LESSON FIFTEEN

A Little History

Type design is a subject which in detail is beyond the scope of a strictly utilitarian course on printing, but you need to learn enough about it to select type intelligently for varying kinds of work, and know the reason for picking one face instead of another.

Previous to the use of printing, when books were hand lettered, styles were limited to those which were possible with pen or brush. The first printing-type designs followed closely on the hand lettered (calligraphic) models, and some time elapsed before any effort was made to break away or take advantage of the new art by creating letter designs which could not be easily fashioned by hand. The best of the early type founders refined the hand designed characters to some extent, but went no further.

Claude Garamond, the famous French type founder of the sixteenth century, was the first to cut loose from the limitations of hand lettering and realize the possibilities which punch cut and cast characters offered. Nevertheless, type designs in each country for many years reflected the calligraphy prevalent when printing first was introduced, and as the lack of easy communication in those days had caused hand lettering to follow individualized lines in each country, there was quite a little type style variation in the different printing centers of Europe.

English type designs up to the eighteenth century was uniformly poor, and most of the type used in America at the time came from England. William Caslon was largely responsible when a change occurred for the better. He drew on Dutch models, but added enough himself to make the credit almost exclusively his. Caslon's type we still have with us, and the 200 or more years which have gone by since its introduction have not affected its popularity in the slightest among those who know good type.

Caslon's characters followed the oldstyle tradition, that is, the lower case has a sloping top, and the tails on lower case letters turn downward.

So-called modern roman can be distinguished from oldstyle roman because the tails of the letters are straight. Other differences can be seen by comparing the two in the lines herewith. The modern and

AEOTefhmy

Goudy (old style)

AEOTefhmy

Century Roman (modern)

oldstyle definitions have no significance in estimating the age of a designer, however, because Bodoni and Didot both were active in the late 1700's, and while they were the originators of the characteristics which identify modern roman, the faces which have since been made by type founders have carried on both traditions. Goudy is an oldstyle face, and is in fact called Goudy Oldstyle, but its actual designing and first sale came in the twentieth century.

If you are interested in printing and type history, you will find several books on these subjects in most libraries. They are of help as a background for any printer. Among the good ones, and by no means heavy reading, is "The Golden Book" by Douglas McMurtrie. However, any volume of printing history which you can pick up will not waste your time.

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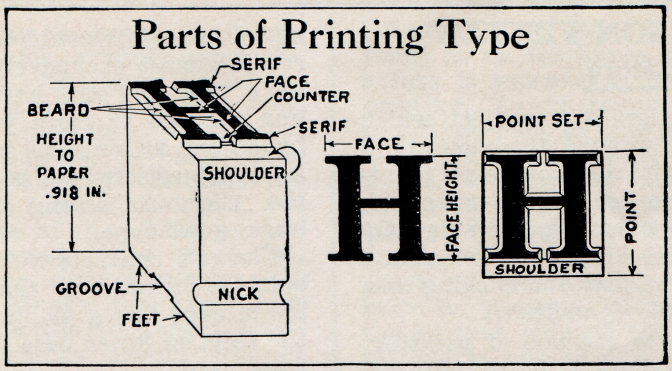
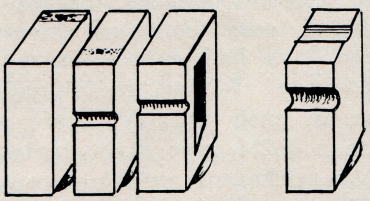


How To Know One Type From Another

It's customary in most educational matter on printing to confront the learner with a specimen picture of a large piece of type, the type founder's name for all its features being shown. We bow to tradition by doing the same. However, not all the terms shown are of importance to the printer. He needs to know what a serif is. These little finishing touches which appear on all faces except script or sans-serif (American name, Gothic) faces are fairly evident in the picture. The nick is important, because by it he tells whether the character is right side up or upside down in his fingers. Pin marks are becoming the exception rather than the rule as type founders cast their type on high speed machines whose moulds have no pin marks in them. It's a good idea to know what the shoulder is, because the size of the shoulder determines the way the type "lines", that is, whether it will line with other faces or not. Type line is covered in another section.

