

## LESSON SIX

### Before Running the Job

Before running the job, be sure that any inked impression that may have been made on the platen drawsheet is wiped off. Gasoline or some similar liquid or cleaner will do. Talc may be dusted on for the same purpose.

### Feeding the Press

We will describe the operation of the ordinary hand fed jobber only. Information on any press having a mechanical feeder may be obtained from the maker, no single set of instructions being applicable to all.

Press feeding, like some other operations of printing, depends not only on the job, but on the individual printer. There is no such thing as the only way, because different kinds of stock require different handling, and one man may prefer his method in a given circumstance over any other. The instructions supplied here must, therefore, not be construed as the only way, and they must be viewed in the light of your own subsequent experience.

### Inking

Care should be taken not to over-ink. If the job is small, the plate should carry very little ink,



*If you have no hand roller (brayer) use one of your press rollers*

and the best way is to put it on with an ink knife or a hand roller. If the ink knife is used, the ink should be well spread before the press rollers are run over the plate. Additional ink should be applied very sparingly, and at the

edge of the plate if with a knife. The hand roller (brayer) will do the best job of distribution. If the press (form) rollers are used, the chase had best be removed so that the form will not become gummed up.

For jobs whose printed surface uses a considerable quantity of ink, the ink fountain is helpful. This must be carefully adjusted so that it will not overink. Small card and stationery jobs are bet-



*Spreading ink with a hand roller*

ter handled without a fountain, because it is difficult to keep the right ink down to the required level, and the cleaning up of the fountain after the run takes more time than is saved in not having to stop for inking.

Watch the "color" of the impression, that is, make sure it is clear, uniform and not weak, but keep the amount of ink down so that the work will not offset or smudge. This requires more frequent inking and in smaller quantities, but the results will be better, and it may prevent a lot of trouble with a non-drying or off-setting job.

### What Causes Type To Be Off Its Feet

Foundry type is made with extreme accuracy, so if you are using it, and the characters in the form, any of them, print on one side and not the other, you can be pretty sure that those affected are off their feet for one reason or another. This is likely to occur when you take a proof unless the form is actually locked up in a chase, although tying up the form properly will help.

Off-their-feet characters are frequently caused by unequal spacing or justifying of lines, which in turn can happen because corrections have been made without put-

Standard pointed flaps will take the place of wallet and other special types for the duration. The envelope manufacturers correct their dies and maintain production so it's a case of take what we can get. We hope the necessity will soon be over.

Standard pointed flaps will take the place of wallet and other special types for the duration. The envelope manufacturers cannot shift their and maintain production so it's a case of take what we can get. We hope the necessity will soon be over.

*Two examples of type off its feet*

ting the lines in the composing stick with its original setting. Or perhaps the stick was used temporarily for another job, and not quite correctly reset. For best results, set the stick at the beginning, and leave it alone until that job is finished, including corrections. Be sure to justify or tighten each line equally, according to the instructions elsewhere, because an accurately set stick will be of no help if not used properly.

A faulty lockup of the form in the chase can also cause one or more lines, or characters, to be off their feet. Careful planing and locking of the form will correct it.

If there are rules or varying lengths of leads and slugs in the form, these can slip in the lockup enough to bind in various spots, and in turn cause loose lines and type off its feet.

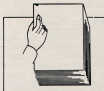
**Feeding—How It Is Done**

The sheets should be fanned out, as in the illustration, so that the fingers can grasp them individually. It will then be possible to pick up most stock with the right hand as shown. The sheets may also be fanned out by placing the thumb on the pile, exerting a slight downward pressure,

and drawing towards you about half an inch.

Start slowly, otherwise you will not get your sheets down to the gauges accurately, and will have too many out-of-register sheets. You can pick up speed later.

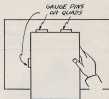
*Flying (or Flopping) a Sheet*



*Picking up a sheet from pile fanned out—sheets face down*



*2. Turning sheet over in the air*



*3. Feeding sheet to gauge pins or quads—right side up*

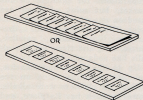
With the left hand, grasp the sheet in a spot which will not smudge, and remove it to the left hand side. While you are doing this, your right hand is picking up another sheet, and feeding it to the press. Get into the rhythm

of the press, so that your movements are coordinated with the opening and closing of the platen. If the sheet is misfed, use the throwoff lever to prevent an impression. While you will have frequent resort to this at first, you will gradually get away from it, and your speed will increase.



*One method of feeding—the curse keeps the sheets from buckling*

If the job is small, and you have not inked too heavily, you can probably pile one sheet on the other without danger of offset. If, however, you haven't, or the job is a large enough one so that more ink had to be carried, the sheets will need to be spread out, shingle fashion, so that they will have at least a few moments' exposure to the air before another row is placed over them.



