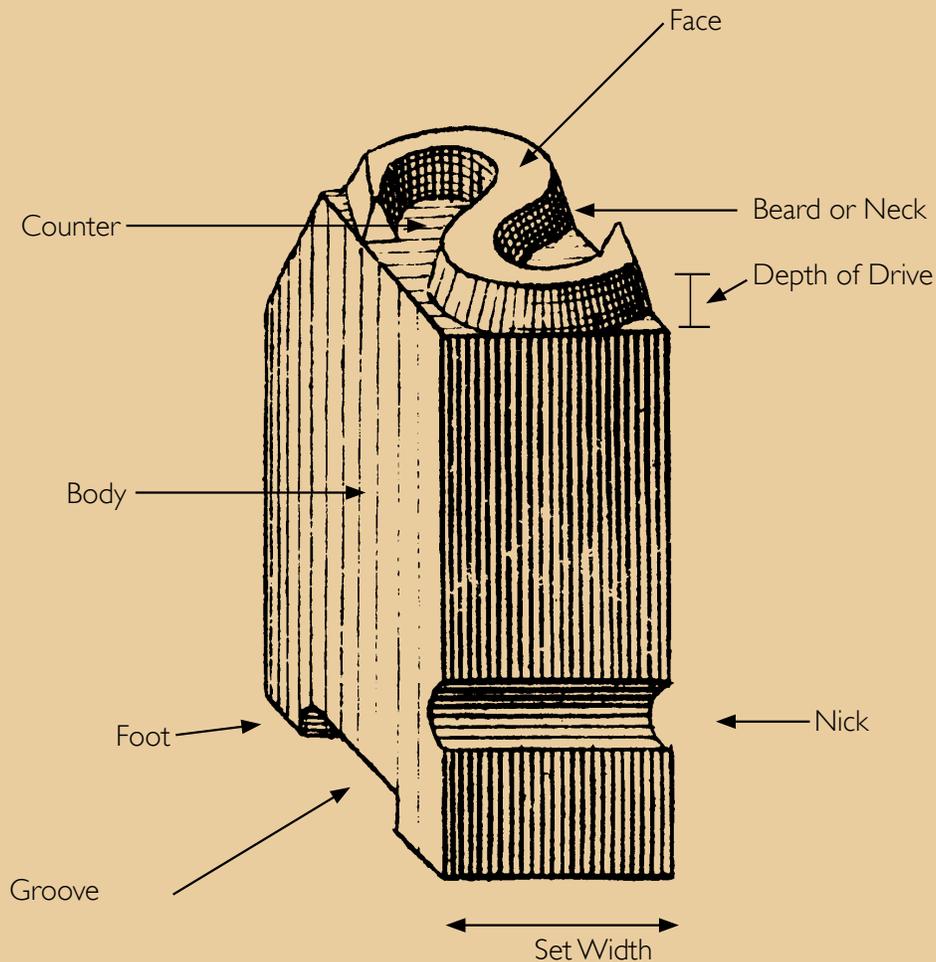


What is it?

Monotype, Foundry, or What?

*How to identify the type of type! **



MOVABLE TYPE ANATOMY

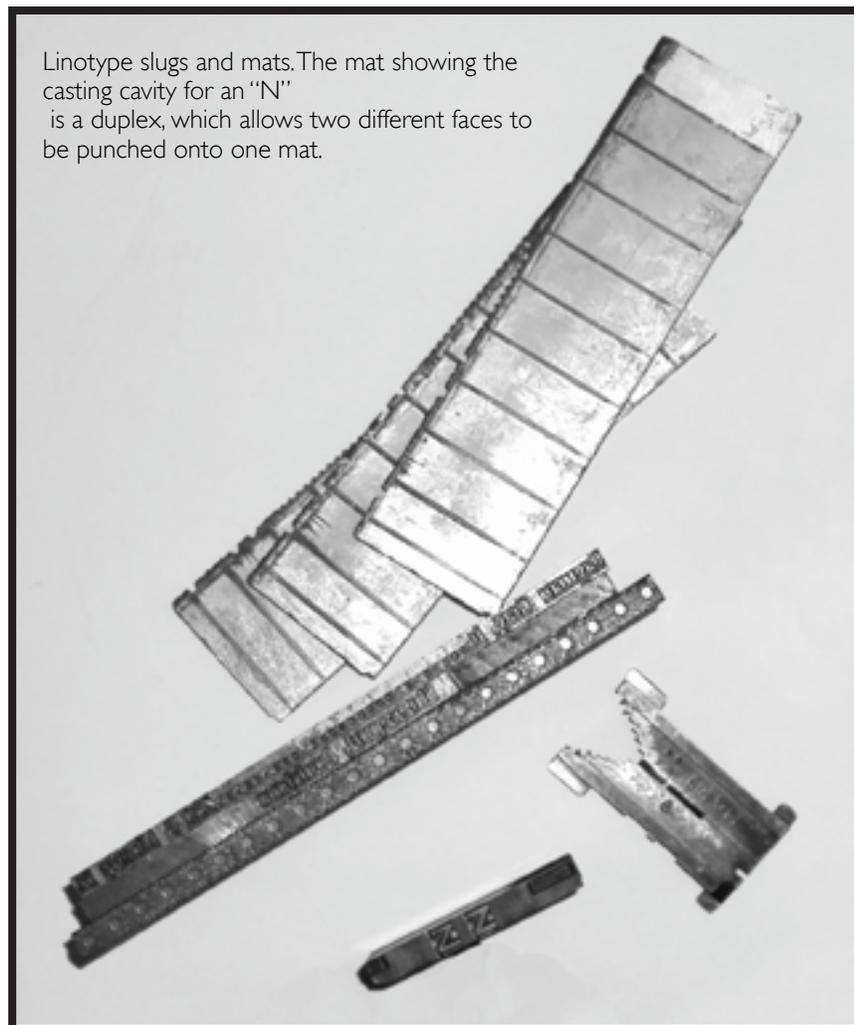
** Also a rogues gallery of type forms*

How to Identify a Piece of Type

We shall consider identifying the source of a given piece of type. The primary sources to distinguish are: Foundry Type, Linotype, Ludlow, and Monotype.