One of the distinguishing characteristics of actual foundry type is the cleanly trimmed-out groove in the bottom, which give the type two well defined feet, and makes it less likely to fall over and pi. Most composition-machine type lacks this advantage. Foundry type is made by squeezing metal into a mould which has an opening right where the groove in the type is. The jet, or "gate" as an ironfounder would call it, which is the surplus metal at the point where the groove is placed, is broken off and the bottom of the type trimmed. Being in the center, the type founder's machine is able to give more equal pressure throughout the mould than on composition machines, whose intake is usually a little to one side. Foundry type is, therefore, more solid, and the trimming operation in the center makes better feet at each end and more stable type.

The characters in the picture are all upside down, to show the foot, or base, and the right hand one standing by itself is a piece of foundry type. The others are various kinds of composition material, including Monotype.



The alloy used in true foundry type is harder than composition machines are built to take, so between better pressure and harder metal foundry type has good reason for being longer lasting.

Foundry type can be made harder, not only because of the metal alloy itself, but because it

is made on machines built for higher pressures and temperatures than are possible on composition equipment. To produce a tightly compressed, fine grain metal, casting must be at high temperatures under high pressure in a water cooled mold. The same metal used in ordinary composing casters will not make as hard or durable type. Each has its place, however, and no reflections should be cast on the different kinds if they are accurately made and used correctly.

How to Learn to Be a Fast Typesetter

The following rules, if faithfully observed and practiced will in an astonishingly short time make a rapid and accurate compositor of you:

1. First you must thoroughly learn the location of the letters and other characters in the case. This can be done by marking each box with a lead pencil, using the diagrams (page 2 Lesson 3), each of which is known as the "standard lay" for that kind of a case. A good way to practice learning the case is to take a sheet of printed or written paper and stand in front of the case. Now look at the first line of the printing or reading (called "copy") and keep it in your head. Now try and imagine that you are setting the type but instead of holding the stick in your hand and actually picking up the type, just point your finger at the box. Practice this and you will learn to find the location of any character in half the time required by the usual method.

2. After you have gotten so that you can instantly point out any character in the case without hesitating, it is time to practice speed and accuracy in actually setting the type.

When you pick the letter up, do so with a swift, stabbing motion, getting a firm hold on it. Do not reach down and gingerly take hold of it as if you were afraid it was hot and going to burn you. Grab hold of it, using plenty of "push" to get a firm grip on it.

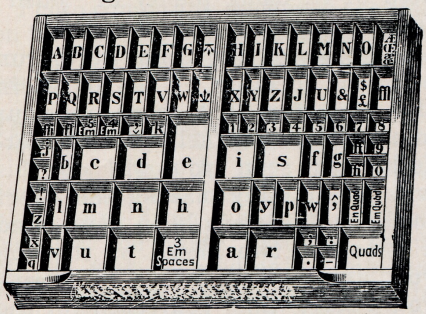
Before you set each word, run over the location of the boxes in the case for that word in your mind. This will help you wonderfully and soon you will do this without actually making the effort to do so. Always keep your mind a letter or two ahead of the one you are setting. This will give you a start when you reach for the next letter.

When you look at the letter you are going to pick up, note the position in which it is lying. Pick it up, but do not twist the hand as you try to put it in the stick with the nick uppermost — instead, roll the type between the fingers and it will take its place with much less effort and very much quicker.

When you pick the letter up, place it in the stick by "feel" — that is do not look at the stick but instead, after you have picked it up, rolled it into the proper position with the fingers, glance ahead to the box containing the next letter you want to set. You can soon learn to place the letter in the stick without looking at it. It is like putting your hand in your hip pocket. You do not have to look at the pocket in order to do so.

Summing up, the thing to do is to pick the letter up with a firm, rapid motion, after first noting how it lies in the case, so that you will know whether to roll it to the right or left in the fingers, and set it in the stick without looking at it from the instant you reach for it. The secret of the whole thing is to be able to instantly glance ahead to the next box after you start your fingers down toward the letter you have selected. As you pick up the letter and put it in the stick without looking at it, you are

selecting the letter you will pick up from the next box and as your hand comes back from the stick, you start it down toward that letter and glance ahead to the next



Standard lay for California ⅔ Case

one. The hand is always one letter behind the eye. In starting to practice these rules, it is advisable to take your time, don't "crowd" yourself in an effort to be speedy. If you thoroughly learn the fundamental rules and are complete master of them, you will acquire the speed in a very short time. Remember — accuracy is much more desirable than speed in composition, for it often takes many minutes to correct a mistake that takes only a few seconds to make. Be careful, work **just below** your fastest speed and make up your mind to master each and every one of the above suggestions until you know them backward, forward and through the middle. If you do, you can't help but make a good compositor.