*Printed sheets spread to prevent offset*

Large sheets or small sheets which are flimsy often call for turning over as they are being fed. This is also called flopping or flying the sheet. The stock to be fed is placed on the feedboard with the side to be printed face down instead of up. This is accomplished by picking the sheet off the pile as shown in the illustration — and with a firm hold turning it before pushing it against the gauges.



*LETTERHEADS PLACED FIRST ONE SHEET ONE WAY NEXT THE OTHER SO THAT PRINTING WILL NOT OFFSET*

### Slipsheets

If you still experience trouble with offsetting (transferring of ink from one printed sheet to the bottom of the other) and if the sheet is too big to lay out shingle fashion, you can interleave the job with newspaper or other sheets, one between each pair of printed impressions.

### The Effect of Temperature on Presswork and Inking

Even with good rollers, satisfactory presswork is often not possible if the temperature of the pressroom has not been at least seventy degrees for at least an hour before starting. Ink will not work up well when cold, and if the press metal is chilled, the ink cannot be distributed evenly. An attempt to counteract the effect of poor distribution by using more ink may be all right for a cheap poster, but it is not suitable or satisfactory for high grade work. Rollers will not function properly, either, at sub-normal temperatures.

In extremely cold weather, when heating systems are working hard to offset outside temperatures, the indoor air often becomes excessively dry. In the process a pile of paper will be so affected with static electricity that the sheets may stick together and to the tympan when you attempt to remove them from the press. This can to a large extent be corrected if the paper is given a chance to "season" — that is, kept at normal temperature long enough for the

whole heap to attain the same temperature. If the paper is divided into a number of piles this process will be speeded.

On power and automatic presses all kinds of devices are used to get rid of static electricity, including such a home remedy as draping Christmas tree tinsel on the machine where it will brush the paper as it goes by, removing the charge and grounding it. An automatic feed machine can be rendered almost useless if static is present in the paper. Sheets will wind themselves into the mechanism and completely foul it up before the automatic safety devices can shut the power off. The hand fed machine does not give anywhere nearly so much trouble, but you will want to know what causes such difficulties, so that you can take the proper steps to eliminate or at least minimize them.

### For Feeding Work Easily and Quickly

In feeding paper or cards with very little margin, where the finger is likely to reach over and blur or smudge the fresh printing, if a larger grip is taken, a small piece of sandpaper (fairly fine grade) wrapped over the index finger of the left hand, with sand surface out, held in place with a rubber band, will make it possible to get a good firm grip without over reaching onto the inked surface.

Another way of doing the same thing is to buy the rubber finger pads which stationery stores sell, and which fit over the finger like one short finger of a glove. In our own printing department a rubber pad is used on the right finger, for picking up the blank stock, and a piece of emery cloth is used on the left for lifting out the work. The

emery cloth is used because it has a longer life than sandpaper. We might add that these two kinds of pads are used on all work, whether the margins are narrow or not, because it helps to get speed.

LOT OF PADS FOR PICKING UP  
OR SHUFFLING  
PAPER -



Still another way is to moisten the end of the finger with glycerine. A little glycerine can be put on the back of the other hand, and when the finger gets dry, it can be re-moistened from there. The finger should not even be damp—just the least bit sticky is all that will be necessary.

### Cleaning Preparations and their Use

There are all sorts of cleaning preparations for printers on the market, but most of them are based on one of two general principles. There are the various hydro-carbons, like benzine, gasoline, benzol, etc., and there are the alkalis like soda ash, lye, etc.

Up to the time that benzine, and later gasoline came on the market, all cleaners were alkalis. However, each has its place, and may be used to best advantage if you understand the properties of both.

For general use, a hydro-carbon cleaner such as gasoline will fill the bill very satisfactorily. The higher test the gasoline is, the better. Benzine is also good. If you want a bang-up fine cleaner which will work fast, make your cleaner of equal parts of the following:

High test gasoline, acetone, alcohol, benzol. Avoid leaded or ethyl gasoline—use so-called white or any brand which does not contain lead.

All the above may be purchased at most drug stores, and while it is a little expensive, it is very efficient. A cleaner made with a larger portion of gasoline will also work well, altho not equally with the unadulterated formula. It is said that the government printing office varies this formula by the use of 60% benzol and 40% acetone. The very high evaporating qualities of such a cleaner mean a dry, clean form and ink plate. It should not be used on rollers except when they are so swollen with moisture that shrinkage is desirable.

The way you handle your cleaner and how you clean, will have a decided effect on results. The type or form to be cleaned should be first rubbed with a rag dampened with cleaner, so as to take all the ink off which will come without using the brush. Then the brush should be used. If you use your brush first, it will force the ink down into the crevices, and eventually your type will be crusted around the edge in such a way that it will be difficult if not impossible to get the type to stay up snugly. The old crust will act as a barrier to prevent the pieces of type from standing straight, shoulder to shoulder.

