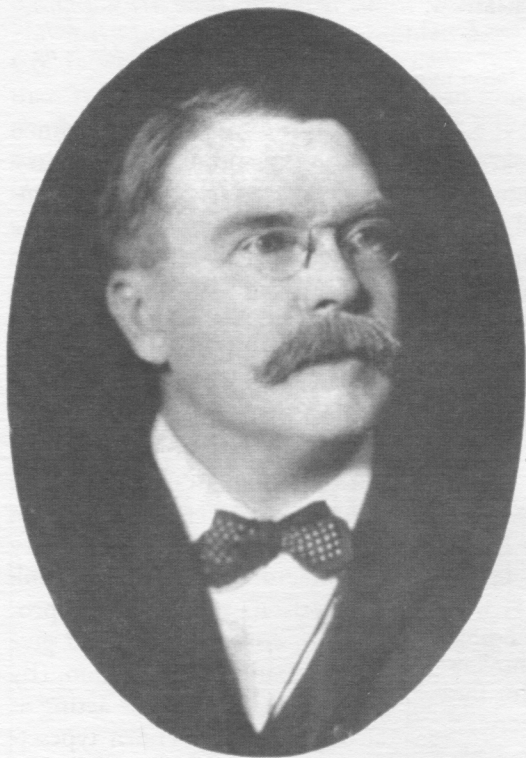
in a very rare publication titled *American Type Founders Company: Its Business and Resources*, published in September, 1902. Therein it is noted that the company had over 1,000 employees, 25 local managers, a payroll exceeding \$1 million, and 600,000 square feet (about 14 acres) of floor space in its various offices and foundries. Of the 1895 Specimen Book, ATF boasts it "contains 1,200 pages featuring a large range and diversity of type faces from 3½ to 120 point."

By 1902, ATF was evolving into a completely different company under Nelson's energetic direction. The principal players were Linn Boyd Benton, Morris F. Benton, Joseph Phinney, Henry Barth, and Robert W. Nelson. Precisely who did what is shrouded by history. Though they had come from diverse backgrounds and geographic locations, all ended up in New York (later Jersey City, N.J.) working to bring the new company to profitability. In the process, they changed typography forever.

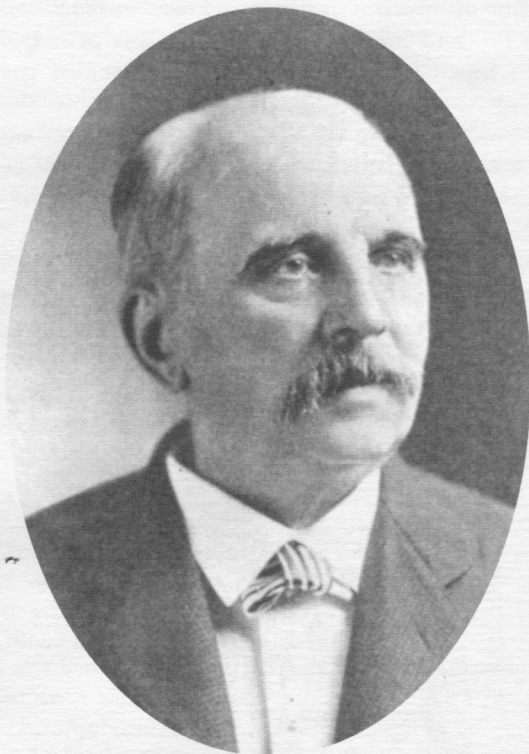
The new company had two major assets and under Nelson's leadership, these assets were exploited in the re-invention of the whole process of typefounding. The assets? Linn Boyd Benton's punch cutting machine, and Henry Barth's typesetter. Nelson gambled the company's future on the use of these machines.

In its first two years, ATF branches basically continued to use outdated pivotal casting equipment and only six new Barth machines were added. Benton's machine was not used at all by ATF during that time.

Compare this fact with what had happened just a couple of years earlier with Benton's punchcutter. He invented the machine when he was a principal of Benton, Waldo & Co. Typefoundry in Milwaukee. Without Benton's machine, both the Monotype and the Linotype were doomed to failure. There are stories of when the Mergenthaler people heard of his invention—they rushed to Milwaukee and tried to buy him out, lock, stock and barrel. And



Linn Boyd Benton

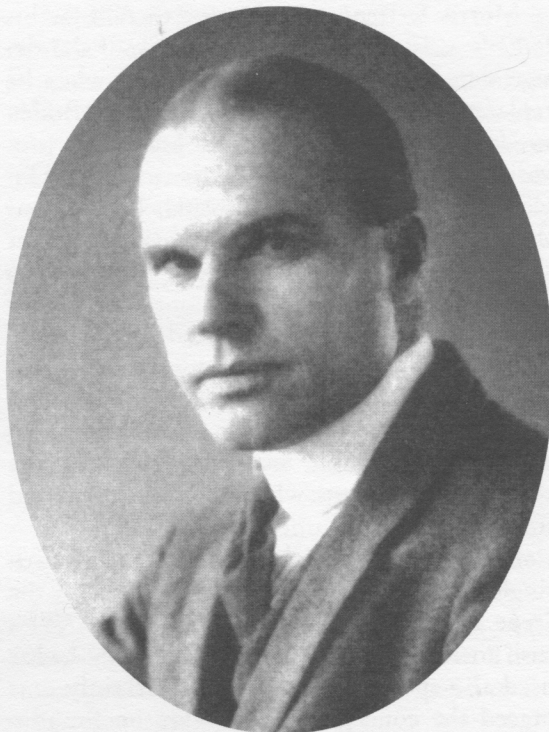


Henry Barth

The inventive genius of these two men provided the two devices on which ATF built its new typefounding empire. Benton created the Benton Punchcutting Machine while still with the Benton & Walto foundry in Milwaukee. Barth invented the Barth Automatic Typesetter while he was associated with the Cincinnati Type Foundry. Both became key members of the ATF team at Jersey City, N. J. These pictures are from a 1902 ATF promotional piece. At that time, Benton was manager of general manufacturing at ATF in New York, while Barth was manager of the Cincinnati branch of ATF.

there's another scene mentioned: Benton and his young son working in Philadelphia with Tolbert Lanston and his organization, teaching them to use the pantographs Benton had sold to them for making Monotype matrices.

When Nelson took over, he ordered the building of 100 new Barth machines and created—for the first time anywhere—a type design department within the foundry. Benton's device quickly came into play, for it eliminated the need for the tedious, slow, and imprecise process of cutting punches by hand. His machine was so successful that by 1903, ATF had abandoned the historic punch and thereafter, engraved all its matrices directly on the Benton machine, which Benton had modified to cut matrices instead of punches. Eventually, ATF would employ many of these machines in the design department—nine are pictured in the 1912 ATF Specimen Book. Initially, Joseph Phinney was the driving force behind the design department. Before ATF, he had much success at the Dickinson foundry promoting newer, *associated* designs. He called them “pub-



Morris Fuller Benton, pictured in an 1924 *INLAND PRINTER* article, is credited with over 220 type designs for ATF. It was his research and close study of historic models—and his direction of a crew of craftsmen in the company's unique Type Designing Department—which brought forth ATF's extensive and excellent revival of master designs of yesteryear—and new designs as well. A significant number of Benton's faces remain popular today.