3. In putting the type back in the cases, which is called "distribution" or in printer's slang, "throwing in", you will at first find it easier and more accurate to take a word at a time between the fingers of the right hand, with the fingers pretty well toward the bottom of the type and after rubbing the fingers over the type to loosen it well, run over those letters in that word in your mind and locate them in the boxes where they belong — then distribute the word. You will find that your hand will follow right along over the trail that your mind has followed a few seconds before and will not falter or hesitate. Of course, it is not necessary to do this after you have had more experience as you will do it without thinking about it, but in the beginning it is a big help.

Type Alignment

In order to make it easier to use more than one face of type in the same line where necessary or desirable, all standard foundry type is cast on "standard lines"—or Point Line, as it is sometimes called. This means that type cast on the same line will line up at the bottom, although not necessarily at the top, because part of the variation and diversity in appearance of type faces is caused by their differences in size. That does not make so much difference in setting—it is just the lining up at the bottom which is desirable if two styles are to be mixed in a line.

TITLE Common *Art Line*

Illustration shows three of the four standard lines. All specimens above are on 12 point body.

There are four standard lines being used at present by type founders. There is Common Line, Title Line, Art Line, and Ultra Line. Common Line, as is indicated by its name, is most used. Title Line, as its name implies, is used for such faces as Copperplate Gothic and those faces having no lower case letters. Art Line, which used to be called Script Line, is carried on Kelsey Script and similar faces having longer than ordinary ascenders and descenders. Finally, there is Ultra Line, which we are not using, but which is necessary on some founder's type having extraordinarily long ascenders and descenders.

Title Line is lowest on the body, Common Line comes next, then Art Line and finally Ultra Line which is way up. The system is called Point Line because all sizes can be justified so that the bottom of the letters will align by the use of one point leads. Also, different sizes of Common Line, such as, for instance, 8 and 12 point, will align by using one point leads.

Type cast on other than standard foundry machines is very seldom on Standard Line, with the result that it is harder to align. Very old type, made before the Standard system was adopted, has, also, large variations. One of the advantages of buying standard foundry type is its uniformity of line, with consequent interchangeability.

Putting Type and Other Material in Mortised or Cut Out Electros

We have been asked about inserting type in mortised cuts. Of course, when an electro has a cut-out space in it, tightening up the impression screws, or quoins, if you use them in your chase, does not have any effect on the inserted matter, because it is entirely surrounded by electro, and there will be no squeeze on it unless you put entirely too much pressure on the form. The "locking up" of the inserted material, as it might be termed, must be accomplished beforehand. One point leads, cardboard and paper are all handy for this, as well as brass and copper thin spaces. Put the material in the mortise, and then estimate about how much spacing material you will need to fill it. Cut the pieces, and then lift the cut up from your flat surface (chase-back if you are using that for an imposing surface) just far enough so that you can test the type and spacing material all over with your finger for loose pieces. After you have found out the points which still need wedging, cut up paper, cardboard, one point leads, brass or copper spaces of the estimated amount necessary, and, first removing one of the bigger pieces so that your small stuff will not buckle or bend up when you insert it, fill in the right place, then put back the material you took out. You may find that several tries are necessary to get everything tight, but it will be a whole lot easier to do the job beforehand than to have the type "work up" while you are printing, perhaps to break off or to damage your rollers.

Make a good tight job, and you will have no more trouble with a mortised cut than any other electro.

We might add that both bodkin and tweezers are invaluable helps in working around small space like mortises or cut-out electros.

Various Kinds of Composition-Type, Linotype, Monotype, Etc.

Linotype is cast on solid slugs of metal the same length as the lines of the work itself. A keyboard is used for setting the lines. The Linotype was the original practical composition machine. The Intertype is a trade name for another similar machine.