NOTE: this is a work in progress. If you have comments or suggestions, please send them to me.

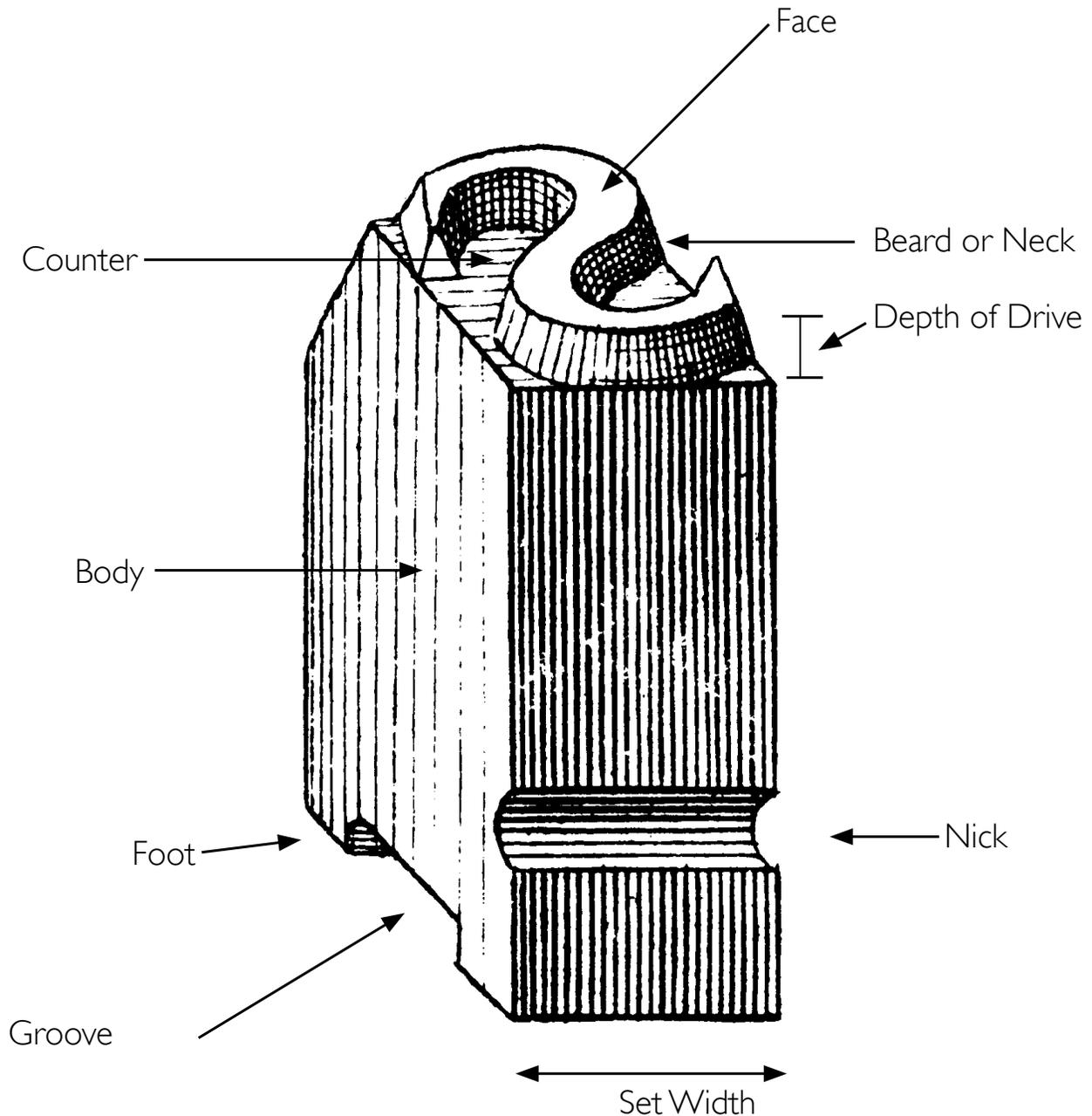
LINOTYPE AND LUDLOW are easy, as they are slugs and not hand-set type. They are the softest form of type, often made with the same metal as leads and slugs, metal furniture, solid base for copper cuts, or engraved or photoetched images.



And now, into the weeds:

For the Sake of Clarity

Let's refer to type anatomy in the same way, so see the following diagram:



MOVABLE TYPE ANATOMY

Quick Method

First, a quick decision tree for distinguishing Monotype from Foundry Type:

- 1) If the foot is flat (no groove) it is Monotype
- 2) If the foot is grooved, and there is a pin mark, it is Foundry Type

NOTE: If you use this method you will be correct some of the time, and otherwise you will be wrong. If you want to delve deeper, things get very complicated very quickly, so here goes:

An Aside: Brass & Zinc Type

FIRST, lets get rid of three kinds of type that should be relatively easy to dismiss. Brass type is made of brass, so easy to spot because of its yellow color. Zinc type usually has a nick or nicks on both the traditional nick side plus a nick on the opposite side, and often the type has a patina different from regular type. It often has a nick that does not go all the way across its side as well. Plus is it much harder, which can be tested with a hammer or whatever, and has a much higher melting point than Monotype or Foundry, making it useful for foil stamping. Steel type typically has no nicks, and will respond to a magnet.

Now onto the really weedy differences between Foundry Type and Monotype.