The Demand Determines the Supply

THE progressive printers have in reality selected the type faces and decorative materials shown in this Book. Here and there are printers who for one reason or another cling to old-fashioned job type faces, now rapidly becoming obsolete, but the demand for the old-fashioned type faces is so small and dwindling that they cannot profitably be carried in stock.

There is no kind of printing that cannot be done better with the newer progressive type faces than with old-fashioned job type faces.

Printing done with the fashionable, popular and progressive type faces shown in this Book is more valuable to the printers' customers than if set in type faces which are old-fashioned relics of the past



The foundry's campaign for typographic coherence was firmly in place by the time the 1912 Specimen Book was published—to the point where ATF was ridiculing any printer wanting designs issued by the firm before the turn of the century.

licity types.” One of the first series issued in Boston was Jenson Oldstyle with its variants.

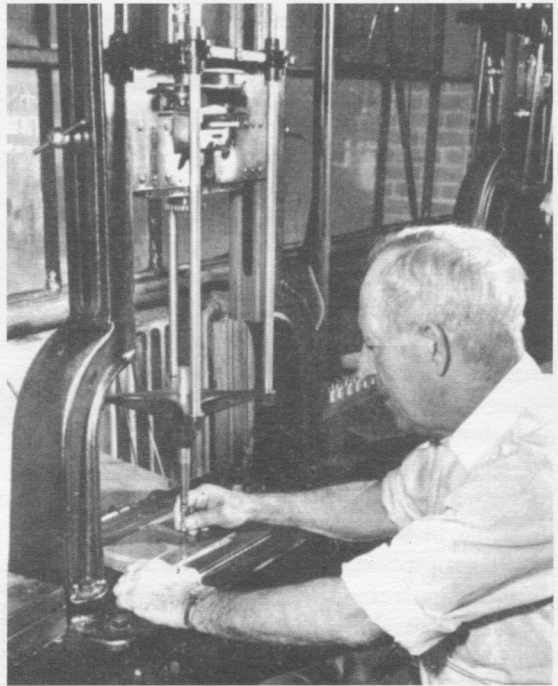
Taking up this emphasis on *compatible* type designs, ATF sought to create a totally new and greater demand for type, especially in the growing advertising industry. This was imperative, for be reminded ATF was rapidly losing all its “body type” business to Linotype and Monotype machines.

Linn Boyd Benton and his machine were put to the task of creating the matrices necessary for this virtual re-fitting of the foundry.

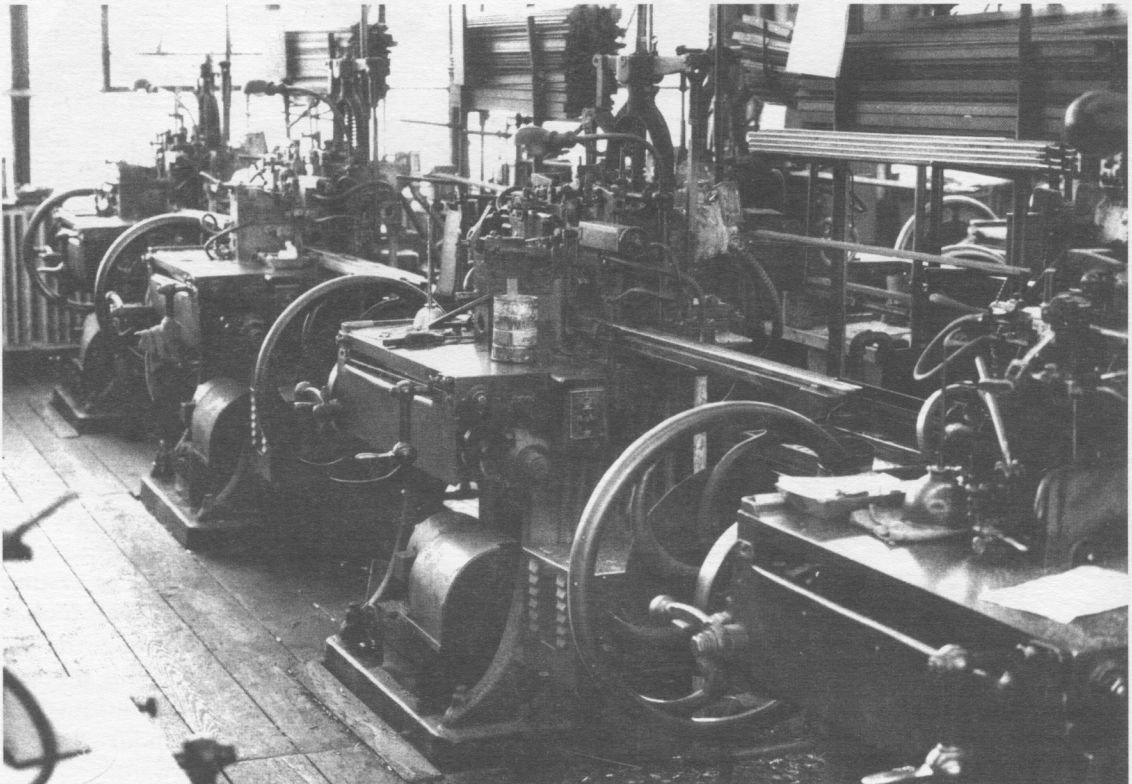
Just 11 years after ATF was formed, most typefounding operations were closed throughout the country and equipment and matrices brought together in one new central plant at Jersey City, N. J. With the closing of casting operations at Boston, Joseph Phinney took a lesser role in the organization (though he remained a director). The legacy of his innovative ideas regarding typography continued to influence Nelson, who strongly endorsed them and continued to push them forward.

Morris F. Benton had come to ATF as his father's assistant, but soon the bulk of the design department fell on his shoulders when he replaced Phinney as its head. Henry L. Bullen needs to be recognized also, for aside from providing the several written articles about ATF we now carelessly cite as gospel, he also was the one charged by Nelson to bring together the extensive and diverse *reference materials* amassed from the 23 different foundries as they were consolidated. He invested hundreds of hours cataloging and organizing this material so it could be used efficiently, and M. F. Benton spent many weekends and late hours studying this readily available material in creating the typographic designs which quickly emanated from his hand.

Bullen credits Nelson—his boss!—with singlehandedly coming up with the idea of the “type family,” the essential element of ATF's rush to re-create itself. Perhaps Phinney hadn't used the specific term, but he certainly embraced the concept at the Dickinson foundry before ATF came into being. And the Central Type Foundry of St. Louis, before the merger, had been successful in introducing “The DeVinne Series” of fonts, which in the 1895



Above is a Benton pantograph in use, as shown in INDUSTRIAL DESIGN magazine in November, 1959. At least nine of these machines were in use at the Jersey City facility soon after being established in 1903. Below are a few of the many Barth casters still on the floor and (occasionally) in use when our group toured the ATF facility at Elizabeth, N. J., in 1980. ATF capitalized on the Barth and Benton inventions to move into a “new era” of type and typography.



combined ATF Specimen Book included DeVinne, DeVinne Condensed, DeVinne Italic, and DeVinne Outline—certainly the makings of a “family.”