The Monotype uses a keyboard to make perforations in a ribbon. The ribbon is then fed through a casting machine which translates the ribbon and casts the line, but each letter is an individual piece, as with foundry type.

Both Linotype and Monotype styles of machines are limited to the smaller or body faces for regular run of the machine, but most makers also provide so-called giant casters for supplying the bigger sizes. In addition there is the Ludlow, which provides big type through means of setting matrices in a stick, which are then

transferred to the caster, and the line cast. These machines all help to speed up production where the quantity of work in the various categories makes them worth while.

Photo composing machines are also on the market, but are not adaptable to the job printing business as now made.

The Various Kinds of Rule

Years ago the art of using fancy rule and scrolls reached a high point from which it declined because the taste used on much of it was exceedingly dubious. Rule, however, has a very definite place in printing, and not just in ruled forms, either. Its use to underline a word, group of words or title line is often helpful in giving emphasis, or in making the line or words stand out. Such underlining is particularly needed in selling copy. The prevalence of display lines in such printing otherwise has a tendency to bog down the message, one line neutralizing the other.

As in type, there are several grades of rule. First comes brass rule, which is the longest wearing. It is made in a wide variety of styles. Next is metal rule which is available at a much lower price. Metal rule is liked by printers who maintain the non-distribution system —that is, never use material over, but throw it into the melting pot. It is made of metal suitable for mixing with machine composition material. As with type machine composition, there is a wide variation in quality, depending on the operator and the condition of the machine.

Lesson 15—Questions

1. *Describe the differences between foundry type and machine composition type.*
2. *What is meant by, 1.) Title Line, 2.) Common Line, 3.) Art Line?*
3. *What is meant by Point Line?*
4. *What is a Linotype?*
5. *Name some of the differences between modern roman and old style type faces.*

The Printer's DICTIONARY

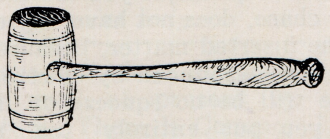
M

Machine Finish — A finish on paper produced by the calender rolls of the paper making machine. Popularly known as "m.f." Not so smooth as super-calendared paper, but smoother than antique or egg-shell.

Makeready—Literally, the making ready of the form for printing by the building up of those parts of the job which appear low in the first impression, and cutting down those parts which are nigh.

Make-up — Getting the form ready as far as is practicable before laying it out to put in the chase; spacing it out, grouping it, etc. Make-up comes after composition (setting up the type) and before imposition (doing the final work and locking it in the chase).

Make-up Rule—Sometimes called a "humpback rule" because it has a hump in the back which can be readily grasped when it is desired to push the type along. It is used by newspaper men in making up pages.



One type of Printer's Mallet

Mallet – A species of wooden hammer, used by printers for taking proofs, planing down forms, etc.

Masthead—In a newspaper, the name and matter appearing beside and around it on the first page, in any other publication that part most nearly corresponding to the newspaper's masthead.

Matrix—The mold from which, in the case of type founding, the letter is cast. In stereotyping, the matrix is made of a special wood pulp or paper maché, which has been impressed with the type form, and in which the metal cast is made, which is used for actual printing.

Matter—Type, etc., which is set up. It falls into one of three classes; live matter, (ready to print); standing matter, (waiting further orders); or dead matter, which is ready to put back into the type case.

Measure — The width of the lines being set; the column width.

Minute Mark—The mark (′) to denote minutes or feet. Two marks (″) denote seconds or inches, as the case may be. The same mark is used as an accent mark when put over the top of a letter, as in "café".

Misprint—A printed mistake in spelling, letter upside down, etc. Any kind of typographical error. Some people call poor jobs of printing misprints.

Missal Letters — Initial letters made after the fashion of those used in the old missal books.

These are mitered corners

Miter—Pieces of rule beveled at the ends, so that when joined together, they form a corner.

Modernistic—Layout, type, etc., in the modern manner — which cannot be too closely described because it is changing as time goes on. There is, however, a very definite difference between the traditional, conventional typography and the so-called modernistic, the older being more regular in appearance, and the newer being characterized by more or less disregard of the old time layout balances, margins, type sizes, etc.

Modern Roman — Roman type with straight serifs and hairlines as well as heavy strokes in its makeup. This line is set in Century Roman, which can be classed as a modern roman. The word modern is used only in a relative sense, as it has been used for a period of a great many years.