How to Identify Monotype

Part One, Monotype Composition Type

We shall now consider distinguishing Monotype composition type from Foundry Type. This section applies, in general, to type 4 point through 24 point. It also applies generally up to 36 point Monotype Display type. We will later consider up to 48 point and then to 72 point.

IN GENERAL, look at the foot of the type. If the foot is flat, with no groove, it is probably, but not always, Monotype.

If one can measure the depth of drive, Monotype composition came in two flavors, 0.030" drive and 0.050" drive, American (Lanston) Monotype and English Monotype, respectively. Foundry type generally had other drives. Regular composition Monotype ran from 4 point to 24 point. The rounded single nicks are usually in the same position, so if you have one known sample you can assume others resembling that are also Monotype. I don't believe there were Monotype moulds with more than one nick. Late model English Monotype moulds sometimes had a square nick.

DOGHOUSE & STEP TYPE

If there is a taper at the top of the shoulder(s) going the point wise dimension (not the width or "set wise" dimension) this type was done with a "Doghouse" mold, and was generally done for moulds 13 point to 16 point in order to be able to use "small comp" matrices (0.2 x 0.2" at the business end, as opposed to a full-bore mold (no taper) that required "Large Comp" matrices (0.2 x 0.4" and 0.4 x 0.4" matrices) when casting over 12 point. English Monotype also made a version called a "step mold", which used a right angled decrease in the bore of the mold near the matrix to reduce the mold's point size opening and allow the use of small comp matrices for 13-16 point.

Casting on a Doghouse mold also allowed leading to be built into the casting, so say a 12 point face could be cast on a 16 point body to allow solid setting of 12 on 16 (4 pts "leading").



The "large comp" matrix case is used to cast 14-24 point type. Due to larger matrices the roman and italic must run in separate cases. The caster must run slower in order to dissipate the heat generated by the larger volume of metal per cast.

Monotype Composition Matrices & Machines

THE MONOTYPE KEYBOARD AND

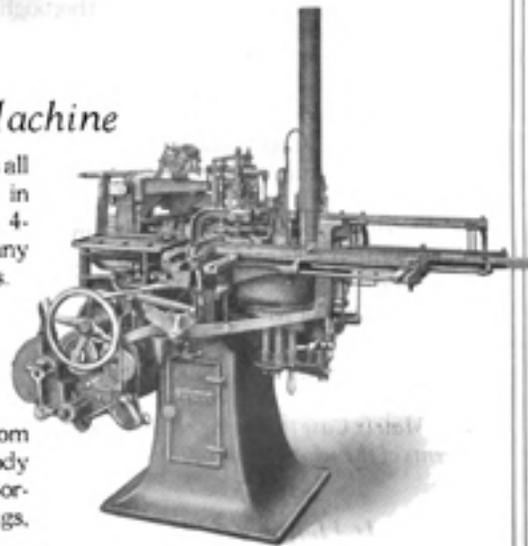


The Keyboard

which handles with equal facility all kinds of copy from the plainest to the most intricate, setting it in any measure up to 90 ems. The universal arrangement of the keys makes it easy to operate, and its speed is so great that no operator can possibly be fast enough to stall it.

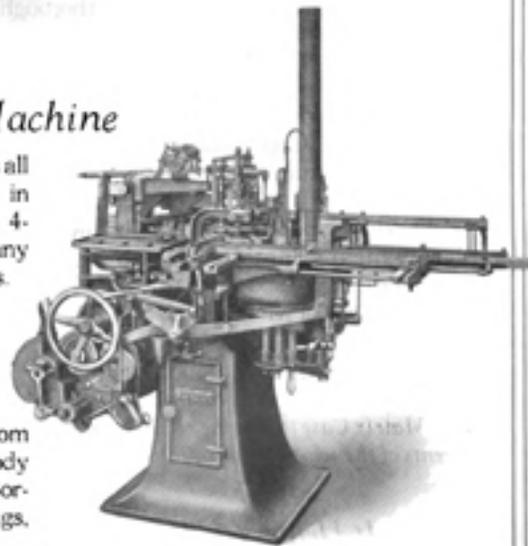
Composing Machine

This Machine produces all kinds of composition in any size of type from 4-point to 18-point in any measure up to 84 picas.



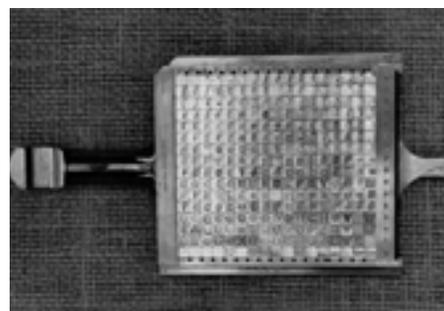
Type-&-Rule Caster

casts type in all sizes from 4-point to 36-point: Body Type, Display Type, Borders, Rules, Leads, Slugs, Spaces, and Quads.





The Monotype cellular composition matrix has a punched cavity at the top into which molten type metal is injected to form the printing surface of a piece of movable type. In the standard 15x15 matrix case 225 mats are arranged in 15 rows of 15 mats. Each row casts type with the same set width, thus in theory 15 set-sizes may be cast from one matrix case.



The typical matrix case includes five alphabets: roman caps, roman lower case, italic caps, italic lower case and small caps. Narrow characters occupy the top rows, wide characters the bottom rows. Sometimes not every character can be put into its appropriate row and must be cast separately or on a narrow body with a high space "underpin" to support the overhang. This is a 16x17 case.