Thus, none of the individuals named can take credit for *originating* the type family idea, but collectively, they certainly were the force behind fostering the concept and carrying it to total manifestation. The Bentons, father and son, were largely responsible for producing these new faces, with Linn Boyd Benton developing numerous other devices to assist in the design of type. Noteworthy was a special pantographic device he invented which could be manipulated to *enlarge, reduce, italicize, condense, backslant, bold, etc.*, any pattern. This “delimiting device” could produce a precise inked outline to any size, which (when inked in) provided a reduced specimen from a large pattern for close inspection as to suitability for common type sizes. Keep in mind, this device was developed before photostats, Xeroxes and other similar tools were available to make quick and easy enlargements and reductions. Vectors and digital renderings were still three-quarters of a century in the future. Indeed, Benton’s delimitator concept is largely *built into* the newest digital type standard called “Open Type,” wherein a single digital master can be manipulated in almost endless ways by the user to get any bold, italic, condensed, extended, outline, etc., variation that he might fancy.

Morris F. Benton is largely ignored by the type industry today, yet probably there is no other designer with a greater number of *long-lasting*, solid and reliable designs to his credit. Consider his Garamond, Baskerville, Bodoni, Bulmer, Cloister Old Style, Century Expanded, Century Schoolbook, Franklin Gothic, Souvenir, Cheltenham . . . well, there are over 200 and they’re all great renditions resulting from Benton’s extensive study of the old masters, his study of typographic trends in the industry, and his clear focus on the need to make any design work well in sizes from 6 to 72 point.

Nelson certainly was involved in all of this. Against the advice of others, he purchased from Bertram Goodhue the drawings for Cheltenham Oldstyle. But M. F. Benton was the one who adapted the design to typemaking requirements, and then developed the many members of the Cheltenham family. This family served as a tremendous “cash cow” for ATF for many, many years.

Nelson was the boss who pushed ATF ahead in the process of re-inventing the entire process of making type. The significant point is this: In order for ATF to survive and thrive, Nelson had to literally *toss out* most of the thousands of type designs he inherited from the 23 original foundries (and other struggling independents as they folded into ATF in later years). Likewise, he had to abandon most of their equipment, and close down all their facilities.

In re-inventing ATF, Nelson and his close associates also changed printing forever. There was a new-found interest in type—concern for *appearance, legibility and harmony*. No longer was the uninspired local compositor considered up to the job of making print advertising into a forceful, effective means of communicating—rarely did he have the necessary tools.

What evolved was an entirely new service industry called “advertising typographers.” They were the ones leading the charge toward newer and better typographic design, and they became missionaries of the concepts first brought forth by American Type Founders. Of course, they *bought* ATF type!

This transition is well defined in ATF’s 1923 Specimen Book: “As a prelude to the new era in typography, in which types talk at command with varying emphasis and orchestral power, the American Type Founders Company scrapped hundreds of time-honored but utterly inadequate type series which were clogging the wheels of typographic progress. Compare this Specimen Book of 1923 with the much praised Specimen Book of 1895 and note how few of the types of 1895 survive.”

The showing of the Cheltenham family on the next page is taken from the 1912 ATF SPECIMEN BOOK (page 225) and shows the 18 members of the family as it existed then. Eventually, M. F. Benton would develop 26 variations of the face, though only 21 of them reached the market (five were abandoned before production began). Though ATF produced ligatures for the face, for some reason ligatures were not used in this specimen page. Lanston Monotype, Ludlow and other firms developed still more variations. With Cheltenham, ATF perhaps over-developed the type family concept. The design was an extremely good “seller” for the foundry and its great popularity for the first 50 years of the 20th century surely caused it to fall into disfavor. It became less popular, perhaps, but the design never has disappeared and is enjoying somewhat of a revival today.

The Cheltenham Family

IS BEYOND ALL DOUBT THE MOST POPULAR AND THE MOST DISTINCTIVE GATHERING OF RELATIVE TYPE FACES THAT THE WORLD HAS EVER SEEN

The completeness of this great family makes it adaptable for all forms of work

Most Profitable Designs

Proven by the most successful printers and advertisers in the world

**American
Type Founders
Company**

Originator of Type Fashions

Cheltenham Oldstyle

Cheltenham Wide

Cheltenham Medium

Cheltenham Bold

Cheltenham Bold Condensed

Cheltenham Bold Extra Condensed

Cheltenham Bold Outline

Cheltenham Oldstyle Condensed

Cheltenham Italic

Cheltenham Medium Italic

Cheltenham Bold Italic

Cheltenham Bold Condensed Italic

CHELtenham BOLD EXTRA CONDENSED TITLE

Cheltenham Bold Extended

Cheltenham Extrabold

Cheltenham Inline

Cheltenham Inline Extended

Cheltenham Inline Extra Condensed

For the first 20 years of the 20th century, ATF was largely *by itself* in this endeavor, for linecasting and typesetting machine manufacturers at that time were preoccupied with simply making their machines *work* and had no time for the niceties of “good typography.” Mike Parker, a noted typographic historian, type designer, and creator of the Bitstream digital type firm (among other things), says it this way: “In the clamor of the first years, Linotype and Monotype were too busy satisfying customers’ demands to recognize the benefits of planning typeface design. An innovative program of new designs based on market analysis, scholarship and artistic imagination stood little chance against the rush of proven cash demand provided by raw customers’ orders.”

Did this new approach to typography pay off for ATF? *Did it ever!* The ATF plant at Jersey City quickly grew to be the largest type foundry in the world. And the tonnage of type shipped from that foundry far outstripped the fondest imagination of those who had come together in forming the new organization. At one time several hundred persons worked at the Jersey City plant.

In 1926 Nelson died, leaving a tremendous void in ATF’s management hierarchy. Soon thereafter, the great depression of 1929 brought ATF to its knees in bankruptcy and forced retrenchment in smaller facilities at Elizabeth, N. J. Though it did succeed in coming out of bankruptcy, slowly, ever slowly, the company began to dwindle principally because it no longer had the driving, creative minds behind it which were so evident in the teens and twenties. ATF continued to rely on its key personnel, making no effort to train a new generation of managers, artists, technicians and typographers. Linn Boyd Benton, for example, remained with ATF until he was 88 years old! His son, M. F. Benton retired after over 40 years at the age of 76.

Most employees enjoyed (or *suffered*, depending on one’s viewpoint) very long tenure and again, little effort was made to pass their



A Barth operator depicted in the 1906 ATF Specimen Book.

skills to a new generation. ATF was an early innovator in phototypesetting and even digital type rendering, but somehow the company never capitalized on these efforts and was eclipsed by energetic newcomers to the type business. Slowly, ATF faded into the background, but the typographic concepts the company energetically forced onto the printing industry are still wholly embraced by modern typographic masters.

Out of typographic chaos arose American Type Founders. The new company was first to define typography with regard to harmony, legibility, compatibility, and variety. It now is obvious that the ideas were quickly embraced. Soon textbooks evolved advocating the ideas and labeling them as “standard” for modern typography. J.L. Frazier’s *Modern Type Display*, done in 1929, is a strong endorsement of ATF’s typographic principles. (Frazier was long-time editor of the *Inland Printer*.) Two years later *Advanced Typography* was published as a standard textbook on printing; it was done by the United Typothetae of America, and further explained and refined concepts advocated by ATF.