Monogram Type—Letters made up in such a form that when two or more are put together they form an attractive monogram which has many of the features incorporated in an especially drawn design. Monogram type is

made in sizes 24 points and up, and in a number of different styles, for one or more colors.

Monotone—Single tint or tone; in type, a style having the same thickness of line in all parts of the face is a monotone face. Don't confuse this word with monotype, which refers both to a composition machine and to the product of that machine.

Mortise—A space cut out in a block or cut, for the insertion of type or other material. An inside mortise is entirely surrounded by the cut, an outside mortise is one which has at least one side open.

Moulds, Roller — Moulds into which the iron cores or rods of a roller are set, and into which the roller composition is poured and rollers thus cast.

Mutton Quad—Em quad..

N

Nick—The groove or grooves in the lower front part of the body of type, which enable the person setting type to tell the front from the back without looking at the face.

Nickeltype—A species of electrotype which receives a plating of nickel before it is plated with copper, and which is more durable than ordinary electros. It should not be confused with a nickel plated electrotype, which is not equal in quality to the article which afterward receives the copperplate.

Nonpareil—The old name for 6 point type, and, with the pica and the agate, the only other names surviving after the introduction of the point system. Very often used, particularly by older printers, to designate 6 point measurements.

Numbering Machines—Automatic devices for printing duplicate, consecutive, triplicate numbers, etc., on printed matter. Hand numbering machines operate as the name implies, by hand, typographic numbering machines are put into the form in the chase, and the pressure of the platen against the figures makes the impression, at the same time furnishing the power to change the number in readiness for the next sheet. Numbering machines should not be confused with counters, which keep a record of the number of impressions without contact with the sheet or type.

Nut Quad—En quad.

O

Offcut — Scraps of paper left after cutting or trimming.

Off Its Feet—When type does not stand squarely on its base, it is off its feet. If the line of type is properly spaced, neither tighter nor looser than any other line, and is properly planed (smoothed or tapped), this will be eliminated. Type off its feet usually prints on one of its sides and not the other.

Offset—If for any reason an impression of the printed form appears on the back as well as the front of the sheet, it is offset. This very often comes from laying sheets one on the other when the ink is so damp that they transfer to the back of the next one.

Offset Printing — Lithograph printing in which the plate, instead of coming in contact with the paper, transfers the inked design to a rubber roll, and this in turn retransfers it to the paper. The use of offset makes it possible to print on rough surface papers which can not be satisfactorily used otherwise except for simple letterpress printing. Curved metal plates are used in offset printing, and because of the retransfer, all lettering on the plate reads as it does from the printed sheet, from left to right. High press speeds are possible from offset, as contrasted with ordinary lithography, which it is largely supplanting. Offset printing was done on metal (such as tin for boxes, cans, etc.,) before it was ever applied to paper printing. As in regular lithography, that part of the plate which is not to print is kept damp with water, so that the ink will not stick. On certain work it is possible to eliminate the water.

Oiled Sheet—An oiled tympan sheet on the platen, which will help to prevent offsetting when the reverse side of the job being printed is not as dry as it might be. A piece of kraft paper will do, with oil used sparingly so as not to injure the work to be printed.

Old Style—What is, and what is not, Modern or Old style is so controversial that we are purposely leaving out any strict definition. Old style is really an original Roman. Caslon and Goudy are Old style faces. Roman faces unlike these are called by some Modern Roman, but the outbreak of Modernistic designs has made the term more confusing.

Opaque—Papers and ink which are not transparent, that is, in papers, a sheet which cannot be seen through, and in inks, a color which can be printed over another and leave no indication of the color beneath.

Open Matter—Type and other matter with wide spacing, leaded out widely between the lines, or with many short lines.

Open Spacing—Wider than usual spacing.

Optical Center—A form will appear properly placed to the eye if it is slightly above true center of the page or card; it is then centered optically.

Out of Register—When two or more colors are used, and one or more of them is not properly placed, so that the different colors do not meet as they should, they are out of register. This may be caused by not feeding the sheet up to the gauges correctly, or it may be because something has shifted. On big presses, poor register is also caused by shrinking or swelling of the paper between the printing of the colors.

(To be continued)