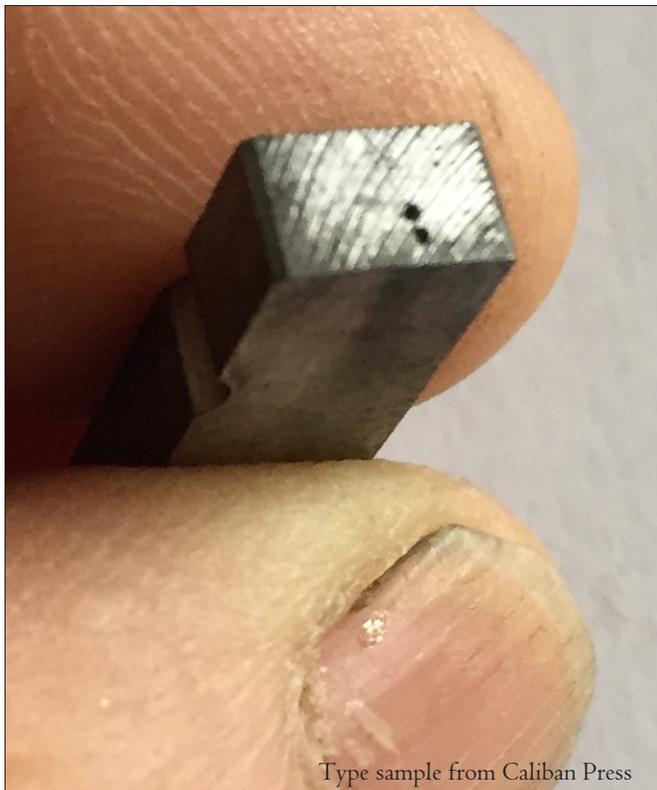
Complications and Exceptions

(**Caveat One:** a Thompson can cast from Linotype and Ludlow mats, so the depth of drive may be Linotype drive or Ludlow Drive. 0.047 and 0.168" respectively), and yet still indicate Monotype. Although in these cases there will be a foot groove, usually at the bottom of the foot vs. the center. Foundry type is always grooved in the center.

(**Caveat Two:** if the foot is flat but shows radial scoring, tiny parallel semicircular marks, from being milled down to 0.918" height, the type is surely foundry type, probably imported from Europe. A pin mark would tend to confirm this conclusion, as well as the identity of the face itself . . . for if the face was never made by Monotype but was a Bauer face, for instance, it is almost definitely Foundry type (however see Caveat Three). Also look for multiple nicks, as Monotype used a single nick. (Well, mostly.)

(**Caveat to Caveat Two:** multiple nicks could indicate a Thompson Monotype. More on this later.)

(**Caveat Three:** a Thompson can cast from Foundry matrices, and given the demise of the traditional foundries and the distribution of foundry mats into private hands, and widespread piracy of faces by electroforming, faces from Europe might reside on a Thompson (or even Monotype Display Caster) cast body. AND some people have access to milling devices (such as a Hacker or Vandercook type milling machine, or even a Benton matrix trimmer or a machine tool of any description) and they might mill high type cast from a foundry style matrix down to "English" height or 0.918". Some people use a Supersurfacar to mill type. Monotype display moulds ran to 36 point and produce a single nick, flat foot, 0.050" drive type up to 36 points in set. To make matters more complicated, some people ground down Monotype Display moulds to accommodate foundry matrices of deeper drive, although a special holder for the matrices was also required.)



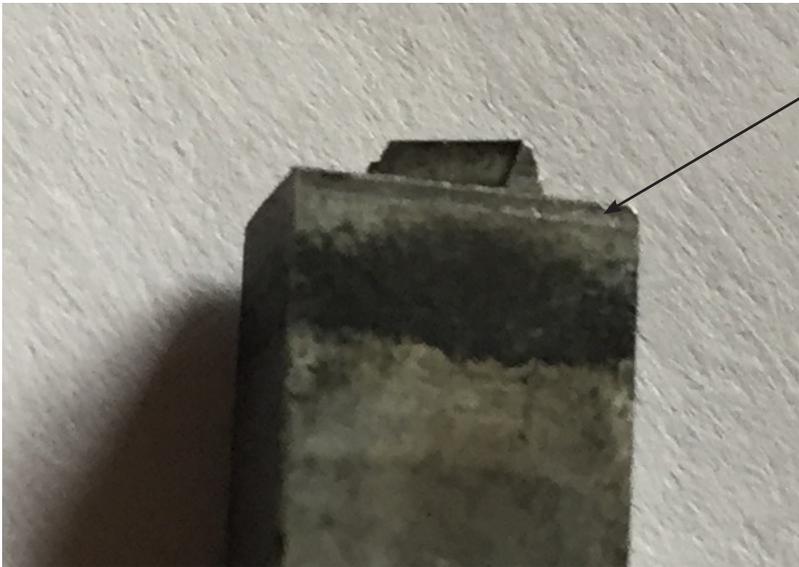
Milling marks on the bottom of a piece of foundry type

Type sample from Caliban Press

Thompson Monotype or Foundry Type

This whole distinction between Monotype and Foundry type is not straight-forward because the Thompson type caster (first made by Thompson, then by Monotype) straddles the line. A Thompson, using foundry metal, could be said to make “Foundry Type.” That said, a “true” foundry caster such as the Barth or Fouche, Kuco, etc., casts generally at much higher temperatures and pressures, and purists insist that the resulting two species of type are distinct.

In addition, although a side-trimming device was advertised for the Thompson (I have never seen one or know of anyone who has)—a true foundry caster can in most cases trim the shoulder on all four sides, while the Thompson can only do two sides, the top and bottom (parallel to the nick). In cases where it was impossible to trim all four sides in the Barth, say, the type was hand finished on the other two sides.