The American Type Founders Company remains only as a fond memory in the minds of we who are older printers. But the typographic revolution the company inaugurated in the early years of the 20th century remains firmly entrenched and all “good printing” and “good design” today is judged by the principles introduced by ATF just about 100 years ago.

POSTSCRIPT: Theo Rehak’s upcoming book on *The Fall of ATF* is a captivating portrayal of the last years of this once-robust and dynamic organization. An unpublished master’s thesis by Patricia Cost (done in 1986 at Rochester Institute of Technology) provides unpublished and fascinating details about the Bentons and certainly is something which should be published. In the meantime, what follows is a reprint of one of the articles in *The Inland Printer*, penned by Henry L. Bullen. And keep in mind, the wonderful revolution we’re talking about was occurring almost precisely 100 years ago!

Information Sources for Article on American Type Founders

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Bullen, Henry L., "The Effect of the Composing Machines Upon the Typefounding Industry," *The Inland Printer*, July, 1924, pages 595-597.

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Collective Specimen Book, American Type Founders, published in 1895. My copy is from the New York office though the same volume was published by most of the 12 ATF facilities at that time.

Cost, Patricia K., *The Contributions of Linn Boyd Benton and Morris Fuller Benton to the Technology of Typesetting and Typeface Design*. Unpublished master's thesis, College of Graphic Arts and Photography, Rochester Institute of Technology, Rochester, N. Y., May, 1986.

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Gress, Walter B., *Advanced Typography*, Washington, D. C., United Typothetae of America, Inc., 1931. Gress was instructor in typography at Carnegie Institute of Technology, Pittsburgh, and this book was the first serious text on printing I ever owned—given to me as a used textbook by a Carnegie Printing student in the early 1950s.

Hopkins, Richard L. *Origin of The American Point System for Printers' Type Measurement*. Terra Alta, W. Va.,

Hill & Dale Private Press, second edition, 1989. (Book still available from the author.)

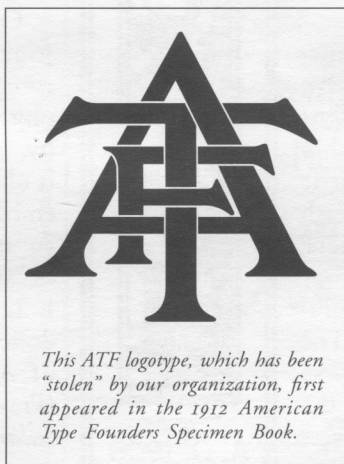
Jones, Thomas R., *Printing in America—and American Type Founders*, published by the American Branch of the Newcomen Society of England, 1948. This was the text of a speech Jones gave before the organization and, though it contains some insufferable errors in fact, still is a valuable source of information about the early years of American Type Founders.

McGrew, Mac, *American Metal Typefaces of the Twentieth Century*, Second Revised Edition. New Castle, Del., Oak Knoll Books, 1993. Note especially Mac's discussion of Cheltenham, and also the Bullens.

Parker, Mike. "Introduction to the New Edition," *A Tally of Types* by Stanley Morison, edition of 1999 published by David R. Godine Publishers, Inc., Jaffrey, N. H. Originally a private edition in 1953.

Photographic Views of Central Plant, a keepsake reproduction of an American Type Founders promotional piece distributed at the 2002 American Typecasting Fellowship Conference at Provo, Utah by Theo Rehak, Dave Peat, and Rich Hopkins. It is speculated that the original undated publication was done about 1912.

Weinig, Irma M., "Genesis of a Type Face," from *Industrial Design* magazine, November, 1959. It's a rather complete discussion of how ATF made type. My copy is a reprint and thus, I do not have the original page numbers. Copyright 1959 by Whitney Publications, Inc.



This ATF logotype, which has been "stolen" by our organization, first appeared in the 1912 American Type Founders Specimen Book.

Author's Footnote

Every single fact detailed in the preceding account is substantiated by at least one of the references listed above—excepting one.

I have heard it said that ATF's Jersey City plant once employed over 600 persons. Initially I included that figure in my text on page 15. But when checking my text, I decided I had to confirm my facts.

To save myself, I cannot find the proper reference.

So much of ATF's history is shrouded by the company's psychotic adherence to secrecy and paranoia about any person expressing an interest in the company. That paranoia certainly has made research about the company far more difficult.

But surely that information is "out there," and I ask any reader who might have the proper references to let me know. Such a detail would contribute greatly toward affirming ATF's claim to being "the largest typefoundry in the world."

The Effect of Composing Machines Upon the Typefounding Industry

By HENRY LEWIS BULLEN*

THE INTRODUCTION of the composing machines presaged ruin to most of the typefoundries of the United States. In 1890, when the Linotype machines began to enter the newspaper plants, there were 29 type-foundries† in North America. Twenty of these, so far as the manufacture of types was concerned, were about to lose the market for fully three-quarters of their output. In 1892, 19 of the typefoundries were consolidated into one corporate body, the American Type Founders Company, with a capital stock of \$4,000,000 preferred and \$5,000,000 common.

This was at the time a fair valuation of the foundries thus incorporated, including their stocks of type, etc., for most of them were small and unprogressive, subsisting upon local requirements for body types simply because of their greater accessibility to newspaper plants, which depended upon them for quick deliveries of sorts and additions to body fonts. To this trade they added the profits derivable from the sale of printing materials and an occasional small press or paper cutter.

In 1896 this capital was reduced to \$4,000,000, with no preferential stock, supplemented by the sale of \$1,000,000 in bonds. This reduction was the measure of the effect in 1896 of the introduction of composing machines on a company which was making probably more than three-fourths of the types produced in America.

Besides the American Type Founders Company there were in 1892 the typefoundries of Barnhart Brothers & Spindler (Chicago); Farmer, Little & Co., Bruce, Walker & Bresnan, and Lindsay & Co. (all New York); H. C. Hansen (Boston); Pacific States (in San Francisco) and Keystone (Philadelphia). To these was added within two years the new typefoundry, the Inland (St. Louis). All of these, with the exception of Barnhart Brothers & Spindler, have ceased to exist because they became unprofitable. . . . It may be interesting to know how, amidst these disasters, one man created the greatest typefoundry in the history of the

industry and established it on an impregnable foundation.

The year 1924 finds the typefounding industry resuscitated. The output of types in America is not so great as before the advent of the composing machine, but it is very large and has been increasing rapidly. Though the product of the American Type Founders Company in 1917 was at that date the largest in its history, it was nearly doubled in 1923 in tonnage sold, each year showing an increase over its predecessor.

This victory over the adverse conditions created by the entry of the composing machines was not achieved without a long struggle. The victory was achieved by Robert Wickham Nelson, who nearly 30 years ago assumed the management of the American Type Founders Company, then on the verge of bankruptcy. Of the thousands of type faces then current scarce a score survive, and as for the plant equipment it has almost all been supplanted with better and more economical machines.

Typefounding as described in De Vinne's *Plain Printing Types* (1896) was as Nelson found it. Today the methods, machinery and processes are almost completely changed, so far as the American Type Founders Company is concerned, and De Vinne's description is obsolete. Of the financial and administrative difficulties something will be told, but at this point the Nelson policy in typesetting needs to be explained, for that policy was and is the foundation of the success of his company.