An alkali cleaner should be used occasionally on all forms, because nothing will clean as thoroughly, and if you want to keep your type in the best possible condition, it may be done in that way. You will also find it best for old and aggravated cases of old ink or crust on ink plates and type. It should not, however, be used on rollers. In extreme cases on type and ink plates, the solution may be applied in the regular way, and then several sheets of paper also saturated with the cleaner may be spread out on the form and allowed to stand over night. After the alkali cleaner has been used, it should be washed off carefully

with clear water. Wood furniture should be removed from the form if you are going to let the cleaner stand on it over night, because the alkali will draw the oil out of the wood, and it is the oil which keeps the furniture from warping.

Printers often buy a can of concentrated lye at a grocery store. If the quantity used warrants it, the whole can is dissolved in a stone crock or cast iron kettle. If not, the unused lye should be placed in a glass jar, sealed tight, otherwise it will absorb moisture from the air and soon eat the tin can entirely thru.



Cleaner Can of the safety type

You can make your own alkali cleaner if you want by purchasing Tri-sodium phosphate (40%), soda ash, 58% quality (45%), and ground caustic soda, 95% quality, (15%), and mixing them together in the percentages given in the brackets, but the small amount used for a great deal of cleaning solution usually makes it cheaper to purchase the already manufactured preparation.

If you use gasoline, benzene, or any similar hydro-carbon cleaner, you will find it advisable to consider the use of a safety can to hold the liquid. This can will not spill, even when turned over or upside down, yet a slight pressure around the nozzle, when you are using it, brings forth the right amount of cleaner as easily as if the can had a wide open mouth. Such a can, while particularly good for inflammable cleaners, also works out very satisfactorily for alkali cleaners as well, because the amount of cleaner used may be so easily controlled.

During most seasons of the year it is best to use kerosene for cleaning your rollers, rather than the other cleaners which have a tendency to draw the life out of the composition, and make the surface hard and glassy. During extremely moist, warm weather in summer, the use of gasoline, benzine or similar cleaners will not be detrimental, because at that time the problem is, how to remove moisture rather than to conserve it, and the hydro-carbons are great moisture removers.

Always make sure that rollers are thoroly wiped, because any greasy substance left on the rollers will adulterate the ink and cause trouble in printing and drying.

Careful attention to cleaning will preserve for you your type, with its originally clear sharp face, it will keep your rollers in the best condition, and if with these you have a clean ink plate, on which the only ink is that which you have just put on for the job on hand, you have everything in your favor toward producing a good clear job of printing without a lot of fuss and bother.

### Preventing Offsetting (Set-off) On Platen

There are times when it may be necessary to "back up" (print the other side) of sheets so soon that the ink from the previous printing has not thoroughly dried, with the consequence that enough ink eventually will transfer itself to the tympan or platen padding to cause sticking, and some offsetting of the ink on sheets being fed. If the first run has been very accurately registered, the inked parts will only touch each other, and no great harm will result, although the sheets may stick, but if they are at all off register, something will have to be done about it. If,

likewise, an impression is inadvertently made on the tympan, this also must be removed before any more sheets are fed into the press. Gasoline or Printoclene can be used successfully in both instances. It will dry off quickly and not harm your work.

An oiled tympan sheet will have a tendency to prevent offsetting and sticking. Ordinary brown kraft or wrapping paper may be oiled and serve the purpose, but no surplus oil should be left on the paper.

Some printers don't want to take the time to clean off the tympan, and they report that talc or ordinary talcum powder will, if rubbed over the ink on the tympan sheet, prevent it from sticking or transferring itself to your work. The time saved is in making it unnecessary to let the tympan dry as must be done when a liquid is used.

### Lesson Six—Questions

1. *What precautions should be taken for proper inking?*
2. *How can offset be prevented?*
3. *What causes type to be off its feet, and how can you remedy this condition?*
4. *How are flimsy sheets or large sheets fed into the press?*
5. *What causes sheets of paper to stick to themselves and the press? How do you prevent it?*
6. *What should be done before a form receives any prolonged treatment of cleaning solution?*

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## **The Printer's DICTIONARY**

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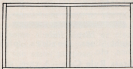
**Black Letter** — another name for bold or heavy face type, such

**VOGUE**      **Frang Old Eng.**

as Vogue Gothic. Originally applied to text type, particularly early

German and English. (Old English.)

**Blank Case**—A wood case the same size and shape as a type case,



but without partitions or divisions. Used for plates, electros, forms, etc.

**Blanket**—A piece of rubber surfaced fabric or felt used under the tympan sheet on heavy forms by some printers when ordinary packing does not suffice or where type is too worn to otherwise produce good results. Also used on cylinder presses.