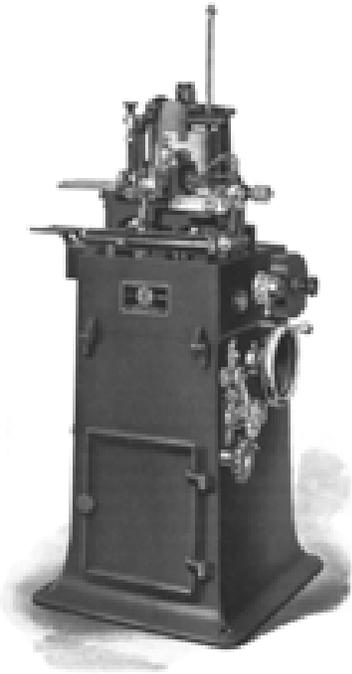


Side dressing, note the line indicating the edge of the trimming knife

Type sample from Caliban Press

For the purposes of this exercise, we shall consider Thompson cast type to be “Monotype” in all cases because in general regular Monotype metal is/was used. Bear in mind that back in the day Monotype metal came in many flavors, from “regular” to “re-run” metal, and varied in hardness and toughness. That said, all Monotype is in general harder than Linotype or Ludlow type, and softer than Foundry type. Note that the Thompson manual gives directions for using true foundry metal.

Thompson Caster



Typical "flat mat" for display casting. Since it is hand-loaded into the caster (Monotype Orphan Annie, Type & Rule Caster, Thompson, English Monotype Supercaster or Lanston Giant Caster, only sorts casting is possible. When making up fonts each matrix is loaded and the appropriate number of casts performed, then the next matrix &etc. until enough type is made to hand-assemble into fonts. The comp caster can make fonts in a single run.

How to identify Thompson Type

I) THE SHORT ANSWER: check the groove on the bottom of the type. If the groove is closer to the bottom edge of the foot, and not down the center of the type's foot going set-wise, then it is Thompson type. Foundry type has a groove down the center. Thompson moulds were generally "Foot Jet" moulds, using one cast rounded nick and injecting the metal into the type cavity using a jet or tang located near the bottom of the mold, and this location was used for casting 6 point to 48 point. This set up made it easy to change point sizes, as the jet stayed at a fixed elevation. The flat mat matrix, above, was held upside down in the holder so the type is cast nick-up.

THAT SAID ...

Thompson also made "Center Jet" molds, which were adjustable so that the jet could be moved up and down to produce a centered injection site in all its type sizes. These molds were rather rare, but they exist. This mold was harder & more time consuming to set up and change sizes because the pot had to be moved up and down, and special jet pieces were required.

AND YES, THERE'S MORE RABBITS

The Thompson "receiving shoe", which strips the type coming out of the mold from the body piece and jet piece, and prevents the type from being pulled back into the mold, allowed for up to two cutting pins to create additional nicks. As the type was pushed through the receiving shoe by more pieces of type coming out of the mold, it was first plowed (ie the groove was cut with a hardened steel blade) and then on its path out of the shoe the type ran under the two nick-cutting pins, assuming they were installed.

CONFUSING

So, in general a low foot-groove means Thompson cast.

A pin mark means Foundry.

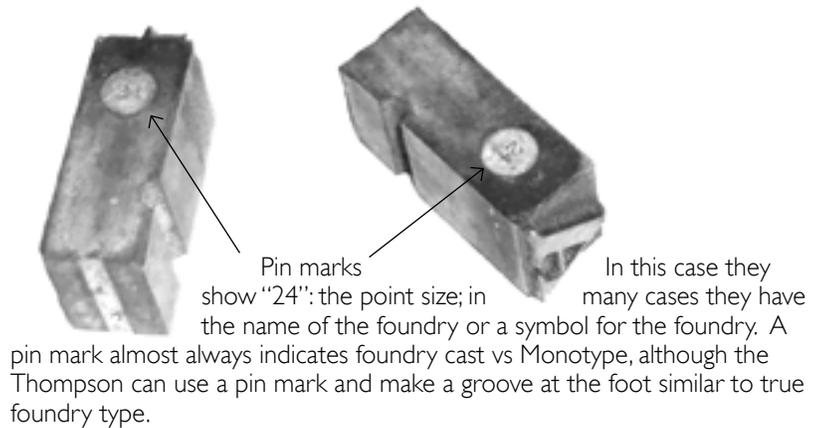
A center groove means Foundry.

More than one nick indicates foundry,

four plus nicks is dispositive.

Foundry metal is harder

(unless the Thompson used true foundry metal.)



BUT

I have installed a pin mark on my 24 pt Thompson body piece, so a pin mark showing an overlapped S and P means Thompson cast at Swamp Press. Others may have installed pin marks also.

Thompson center jet cast type exists. I have a center jet mold and use it for casting 36 through 48 point.

Thompsons could cut two additional nicks, for a total of up to three.

SO BEST RULE OF THUMB:

Center foot groove is usually Foundry, but more than three nicks corroborates Foundry designation.

A pin mark most likely means Foundry.

Four sides of shoulders dressed, means definitely Foundry.

A drive of 0.050, one nick, grooved foot, usually indicates Thompson (with Caveats for other drives), & shoulders are only finished on two sides, at top and bottom (holding type nick up, face in front).

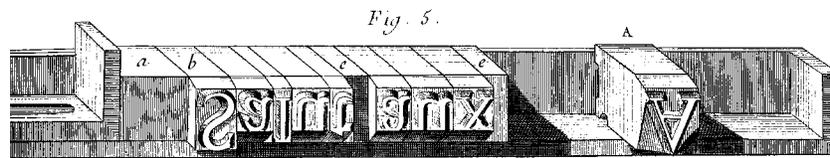
HOW TO LOOK & WHAT TO LOOK FOR

Find two pieces of flat-bottomed (no groove), non-milled, single nicked type with a Lanston face. Choose one of 12 pt and one of 30 to 36 point. These are most surely Monotype, the first “composition” and the second “display.” The composition is usually 0.030” drive, the display 0.050” drive. Use these two as models. You will notice the display type has a larger diameter nick.

Find a center-grooved piece of type with nicely finished shoulders (all four sides), a pin mark and more than 3 nicks. This will be your model for Foundry type.