Other departments are left in a great measure to their respective managers, but Nelson is the active directing spirit of the type department, which, of course, has several managers. Great in many ways, he is, above all, a type man, selecting the type faces and following with critical care each design as it progresses through the designing

† These were: In Boston: Boston, Dickinson. In New York: Farmer, Little & Co., Bruce, Henrich, Lindsay & Co., H. Lindsay, Walker & Bresnan. In Philadelphia: MacKellar, Smiths & Jordan, Collins & McLeester, Keystone. In Baltimore: John Ryan, Hooper Wilson, Cary & Co., Mengel. In Richmond: H. L. Pelouze. In Buffalo: Lyman. In Cleveland: H. H. Thorpe & Co. In Cincinnati: Cincinnati, Allison & Smith. In Chicago: Marder, Luse & Co., Barnhart Brothers & Spindler, Union. In Milwaukee: Benton, Waldo & Co. In St. Louis: Central, St. Louis. In Kansas City, Reton. In San Francisco: Palmer & Rey, Pacific States. In Toronto: Toronto.

* This article is from the July, 1924, edition of THE INLAND PRINTER (pages 595-597). It was followed by another piece titled "The Creators of the New Era in Typefounding," published in August. Bullen was curator of the Typographic Library and Museum at American Type Founders, and a frequent contributor to THE INLAND PRINTER.

department. No detail of design or manufacture escapes his scrutiny. He investigates every suggestion and complaint. Thus he has made his typefoundry preeminent and in doing so has revitalized American typography. In the earlier years of his administration the difficulties of putting a virtually bankrupt company on a sound financial, administrative and manufacturing basis prevented him from giving much attention to type faces.

It was in this period that Joseph Warren Phinney's studies in type design, and his good judgment in selection, first gave to the American Type Founders Company its leadership in type fashions. Greatest of his successes was the introduction of the Morris types and decorative designs, which so swiftly revolutionized American typography to its lasting advantage. He produced the first type family—the Jenson family of related designs.

Nelson's first selection of a type face was the now celebrated Cheltenham Old Style, designed by Goodhue. Though by no means a perfect type design, it was an advance in certain ways on the Jenson Old Style. The price asked for the design was for that time unusually high, and a majority of Nelson's advisers were against its acceptance. It proved to be the best seller in the history of typefounding, and was developed by Morris Benton into an extensive family, some of the Bentonian members of which have outsold and are outselling the parent design. The Nelson policy is to enliven printing by issuing a constant succession of good type designs and expanding each into a family, when practicable.

Well conceived variety and gradually changing fashions are the very life of all industries in which art is an important factor. Literature, the drama, music, household decorations, furniture, articles of personal adornment, architecture, for instance, need to be ever changing to maintain their interest to the users, and what is true of these is no less true of typography. This policy has reciprocal advantages, much greater to the printers than to the typefounders. The typefounder when selling makes but one profit. The buyer of a series of types may make hundreds of profits in the use of it. The most essential factor in good typography is good type faces. If the type design is inferior, the effect in the printed work will remain inferior, no matter how superior the craftsmanship of the user.

Undeniably, the greater effectiveness of printing in advertising, the greater is the demand for printing. This is the basic idea in Nelson's policy: to increase the demand for types by increasing

the demand for printing. Nelson moves his type families as generals move their divisions, not haphazardly, but with deliberation. The design announced today was planned two or three years before to support a further advance. The type family as developed by Nelson makes for a saving in time by securing harmonious effects automatically. Printers now buy type families where once they bought series.

In developing type families a new order of types was created, properly called "publicity types," because [they are] peculiarly adapted for advertising purposes. These are not to be judged, as one eminent critic has done, by rules which apply to book type only. Printing has varied uses, and in most of these uses it can not be made conformable to the restraint that distinguishes the work of the producers of limited edition books, to whom Cheltenham Bold or Goudy Bold are anathema, though they greatly outsell Cheltenham Old Style and Goudy Old Style, their parent designs. That fact establishes their usefulness and justifies their manufacture; it also is a factor not to be overlooked in the success of the company.

For two years after the formation of the American Type Founders Company Nelson had no financial interest in it. The history of those two years discloses the dangers confronting the typefounding industry and the inadequacy of time-honored methods to overcome them. In 1890 the industry was in a depressed condition, but the prospect was enlivened by the appearance of a group of promoters from London with a plan to form a company of (principally) British capitalists to buy all the typefoundries in America.

For this purpose the promoters asked for options, which were readily given, because the tentative offers for the respective typefoundries were liberal "beyond the dreams of avarice," being based on plans for capitalization at \$20,000,000. It is believed that every typefoundry was eager to sell, with stipulations in some instances for the continuation of the proprietors in the management, with attractive salaries. No money was paid for the options, owing to this eagerness. A prospectus was prepared. The promoters returned to London. They never came back. But they left the idea of consolidation in the minds of American type-founders. John Marder (Marder, Luse & Co.) and A. T. H. Brower (Union Typefoundry, Chicago), with two friendly bankers of New York, promoted the American Type Founders Company, which was incorporated on February 8, 1892, with a capital of \$9,000,000.

Every important typefoundry, and all but four of the unimportant, signified their willingness to consolidate, but eventually Barnhart Brothers & Spindler were left out, because their price was excessive, and Farmer, Little & Co. also, because of a disagreement among the partners. Those who entered the company accepted payment for their plants and merchandise for the most part in stock, and consented to continue as managers where they had formerly been proprietors (except James A. St. John and Carl Schraubstadter, principal owners of the Central Type Foundry, of St. Louis, and of the Boston Type Foundry. They sold outright for \$500,000 cash and never had any part in the management).

A considerable amount of stock was sold to outside investors, some of whom were printers. The officers and directors were typefounders, except the treasurer. The general offices were in New York in charge of the secretary. The president was Robert Allison, of the Franklin Type Foundry, Cincinnati. He continued as manager of the latter foundry, and did not appear in the general office oftener than once a month. There were two general managers—in the West, John Marder; in the East, George Frederick Jordan, of MacKellar, Smiths & Jordan, Philadelphia. Thus there was no central executive control. There was no policy, except to continue along the same lines as before the consolidation. There was no vision. Month by month the Linotype machines were cutting off the demand for renewals of newspaper “dresses.”

The company had two potential assets, both of which were neglected. One was the ownership of the Benton punch and matrix engraving machine; the other, the ownership of the Barth automatic typesetting machine. In pre-company days these machines had been used only in the respective typefoundries of their inventors, except that several Benton machines were being used by the composing-machine companies to the peril of the typefounding industry. The American Type Founders Company during its first two years made no use of the Benton machine, and added only six Barth machines to its equipment. It continued the old methods of manufacture.

During the negotiations leading to the formation of the company, the individual typefoundries ceased advertising. They exhausted their supplies of specimen books without replenishing. Yet in the first two years the company failed to provide either a specimen book or a catalogue. Two managers assumed the authority to reissue specimen books which, as proprietors, they had used lo-

cally. In New England, Phinney reprinted the specimens of the Dickinson, Boston and Central typefoundries; in the Northwest, Marder reissued the specimen book of Marder, Luse & Co. To both of these reissues a few typefaces of other foundries were added. There was no advertising department and no advertising policy. The only excuse for these ineptitudes was insufficient fluid capital. As the company started with no accounts collectible, its cash capital was quickly absorbed by its credits to its customers. To finance the printers' purchases for 30 days requires the use of many hundreds of thousands of dollars, but in 1893 not half the accounts were settled in 30 days.

