if possible, to let them lie until the next day. Work will dry better if spread out loosely than if it is piled up solid. To prevent smearing on the back of freshly printed sheets (called offset) lay sheets down carefully without slipping or sliding. On fine work it is best to "slip-sheet" or lay sheets of paper between the printed sheets until they dry.

A long board on which you can lay the sheets in a row as they are printed will often give the ink time enough to "set" in the air before it is covered up by another sheet.

Adjusting the Pressure of the Rollers

Rollers may be adjusted to give more or less pressure on the type and ink table through the roller hook springs. If more tension is desired on the 3 x 5 model, the cotter pin and washer can be taken off the end of the roller hook and the spring stretched out, then replaced. If yours is a 5 x 8 or larger press, more pressure can be obtained by turning down the nuts on the ends of the roller hooks (on saddle style presses, tighten the saddle spring nuts).

The ideal pressure is one which makes the press as easy as possible to work, keeps the rollers in place over the type form, yet allows them to turn freely. Important: Before changing any adjustment on the rollers, be sure that the roller hooks are oiled where they go through the sockets. The press is more likely to work hard because of this than because of too much tension on the springs.

Printing Halftone Cuts

Halftones (cuts from photographs or other shaded pictures) have a surface made up of tiny dots (as you will see if you look closely or through a magnifying glass at one). Such cuts take a lot more impression and ink than the same amount of type or line cuts. Practically all the illustrations in the Guide and the Printer's Helper are line cuts.

Because of this need for extra squeeze and inking capacity, the printing of halftones larger than one third the size of the chase had best not be attempted.

Makeready (underlay and overlay) is particularly important on halftone printing if good results are to be obtained. You need everything clean and dustless, because any specks on the ink table, rollers or in the ink will transfer themselves to the face of the cut, usually making spots with small white areas around them, which will require cleaning rollers, table and form, and re-inking with uncontaminated ink.

Halftones are best printed on a coated or enameled stock. If they are to be used on rougher surface papers, or on book grades without coating, they should be purchased with a coarser screen (larger dots) such as those used in newspapers.

A soft ink like halftone black is best for cut work. If ink is stiff, it may cause the cut to pick specks of paper from the sheet being printed, which will transfer themselves to the rollers and ink table, and then back to the cut. Such specks act just as dust or pieces of ink skin — they make spots on

the cut, often surrounded with halos of white.

The higher the number, the finer the screen (the more dots to the square inch). Thus, 133 screen has smaller dots or screen than 120. For work on enameled, coated or glossy stock (including Porcelain Finish Card) we recommend and furnish 100 screen unless otherwise specified, and 85 screen for other grades of book or news paper.

If you are going to run a halftone, be very careful that the ink you put on the press does not have any particles of skin in it; that your press, rollers and form are entirely free from dust, and that your ink does not start to "pick" the surface of the paper. Use makeready as described in the Guide and the Course rather than a lot of heavy impression, although you will need somewhat more squeeze than for the same amount of type. If you follow through on these details with patience, you ought to get good results.

One other thing — add ink frequently and in small quantities, rather than larger amounts less often. The face of a halftone plate is easily filled up, and if too much is put on, the results will be poor and the cut will have to be given a good cleaning. On some jobs it may be necessary to clean the face occasionally anyway, but that will happen less frequently with the sparing use of ink.

Cleaning Up

There are plenty of other suggestions for getting good work on the pages following, but assuming your work is satisfactorily completed for the time, you will want to clean your rollers, ink table and type form.

Remove the chase from the press, and before loosening or unlocking, take a rag wet with cleaning solution (or gasoline or benzine) and carefully wipe the face of the form until no ink remains. We recommend Printoclene for this purpose. Use a small stiff brush to get the ink out of the crevices, but not until you have first wiped the face with a rag. Wipe furniture, chase and all parts of the form with cleaning solution until everything is perfectly clean.

The ink table and rollers may be relieved of a large part of their ink by placing a sheet of newsprint or other paper on the table and running the rollers back and forth. The rest may be taken off by wiping with cleaning solution and rags. The general care of rollers will be found elsewhere in this Guide. Proper roller treatment is very important if you want to continue to have good results.

If your press is not used every day, it is a good idea to put a thin coating of oil on the rollers, and, also on the ink table to prevent rusting, but it must be thoroly cleaned off before putting on ink.

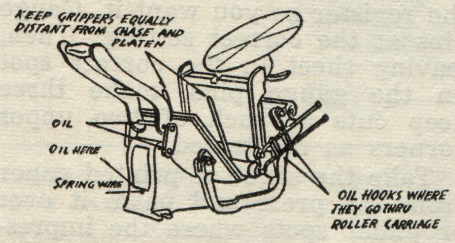
Distributing Type

After cleaning, unlock form, and taking a line at a time, by the aid of a lead or rule, hold it in left hand, and taking off a letter at a time, drop it into its own place in

the case, continuing until all is distributed. Use your composing stick for this, if you have one. All rules, leads, reglet, furniture, etc. should also be distributed to their places.

How to Oil Your Press

Oil *sparingly* but *frequently*, with machine, motor or sewing machine oil—preferably motor or a fairly heavy oil:



IMPORTANT—For best results in printing, and a long life for your press study this diagram.

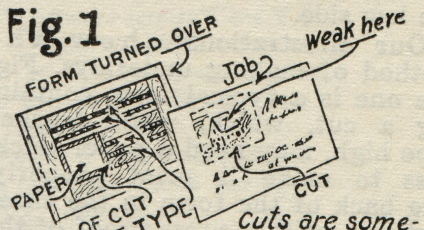
Gripper Bar Spring, where it goes thru hole in body, underneath handle.
Roller Hooks, where they slide thru holes in roller carriage or on presses with saddles, the moving parts.
Ink Roller Ends, oil slightly where they fit in hooks or saddles.
All Other Bearings and **Joints,** that are subject to wear.

Underlays and How They are Used

Underlays are used largely for raising cuts high enough so that they will print with type, and also to raise lines or words which do not print when a press proof is taken. **Cuts, wood type, electrotypes, etc. are often lower in height than type and must be brought up to type-high by pasting one or more thicknesses of paper on the bottom.** Cuts that are low on one side must be leveled by **underlaying,** as the

UNDERLAYING

Fig. 1



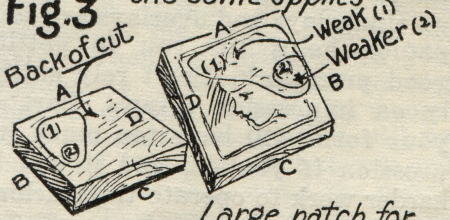
Cuts are sometimes lower than type. In this case a piece of thin paper on back of cut will "bring it up." This can also be done with a weak section of type.

Fig. 2

Paste thin paper patch on back of "S" and "A" (type)

WHEN USING A CUT—

Fig. 3 *—the same applies*



Large patch for weak section (1). Small patch for weakest spot (2). Use patches smaller than weak places as they build up a little more space than they cover on back of cut or type.