FINE POINTS

Thompson cast type will generally exhibit a finish more crude than foundry type. This applies to the groove, which unless the cutter is sharp and the receiving shoe perfectly set up, will show a slight burr when the type is new, especially on the trailing edge (nick up, face towards you, on the right).



Sometimes the cast nick will be slightly mangled by its movement through the shoe if everything is not aligned properly or if there is “flash” (fan-shaped metal flaring at the shoulder borders, which indicates worn matrices or a worn mold or both, or too much casting pressure etc.), or if a type with an overhang is cast next to one with no place for the overhang to go, resulting in a collision and the two pieces together being wider at the face end than at the foot end, and thus working their way through the receiving shoe at an angle rather than perfectly at right angles next to each other, allowing them to “nest.”

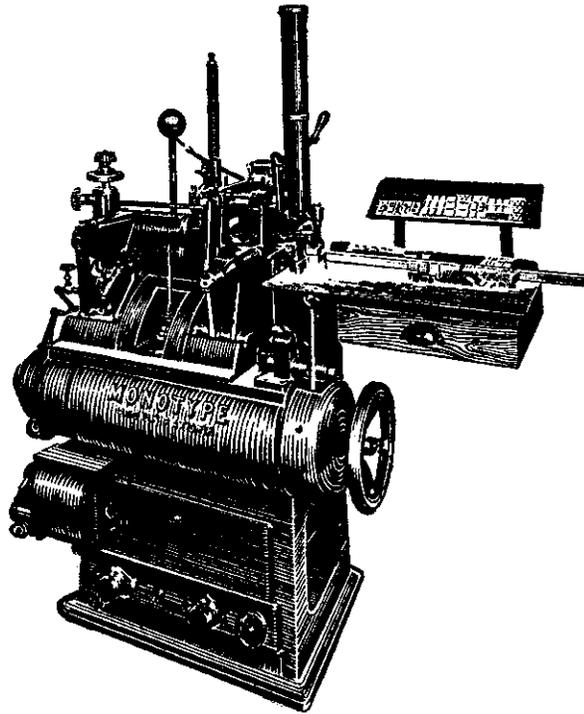
Look at the shoulders, if there are trimming marks only on the upper and lower shoulders of the type, looking at the face, going set-wise, this is an indication of Thompson casting. Also there may be the burr on the trailing edges of the nick (on the right, looking at the face & nick up). If there is “flash” on any edge of the shoulder, then it is Thompson type poorly dressed.

Looking at the long sides of the type, (showing the nick) look for an image of a plume rising from the nick going upwards towards the face. It will look like an elongated flame, with a narrow base that widens as it moves up the side of the type. Generally, foundry type shows the whole side of the type with a uniform matte finish and the plume lightly delineated. If Thompson type is cast well, it will show this also, but often the plume will be weaker and the areas outside the plume will have a pitted, bubbled or otherwise “frosty” appearance which indicates a less than perfect technique. In many instances Monotype was good enough for commercial work, but didn’t need to be beautiful but rather was utilitarian. The side opposite, the right side, will more often show the “frosty” appearance as the nozzle is positioned to the left (facing the caster) and its strongest pulse of metal is to the left against the mold blade. The mold blade tended to heat up more quickly because the cooling is done in the body of the mold. Bubbles or pits indicate casting at too great a speed and/or temperature, and is not usually a feature of Foundry type as it was made at higher temperatures and pressures and in longer runs which allowed time for the adjustments to be better perfected.

NICKS

Thompson type nicks may show burring, see above. The bottom-most nick is cast and the other two are cut after the type is made and will often differ in appearance from the main nick, and may not be as deep or wide, and may show burrs, depending on how the nicking tools were set up in the receiving shoe.

Giant Type



Giant Caster



Giant Caster Matrix



Giant type. Note the two hollows inside the type body. Giant type has a depth of drive of 0.065" in most cases, deeper than Lanston composition Monotype (0.030"), or English composition (0.050") or Thompson / Lanston / English Display to 36 point: 0.050". The "depth of drive" is the business end of the character that rises up from the body, and includes the face and beard.

DISPLAY TYPE

The Monotype Type and Rule Caster could cast not only composition, but “Display” type. Display type was cast, one character at time, until the matrix was changed and a new character could be cast, resulting in type for hand setting. Typical Display moulds ran from 12 point to 36 pt. The flat, non-milled foot plus single nick, no pinmark and 0.050” drive makes this type easy to spot.

MONOTYPE VARIANTS: CORED TYPE

For Display type, Lanston Monotype also had the Giant Caster in addition to the Thompson. Giant type was cast with a flat foot, no groove, and left a mark setwise on the foot of the type resembling a narrow rectangle running from the mid portion of the foot to the edge that abutted the solid sidewall opposite the cored sidewall. Supercaster type (English Monotype) is distinctive for its hourglass shaped outer cores. The foot of Supercaster type is flat, no groove.

CAVEAT ONE: Giant type in its raw state has a flat foot but a recent ATF meeting at M&H revealed a machine for adding a groove and a nick! This device had two shell mill cutters, one cutting the groove to eliminate the subtle ridges of the metal injection site on the foot, as well as adding a nick— cut along the appropriate side. This last is an interesting feature, for many Giant moulds had no provision for a nick and so one has to really mind one’s p’s and q’s, relying instead on knowing which side had the open cores to orient the type.

Supercaster
display type



photo curtesy of Michael Vickey,
of Nickeplate Press

CORED GIANT OR IS IT FOUNDRY TYPE?

Generally, Giant type had two internal cores, rectilinear at the foot and trapezoidal at the top near the face. See the illustration preceding. Round cores indicate Foundry Type. Smaller sizes, up to 36 point had a single core, again with a square bottom and a trapezoidal top.