There was in the company no financier to meet these difficulties. All the troubles which had beset the typefoundries separately were now centralized and thus made more formidable. No dividends were earned. Whatever management there was expressed timidity. The company lost its credit with its banks, and could only obtain advances on the personal indorsement of its loyal directors, who incurred great risks in the interest of the stockholders. The outside investors, represented by bankers, together with certain former proprietors who thought they foresaw in the dissolution of the company the opportunity to resume proprietorship, formed a strong opposition to the controlling interest, which was composed of as honest, unplotting and simple-minded a group of directors as ever undertook to manage a big company. This group had individual efficiency and collective inefficiency. They were helpless against a sea of troubles, aggravated by the totally unmerited unpopularity of the company, which came to be known as the “Type Trust.” They actually deserved the sympathy of the printers. There was not the slightest semblance to a trust in the American Type Founders Company. Its property, which before the formation had been owned by about a hundred persons, was now owned by thousands. It never had the power to control prices. Its first act was to reduce the prices of body types, probably as a measure of defense against the composing machines, completely (as it was afterwards discovered) depriving itself of any profits on body types. Propaganda instigated against the company at the time was decidedly dangerous, and added greatly to the embarrassments of a management not strong enough to overcome the adverse conditions with which it was confronted.

When the affairs of the American Type Founders Company were at the worst, Phinney turned for aid to Robert Wickham Nelson, who was then

principal owner of the Thorne typesetting machine and was one of the three founders of the American Press Association. This was in 1894, at which time Nelson held no stock in the type company. Investigation of the seemingly bankrupt type company was followed by his purchase of the stock of one of the directors. Those who know him will attribute his faith to his foresight. He was elected a director. A few months ahead was a stockholders' meeting, at which it seemed more than probable that all the typefounding ability on the Board of Directors would be supplanted by non-practical, inexperienced men.

Nelson, though unsalaried, immediately began to work actively for the rescue of the company. He became an indorser of its notes. He put himself in touch with the bankers who were alarmed by the non-payment of dividends to clients who had invested in the type company upon their advice. To them he outlined a policy of management which would retain on the Board of Directors the able and well-intentioned typefounders whom the bankers were about to oust, while placing the financial control with the bankers. A coalition was formed, thus committing both factions to the advancement of the company's interests. John E. Searles, a prominent banker, was made president, lending his name to strengthen the credit of the company, though he was not active in the management or in financing. Nelson was elected general manager. This was in October, 1894. The company by this act, as it turned out, was saved. But its salvation was a slow process.

When Nelson became general manager, the company's credit was restored. He was a keen and courageous financier, and all his abilities in that direction required to be exerted to the utmost. No dividends had been earned in the preceding two years, and the composing machines had cut deep into the sales of body types, which bulked the largest. Four more years elapsed before the company began to pay dividends, but during those four years the company was put in an impregnable position. In 1895 the first *Collective Specimen Book* and a catalogue were issued, followed quickly by compact specimen books for New England, the Middle States, the Southwest and the Pacific Coast. A liberal advertising policy was carried on, until the name American Type Founders Company completely subordinated all the old local names, which the earlier management had permitted to overshadow the corporate name in each locality. A large number of Barth automatic typesetting machines were made, displacing the less

efficient Bruce machines, thus reducing the cost of production. A type-designing department was established—the first in the history of typefounding—and a punch and matrix department was equipped with several Benton engraving machines under the direction of Benton.

There was from the first a gradual concentration of manufacturing. Typefoundries in Baltimore and San Francisco had been totally destroyed in the fires which afflicted those cities. By 1903 it was proved that local foundries were no longer necessary, and the great central manufacturing plant in Jersey City was built and gradually equipped with machinery that had been used in Chicago, St. Louis, Philadelphia, New York and Boston. It was then the largest and best equipped typefoundry in the world. In 1907 it was almost doubled in extent. In 1924 its typemaking capacity is again being largely increased.

Nelson, who had been de facto president since 1894, was elected president in 1901, upon the retirement of Searles. Perhaps the best evidence of Nelson's triumph over the adverse conditions which all other typefounders in America failed to surmount is the *Specimen Book and Catalogue*, 1923, of which 60,000 copies were printed at a cost exceeding \$300,000. Its cost might have been reduced two-thirds, or even more, by making it a mere sales catalogue of typefaces, but that was not the Nelson way. His way was to make the typefounder a leader in typography, to set the pace and show the printers how to give better service to the buyers of printing, who were no less the customers of the typefounder than of the printer. Printing has an illimitable field for expansion. Such expansion would increase the demand for better printing. Typefounder and printer would prosper together. Such was the creed of Nelson.

Postscript to Bullen's Article

What Henry L. Bullen wrote in the previous article must be viewed with caution—after all, he was an employee of the company and answerable to Robert W. Nelson, the man he chose to praise.

This is an upbeat article expressing great optimism for the future. What Bullen did not foresee, however, were two devastating events. Nelson died in 1926, leaving the company ill prepared for the tidal wave of depression which swept over business in America in 1929. This depression would cause bankruptcy of the company. As part of its recovery effort, ATF moved from Jersey City to smaller facilities at Elizabeth (into a plant built for the manufacture of Kelly presses). The high points alluded to in this article never again were to be achieved.

THIS IS WORK BEING DONE
IN EIGHTEEN POINT
HADRIANO COMPOSITION
USING MAC-MONO

ABCDEFGHIJKLMNOPS
TUVWXYZ

KERNING WATERWAY
YANKEE VALUE WATER

TAWNY BUSHNELL
RICHARD L. MORRISON, JR.
HAROLD Q. MACARTHUR
MILDRED A. DELAUDER

SMALL CAPS A E C R O ONLY
RIGHT-KERNING A TV W Y

The typeface used to print the specimen shown above is Frederic W. Goudy's Hadriano, cast from a unique font of composition matrices made by Lanston Monotype especially for the University of California to cast and imprint onto diplomas the names of its graduates.

This rather unique utilization of the face was briefly mentioned by Goudy in his book titled (modern title) *Goudy's Type Designs*. Each year, for many years, several thousand names were set up in Hadriano for imprinting on to UC diplomas via letterpress. Of course the process no longer is used. The discarded mats first came into the hands of Monroe Postman, who traded this font to Pat Taylor. Since a keybar and a stopbar were not available, Pat wondered whether they could be cast utilizing Monroe's Mac-Mono computer interface, so he brought the problem to Monotype University 5.

In all other instances, Hadriano was made only in display matrices. It causes me to wonder precisely how much money the University invested in having this special font of matrices made up, for the Lanston folks

had to do plenty of special research to create this unique matcase arrangement; they also had to make all the matrices including some unique characters too.

The mat case includes special characters to assist in the composition of names—small capitals to accommodate prefixes and suffixes, such as "Jr.," "von," "Mac," etc. The case does not contain all the small caps—there wasn't enough space for that. Likewise, it has specials for T, A and Y at "short sets"—narrower to facilitate kerning.