**Blank line**—A line containing no printing, usually a line of quads.

**Bleed**—Lines which run to the edge of the paper are said to bleed. This is often done by trimming after printing. Solid backgrounds are frequently run that way.

**Block**—The base on which cuts, electros, plates, etc., are mounted.

**Block Letter**—Gothic type.

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### BLOCK LETTER TYPE

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**Block Printing**—Printing from wood, plastic, or linoleum blocks.



*Linoleum Block Cut*

**Bodkin**—A sharp pointed instrument, much like an awl, used for pushing down characters in a form, and in various other ways.

**Bodoni, Giambattista**—A printer of Milan, Italy, born 1740, died 1813, the designer of the first modern Roman style of type, after which several present day faces

have been named. In his day, most printers designed and cast their own type, type foundries not

This is Bodoni type No. 86

having come into existence except in connection with printing houses, and machines for type casting not having been invented, very little investment was necessary.

**Body**—The face of a piece of type is mounted on the body, and the point size under which it is listed is always the size of the body. In many series of card and stationery types, like Copperplate Gothic, there are three or four different sizes of face on one body, so that they may be used together in the same line, without difficulty. (See Nos. 6001, 6002, 6003, 6004.)

**Body matter**—matter to be set in body type.

**Body type**—Type used for reading matter in magazines, books, circulars, etc. Six, eight and ten point are most commonly used, altho larger ones, when so set, are really body type.

**Bold Face**—type having a heavy face; black letter. Proof readers,

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Vogue Gothic	Old English
<b>LPSEOiar</b>	<b>AU&amp;R&amp;rat</b>

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and those putting instructions on work to be set up, use the abbreviation b.f.

**Bond paper**—Hard surfaced paper used for stationery, office forms, etc. Originally bond paper was made for the purpose which its name implies, namely, bonds, and other important legal paper which required long, practically permanent life, in spite of handling, folding, etc. The original bond papers were all rags, with no wood pulp in them.

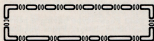
From their use for documents, bond paper began to be sold for fine personal stationery, and as the years went on, and typewriters came into use, they began to supersede the laid paper which the original owners of typewriters always thought was necessary. As the use of bond paper became more widespread, more and more

wood pulp was introduced, until at the present day we have everything from the finest all-rag bonds down through to all-sulphite (wood pulp) papers. There is a place for each, and the experienced printer will act accordingly.

**Book paper**—the name applied to papers used exclusively for printing rather than writing purposes, and for books, pamphlets, circulars, programs, etc. Their surface is not so hard as bond paper, and they are not adaptable to jobs on which writing ink is to be used. They vary greatly both in quality and price. As in the case of bond papers, each has its use.

**Book work** — Book and pamphlet printing, as contrasted to stationery and general job printing.

**Border**—an ornamental enclosure for a printed form. Strictly speaking, even a plain rule all around is a border, altho the term is usually applied to various ornamental type designs made especially for the purpose.



Border

**Bourgeois**—The old name for nine point type.

**Box**—The compartments in type cases. Also used to designate a part of a job entirely surrounded with brass rule or border, which will be found a little more commonly in magazines and newspaper than general job printing. In newspapers, late news despatches are often put in a "box" on the front page.

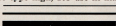
**Box Head**—A heading set in a rectangular, ruled off space.

### A Box Head

**Brace**—a variety of bracket or parenthesis coming to a point in the center on one side, with curved ends. This is a brace:  $\{ \}$ . It is furnished in fonts of auxiliary characters.

**Bracket**— Characters used to separate a word or phrase [ ] from the rest of the text.

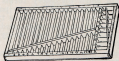
**Brass Rule** — Strips of brass, made type high, for use in making



Brass Rule

straight lines, borders, plain dashes, etc.

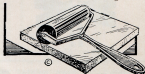
**Brass Rule Case**—A case, similar to a type case, but divided off in such a way that various lengths of brass rule may be conveniently classified and put away in it. Usually the sizes are plainly marked on the edge of each compartment.



A Brass Rule Case

**Brass Thin Spaces** — Spaces of brass one point thick, and of various sizes (6, 8, 10, point, etc.) for use in justifying (spacing) out forms in places where ordinary type metal spaces are not small enough. Also made in copper  $\frac{1}{2}$  point thick. They are much stronger for their size than a type metal space would be.

**Brayer** — A hand roller (roller with handle) used to make proofs, also to smooth out ink applied to the ink plate, so that the regular rollers will not become gummed



Brayer (hand roller)

up and in turn do the same to the type in the chase. Those who have no brayer use one of the regular press rollers, taking care to smooth the ink out well before again running them over the type.

(To be continued.)