To make matters confusing, some late model moulds actually had a cast nick, and even some solid blades so that solid type could be cast. Unless the founder had one of the M&H style machines, the footprint of Giant type is dispositive, whether cored or solid.

Since all Giant mats were 0.065" drive, and the shoulders were not finished, even solid Giant type should be easy to spot, grooved or raw, as Foundry type of larger sizes almost invariably used a deeper drive. Also, milling often leaves a scalloped finish, so that would also differentiate the milled groove from the plowed groove.

CAVEAT: Giants were flexible, and could cast Giant mats, 42 to 72 point, Monotype flat mats, which ranged to 48 point, at 0.050" drive, English Display Mats (both 0.050" drive and 0.065" drive) and Ludlow mats could also be cast in some cases with the proper holder etc. I have heard that some moulds were machined to accept foundry style matrices, but have never seen one, so it is possible Giant type with a deeper drive may exist.

In Conclusion

Differentiating the many forms of type is both simple, if one wants to go by what is probable, and a dive down the rabbit hole if one wants to be absolutely certain.

In General

Flat-footed type (no groove) is Monotype.

(Unless milling marks on the foot are present.)

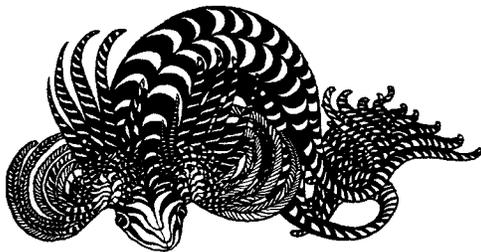
Off-center grooved type (foot jet style) is Monotype.

Center-Grooved type with multiple nicks is considered Foundry, especially if it has a pinmark, unless its shoulders are only dressed top and bottom and three or fewer nicks.

Flat foot cored type is Monotype, whether having a rectilinear bottom & angled top (Giant) or two semicircular cutouts yielding an “hourglass” shape (Supercaster).

Grooved & cored type with round or rectangular cores is Foundry.

Wacko type, such as “bridge type” is Foundry.



Ed Rayher
Swamp Press, 9-I9

contact: ed@swamppress.com with any questions or ideas for improving this article.

Some interesting types of type . . . *A Rogues Gallery*

Thanks to Billy Goat Press for a plethora of type samples:



Foundry hollow core



Foundry Bridge Type



Kingsley zinc type note 3 nicks



Pivotal cast spacing, with odd dome



Keystone



More spacing



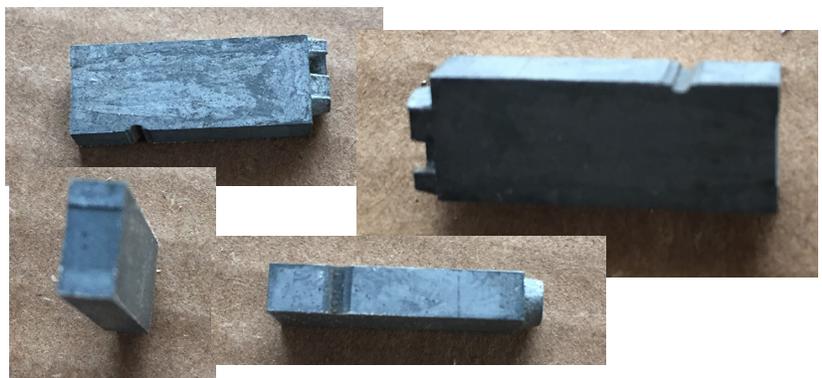
pivotal cast spacing



Pivotal top & bottom, showing some sort of adjustable mold



Slant body (foundry)



Zinc type with flared nick a huge groove



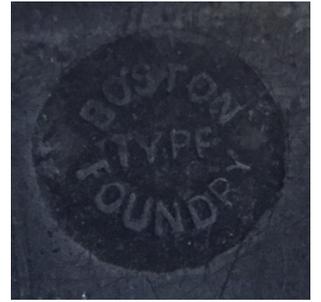
spacing with logos



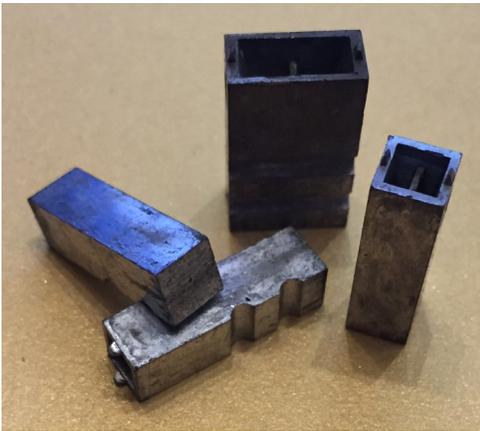
Kerning for scripts



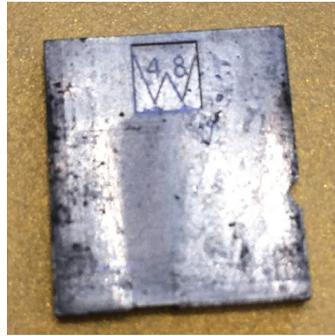
Boston Type Foundry special quad



BTF Pinmark special quad



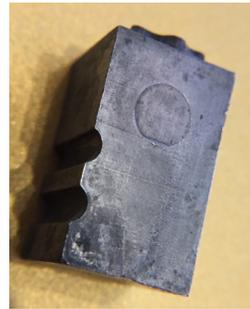
Strange ears on top edges, spacing, blank pinmark



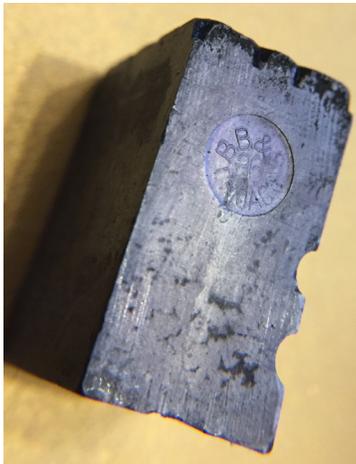
Western Type Pinmark ?



