

FEATURING THE LATEST STENCILIZING TECHNIQUES

TOP EDGE PAPER GUIDE

READ INSTRUCTIONS CAREFULLY BEFORE TYPING

TOP EDGE PAPER GUIDE



The
anvil

May 1954

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Vari-Typer

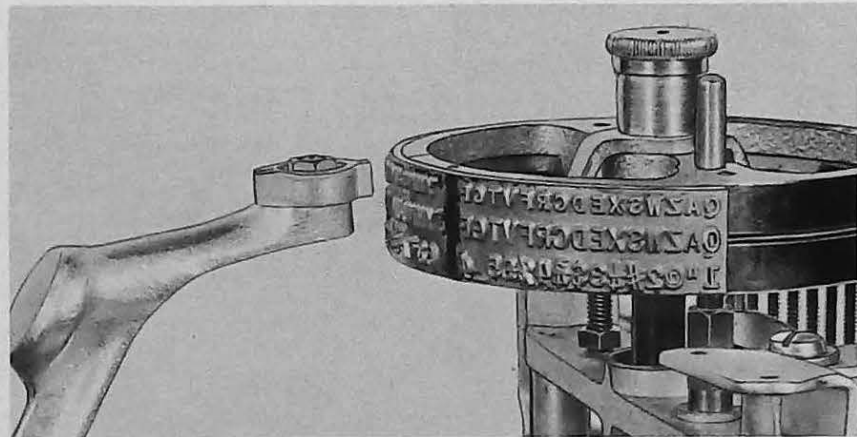
STENCIL DUPLICATING

An Old Art Becomes a New Science

Stencil duplication is one of the oldest duplicating processes known to man. The word "stencil" was originally applied to a piece of metal (or paper) with letters cut out of it. This stencil was placed on some object and ink or paint brushed over the entire piece. When the stencil was removed, the desired letters appeared on the object. This marking device is still popular today, but the term stencil is now more commonly applied to the wax stencil developed during the 19th Century and which is used today as the "master" in the stencil duplicating process.

As in every duplicating process, there are at least two major factors necessary to obtain the best results. These are the *proper* preparation of the master copy

and the *proper* operation of the duplicating machine. Both factors are equally important. The *Vari-Typist* is usually responsible for only the first factor, but knowing something about the entire process will enable him (or her) to prepare a better duplicating master.



The typing action of the Vari-Typer is illustrated above. The impression of the hammer against the type can be regulated to produce copy that is uniformly sharp and clear.

Probably the two most important elements in composing a stencil on a *Vari-Typer* or Coxhead *DSJ* are (1) the backing sheet and (2) type selection.

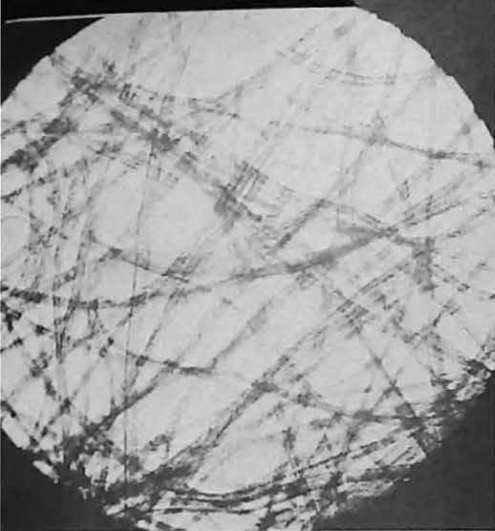
The Backing Sheet — Every stencil is made with a backing sheet attached to it. When stencils are typed on a regular typewriter, this backing sheet remains on the back of the stencil until the typing operation is completed. The backing sheet is removed just before the stencil is placed on the duplicating machine.

The typing action of a *Vari-Typer* differs from that of a typewriter in that the force or blow of a key comes from the *front* on a typewriter, but from the *back* on a *Vari-Typer*. Because of this fact, the backing sheet attached to a stencil is *too heavy* for the *Vari-Typer* hammer to penetrate. It must be removed *before* typing and another backing sheet, lighter in weight, substituted. It is easy to remove the attached backing sheet, for there is a perforation across the backing (and near the top of the stencil). Just fold the backing sheet along this perforation and tear it off.

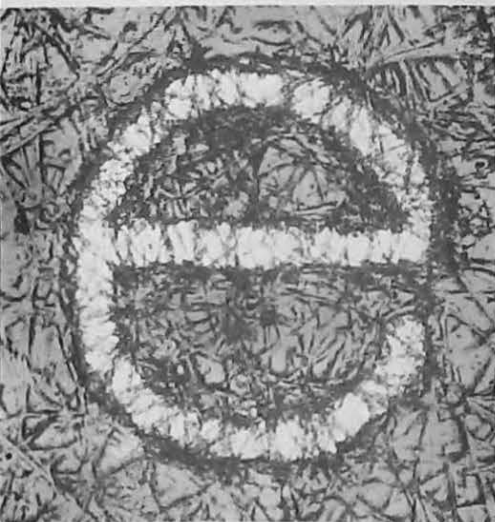
The most suitable backing sheet to substitute is one of the coated cushion sheets which come with each package of stencils. (In each quire of stencils—

package of 24—there are usually 8 or more cushion sheets.) The cushion sheet, in *ordinary typing*, is placed between the stencil and backing sheet—but in *Vari-Typing*, the cushion sheet *replaces* the backing sheet. The cushion sheet may be held in place with paper clips near the top of the stencil. It should be placed behind the stencil with the glossy side facing the back of the stencil. The same backing sheet may be used at least three or four times.