The matcase is far from ordinary. It's set up for 14½ set, but there are two rows of 21-unit characters. The M must be underpinned with 5 units, making it 26 units wide; the W is underpinned with 5 units each side, making it 31 units wide. And the V also is underpinned with 5 units each side, making it 22 units wide.

Three characters, the small caps E, N, and V, simply don't cast properly: the E is two units too narrow, and the N and V cast half way off their bodies when the centering pin is coming down properly on the mats.

Next page, please.

ATF Receives APHA's 2004 Institutional Laureate

"It is a great pleasure for me as chair of the American Printing History Association's Annual Awards Committee to let you know that the committee has unanimously chosen the American Typecasting Fellowship to receive its Institutional Award for the year 2004."

So read a letter from Blanche T. Eberling-Koning which I received in November. She invited me to the APHA annual meeting held in New York Jan. 24, 2004, to receive the award and make comments. With Theo Rehak serving as my "seeing eye dog," I attended that event and thoroughly enjoyed my 15 minutes of fame.

We're in good company, folks, for a few of the other recipients of the award (which has been granted since 1985) include The Gutenberg Museum (Mainz, Germany), The Newberry Library (Chicago, Ill.), Colonial Williamsburg, the Grolier Club (New York), and St. Bride's Printing Library (London, England).

Health problems prevented Blanche from being at the meeting, but she was well represented by David Whetsell, an APHA trustee, who took

the podium in her absence and this is the report of my presence, as published in the Spring, 2004, *APHA Newsletter*.

The Institutional Award

David Whitesell explained: "Founded in 1978 . . . the American Typecasting Fellowship has committed itself to preserving the methods and materials of typecasting and linecasting. Its dedicated membership, now numbering over 300, has worked tirelessly to locate and refurbish old typecasting equipment and to preserve thousands of fonts of matrices. Many ATF members actively use their equipment and instruct others in the technology . . . The American Typecasting Fellowship offers us a valuable and instructive model for preserving our printing history. In presenting this award, we commend the members of the ATF for their passion and commitment, congratulate them for their achievements, and wish them a long and successful future." Richard L. Hopkins's use of a PowerPoint presentation about this organization dedicated to the preservation of metal type represented the eminently practical attitude the ATF exudes, as does his Monotype composition caster run from a Macintosh computer (rather than punched paper tape), a technology developed by an ATF member.

"The group has accomplished much despite a proud distaste for the appurtenances of organization. At what would turn out to be the first ATF Conference, some typecasting enthusiasts stayed up through the three days of the event, talking and making type. They also wrote their famous by-laws, short and sweet, which do not allow for officers or dues, or any further by-laws.

"In his role as editor and publisher, Hopkins produces the *ATF Newsletter*, which is printed partly by offset, but mostly on his 10 x 15 Heidelberg (hence the 7" x 10" size of the journal). In its 40 pages, the journal looks at typecasting and linecasting equipment, its use, its maintenance, its proper care, and its history. Members also communicate by telephone and email, and get together every other year in a conference that has been held in places as diverse as Oxford, England and Provo, Utah.

"Since 1995, Hopkins, with the help of Paul Duensing and Roy Rice, has conducted biennial week-long hands-on sessions with Monotype machines. "Monotype University" now has 26 graduates, who represent a new generation of typecasters.

"Just as ATF lives up to its motto of "Continuing the Tradition," Hopkins clearly fulfills the description on his license plate, "TYPENUT." Interested persons may contact ATF and Rich Hopkins by writing directly: Richard L. Hopkins, PO Box 263, Terra Alta, West Virginia 26764, <wvtypenut a@aol.com>."

Complete text of my talk can be found at <www.printinghistory.org>.

Hadriano Comp Matrices

(from previous page)

These three characters aside, I was successful at casting composition using Mac-Mono. I was not, however, able to get the lines to justify properly. Whether this was caused by mis-interpretation in Mac-Mono translation, or whatever else, I do not know and am unwilling to experiment further, for I can see very little use for the font as a face for *composition* today.

Hadriano Title was Goudy's 33rd design, produced in 1918. He named it for the Roman Emperor Hadriano, and says it was based on his rubbings of inscribed marble dating to the first century.

It would be interesting to know how the University printing shop processed the type after it was cast, setting up each individual name in a chase for a single impression. How time-consuming that must have been! This process also reminds me of an early ATF associate, the late Barney Rabin, who developed a process of casting names in 30 point on the Linotype for the same purpose. But in his case, Barney also developed a process whereby he could automatically shoot a slug into a modified platen press, pull a single impression, and then automatically change the slug before the next impression. Imprinting names was a major problem to be solved back in the days of letterpress. Novel ways were found to do it, but all now have been displaced by the modern laser printer.

Setting the Back Knife on Linotype Machines

By PATRICK J. BURNS*

Editor's note: Our conversation went like this. I said my experience with Linotype was that slug height to paper changed depending on how warm the machine was while the slug was being cast, and thus, correction lines often ended up being noticeably higher in a slug-cast form. Patrick Burns indicated this was more a problem with an improperly adjusted machine, and has prepared these instructions to guide those who might be having this problem.

Before beginning any work on this type of equipment, remember metal is hot and knives are sharp. Use common sense in making adjustments, wear appropriate clothing and take all safety precautions. (Men wearing Bermuda shorts were sent home when I was an apprentice. Also, and alas, many of us have scars.) And, take your time. It took six weeks to build and finish each machine.

1. Left-hand and right-hand designations are always facing the front of the machine.

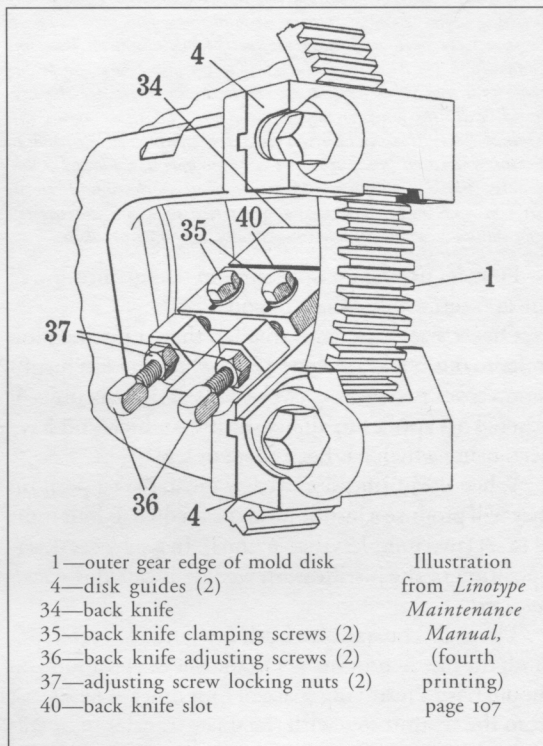
2. Turn off the motor and take out the plunger when working on the machine. The machine should be level and on a solid floor and at room temperature.

3. Check the tie rod. With the machine in normal position, loosen the 1/4-24 set screw and test for snugness with fingers only—to avoid introducing strains, don't use a wrench to tighten it. The head of the tie rod should bear *snug* against the cam shaft bracket. This rod takes up the pressure on the column, when the pot locks up. Tighten the set screw.