milled foot



Blank Pinmark



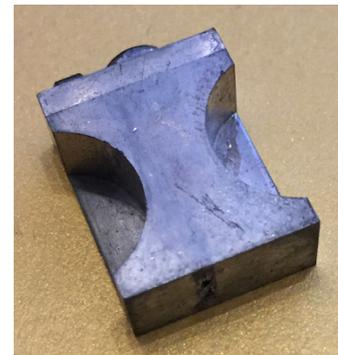
BB&S Chicago



Doghouse Spacing



Classic Bridge



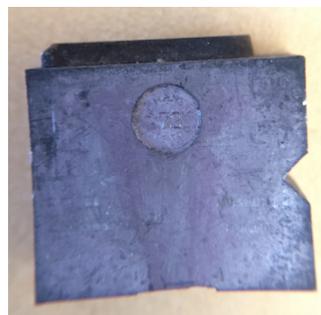
Supercaster



Pinmark: "48 A" (which is upside down !)



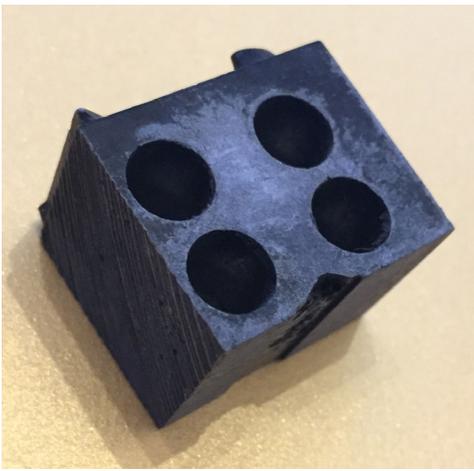
Pinmark "48"



Triangular nick, plume & "HANS" pinmark



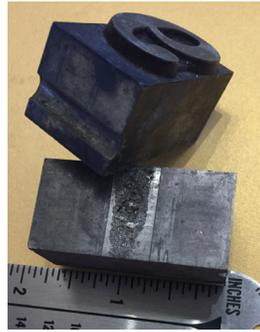
Mackellar Smiths & Jordan "PHIL" (Philadelphia)



cored foundry, sawn on one side



Monotype Giant with nick



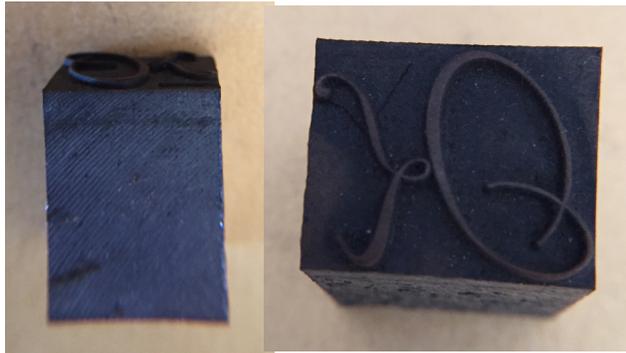
Large (foundry) type



yes, even foundry type can be porous



Ludlow logo



Copper character on top of sawn lead base



Cored Foundry Type



Note pinmark inside cut out



cast with kern cut away



Pinmark "36A"



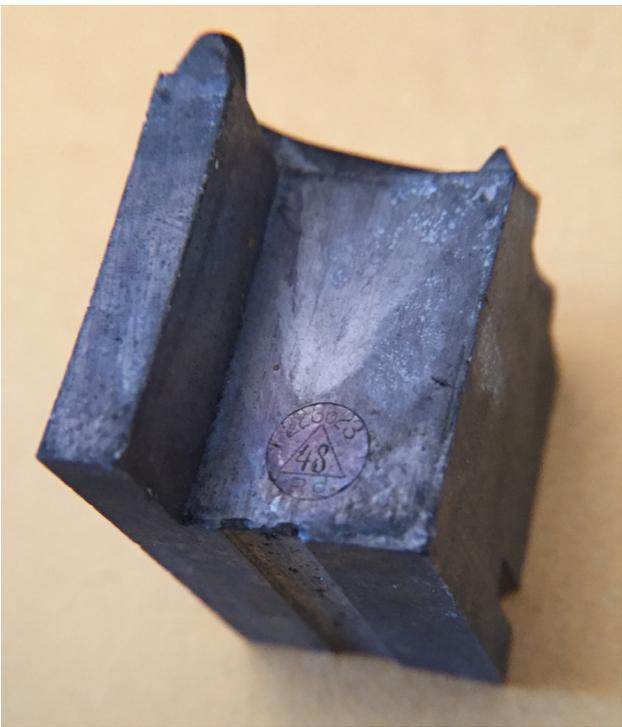
Photoengraving directly on lead body



Pinmark: MS&J



Plume



“Rd” pin, cast cut-out



Pinmark “M&L” nice plume, odd recessed plow & odd angled nick

Pivotal cast (see nick), nice plume, cut away casting, “Rd” with some sort of numbering

Monotype Metals

Class of Work	TIN	ANTIMONY	LEAD	Brinell Hardness
Composition	6	15	79	23
dual (composition & type case) *	10	16	74	27
overhang (italics)	10	10	80	22
timetable	13	17	70	29.5
display type	12	24	64	33

* the most common form used by Monotype foundries

Foundry Metals

Class of Work	TIN	ANTIMONY	LEAD	Brinell Hardness	Copper
ATF #1 “regular”	12	25	62	35	1
ATF #2 “italic”	14	21	64	33	1
ATF #3				42	
ATF #4 “hard”	20	28	50		2
ATF #5 “soft”	44	2	54		0