4. Using a red lead, smoke, or Prussian blue medium on the closed vise jaws, take an impression of the front lockup under power. It should be perfectly even. (Note: When the machines were built, the vises were squared before the pot was installed. In the field, making this adjustment can be very tedious. There are many things to consider. At this point, if the impression does not show fully, consider hiring a competently equipped Linotype service person.)

5. Make sure the mouthpiece holes are clear and properly sized and tapered (.062-.082), using a 6-0 taper reamer. This allows the pot to break away cleanly after the cast. Make sure the vents are clean.

6. Clean everything, including the disk, hub and plate. Now remove the old back knife. Check that the molds are clean on both sides. Check the molds for warpage with a straight edge. Confirm that the mold posts are tight and hold the cap in alignment with the base. Examine the liners, making sure they're level with the surfaces of the mold and free from burrs. Check for burrs or metal pancakes where the molds seat laterally and vertically on the disk, then position each mold properly, *i.e.* with the mold bearing against the right-hand side of the pocket, firm up the center mold body screws first. Then touch down the cap screws; release, then



- 1—outer gear edge of mold disk
- 4—disk guides (2)
- 34—back knife
- 35—back knife clamping screws (2)
- 36—back knife adjusting screws (2)
- 37—adjusting screw locking nuts (2)
- 40—back knife slot

Illustration
from *Linotype
Maintenance
Manual*,
(fourth
printing)
page 107

tighten the body screws, center ones always first. Tighten the cap screws, making sure the center one is only finger tight. Check for cracks in the disk rim under that screw.

7. Test that the mold disk is true. With the back knife and mold disk guides removed, check for play in the disk. If there is more than .002 play, replace the hub and plate. Install one guide with its bolt not quite tight and lightly tap the guide to bear against the front of the disk rim. Repeat with the other guide. The guides must be set close enough to remove a light coating of red lead without causing the disk to bind when rotated. Tighten up the guide bolts. If the disk is very warped, etc., it must be replaced. You can't build a good house out of rotten lumber.

8. When replacing a back knife, make sure the knife is clean, sharp and undamaged; and that its seating is clean. Sharpening instructions are found on page 105 of the *Linotype Maintenance Manual*. Proceed as follows:

- a). Position a mold in front of the knife.
- b). Place the knife in position with the two adjusting screws set so that the knife edge is just clear of the mold and as parallel as possible.
- c). Snug down the two knife holding bolts.

*Patrick Burns is one of the last-remaining factory-trained Linotype mechanics and he continues to travel the country servicing and rebuilding Linotype, Intertype and Ludlow machines. He may be reached at 30 West Seminary Street, Mercersburg, PA 17236.

A Monotype Keyboard Solution for Set Widths Over 12

EDITOR'S NOTE: I have known that the procedure for getting justifying spaces changes after the set width of a font exceeds 12 set. Thus, I have been unable to get justified composition from my Composition Caster in these larger sizes because I lack the proper keyboard buttons and other keyboard paraphernalia to change the keyboard "call" for a justifying space. Recently I came across this original letter from a Lanston field representative, William L. Weatherly, written Jan. 2, 1936, to a Mono operator, Floyd I. Olds, of Boise, Idaho. In my estimation, this is a "work-around" to my problem and though I have not yet tested it, I am sharing the information with others who might have the same problem.

First, let us take up the matter of the justification of the 12½ set, which is new to you.

On set sizes 12 set and smaller, the 1-1 justification (refer to our book, *Monotype System*) produces a justification space two units of twelve set less than six units of 12 set. This applies to all justification which you have been using which has been 12 set or less.

When the justification wedges are in the 1-1 position they will produce a justification space equal to four units of 12 set (two units less than 6 units). In twelve set this 1-1 position of the justification wedges is called the *scale constant*.

The scale constant for both 12¼ and 12½ set is 1-6. With the justification wedges in the one-six position you should have a justifying space of four units of 14 set cast from the six unit row with the space transfer in operation; with the type transfer in operation the same position *should give you a space six units of 14 set*.

PROCEDURE: Perforate ribbon on keyboard for six unit spaces; place on control tower of caster. Cast six unit spaces and get accurate size of six units of 14 set instead of usual quad size.

The size of this space is .0576. Now be sure that justification wedge (10D) is in the one position and that the justification wedge (11D) is in the six position. Cast some more of the six unit spaces of fourteen set and

while the pump is still running manually engage the Shifter-Lever-Arm-Rod 57D4 in the Centering-Pin Lever a16E. This will cause the Space-Transfer-Wedge a52D to come into action against the Normal Wedge and the space so cast should measure .0360" which is two units of 14 set less six units of 14 set. Adjust the screw in your Space-Transfer-Wedge until this size is obtained. Then cast quads (18 units) and get your regular quad size for 12½ set (.1729") and cast composition. When reverting back to 12 set composition, this adjustment will have to be made again for the regular 1-1 adjustment as described on page 167 of your *Casting Machine Adjustments*. Of course, if two six unit spaces and two scale constant spaces are measured, instead of one each, the decimal sizes herein will be exactly doubled and the result will be *doubled*.

It is the common practice that an additional space transfer wedge be purchased and adjusted as above and when changing from 12 set to 12½ set, it is only necessary to change the space transfer wedge, Xa52D. The price of this wedge is \$5.69. This is far more efficient method than making adjustment of this wedge each time you change.

Another Problem

And Regarding Small Characters 'Pulling' Out of Position on their Bodies when Cast . . . Let me suggest you first test your centering pin to see if it has not been slightly bent. Then test the centering pin bushing for play. Test both draw rods and adjust according to your adjustment book. Finding no difficulty, next check the double spring box adjustment as it is most important that the matrix jaws remain closed for exactly 90 degrees in accordance with adjustments in your book, *Casting Machine Adjustments*. Correcting the above will eliminate this difficulty.

Setting the Linotype Back Knife (from page 23)

d). Move the adjusting screws so that the knife is brought up parallel to the mold surface by using feeler gauges of progressively thinner sizes. At about .003, turn the mold disk gently by hand to check that the knife does not bind against the mold.

e). Put the plunger in, *et cetera*, and cast a 30-pica slug (using all caps) from each mold. (I put in the same size liners on all four molds, so I don't have to keep opening and closing the knife block.)

f). At this point, the height (measuring with a micrometer and holding the slug with the face towards you with the ribs uppermost) should be about .921.

g). The extreme ends of the slug are trimmed by the left hand side of the knife, while the middle of the slug passes toward the inner part or right hand side of the

knife. Adjust accordingly, slowly and carefully.

h). If there is variation between molds, shim up the lower ones to a common level.

9. After obtaining the proper measurement, drive the knife against its adjusting screws firmly with a piece of brass and a light tap with a hammer against the provided slot. Then tighten the lock bolts with their washers intact.

10. Check to assure all nuts and bolts are tight.

11. Resume operations! Knives usually stay sharp under continuous use for about a year. It is always a good idea to have a sharp spare on hand.

12. Keep the front and back mold wipers in good condition and proper position.

13. Lightly oil the hole in the mold disk hub plate every time you use the machine.