There are numerous brands and kinds of stencils on the market today—in a variety of colors and with different markings. Basically, however, all stencils consist of a cellulose sheet with a wax coating. When a *Vari-Typist* composes copy on a stencil, each stroke of the hammer against the type separates the wax. The stencil, when completed, is placed on a drum or cylinder which contains ink. The cylinder revolves, and as it contacts the duplicating paper, ink is forced through the wax separations onto the paper. The typing operation on a stencil is frequently referred to as "stencil cutting." In a sense, this is a misnomer, for the stencil is not actually "cut" when you type—the wax coating is merely spread apart.



Above is a greatly enlarged area of a stencil showing the numerous fibers that form its basic substance. The wax coating on the stencil prevents the duplicator ink from flowing through the otherwise porous surface.



In the above illustration a letter has been typed on the stencil. Note that the fibers of the stencil are not cut; only the wax coating of the stencil has been separated to allow ink to pass through the stencil onto the duplicating paper.

Type Selection — Selecting the proper types for stencil composition is extremely important. For any kind of lengthy text matter types with serifs are best, for they are much easier to read. Sharp types (ones with very little shading) will "cut" through the stencil wax better than bold or heavy types. This does not mean that bold types are taboo on stencils, but, rather, they should be reserved for main headings, subheadings, or occasional spots in the copy where special emphasis is required. The reason for this is logical. To get bold types to reproduce well, it is necessary to use the Repeat Key on *each letter*, and it would be far too time-consuming to do this on a large amount of copy.

Some specific type suggestions for use on the *Vari-Typer* are listed at the bottom of page 6.



Special Ribbon Shield — No ribbon is used when typing on a stencil. Simply break the ribbon and remove the part that passes through the shield. The regular shield on your machine may be used, but there is now a special shield with a round hole or window that is particularly good for both stencil and hectograph composition.

Inserting Stencil — Place the stencil and cushion sheet backing in the *Vari-Typer*, holding the top of the stencil with your left hand, and close the feed rolls with your right hand. Place the palm of your left hand against the stencil just above the anvil. Roll the stencil down in the machine. The left hand will force the bulges to the top, preventing creases as the stencil and backing cushion enter the feed rolls. When approximately three inches of the stencil ex-

tend above the feed rolls, remove the paper clips, straighten out any bulges between the stencil and cushion sheet, and replace the paper clips. Some operators prefer to roll the stencil in the form of a tube or cylinder, leaving approximately three inches extending to use when guiding stencil into the feed rolls.

It is not necessary to use the split roller if the stencil is placed in the machine *vertically*. However, when the stencil is used *horizontally* (or lengthwise), the split roller should be used to control the stencil and the coated cushion sheet properly.

Alignment — Most stencils have printed guide lines to assist the operator in aligning the stencil in her machine and to indicate the limits of the duplicating area. Any copy placed beyond these lines will not reproduce. A center line and lines showing the position and limits for 3 x 5 card reproduction are also provided. Numbers along the side of the stencil indicate *typewriter* lines (6 per inch), and numbers at the top show spacings at *elite* and *pica typewriter* spacings.

After the stencil is inserted in the machine, straighten it until the printed numbers on each side line up in the same way against the alignment guides. It is advisable to check the stencil alignment at least three or four times while typing a full page. Because of the wax coating on the stencil, you may find it has slipped slightly. If so, straighten the stencil between paragraphs or breaks in the copy, *never between lines*.

Impression — Most types require a heavy impression when used on stencils. This rule does not apply to extremely sharp types, however, for too heavy an impression may cause letters to cut through and even fall out of the stencil. It is wise to test the type either on a sample stencil or in the outer margin of the stencil you have in the machine.

Corrections — Making a correction on a stencil is easy providing you observe a few simple rules. Insert a stiff card or flat ruler between the stencil and back-

ing sheet. Using the rounded end of a paper clip (or the glass rod that comes with each bottle of correction fluid), rub *lightly* over the word to be corrected. This smoothes some of the natural wax back into place. Then brush a *light* application of correction fluid over the error — just enough to completely cover the word. A light application of fluid dries faster and provides a neater correction. When the fluid is dry, type correction in proper place.

Occasionally, it is necessary to change an entire paragraph or block of copy. It can be corrected as described above, but, if there is adequate space around the copy, another method may be used. Cut the incorrect copy out of the stencil, leaving at least $\frac{1}{4}$ " margin on all sides of the cut-out copy. Type the correct copy on another stencil and cut it out. Leave enough margin on all sides of the correct copy so that correction is larger than the hole where the old copy was removed. This allows the correction to overlap on all sides. Cement correction into position with either stencil cement or correction fluid. Put correction on *front* of the stencil. Then when the stencil is placed on the duplicator (reverse side out), the correction will be better protected.

TEN COMMANDMENTS OF STENCIL COMPOSITION

1. Remove ribbon.
2. Turn on stencil light.
3. Clip special backing sheet to back of stencil.
4. Insert stencil and align properly.
5. Use proper impression. Heavy (with repeats) for bold types; medium or light for sharp types.
6. Check alignment while typing.
7. Use protective film on stencil—or clean types while typing.
8. Corrections—Smooth lightly with rod or clip; use fluid sparingly.
9. Clean machine and types thoroughly when stencils are completed.
10. Do not leave stencil in machine overnight.



A Few Simple Rules on the Care of Your Machine

Stencils will not harm your *Vari-Typer*, providing you take proper care of the machine during and after the typing operation.

Do not leave a stencil in your machine longer than necessary—*never overnight*. When the stencil is completed, clean the feed rolls thoroughly with denatured alcohol. If your *Vari-Typer* is used exclusively for stencils during the day, clean the feed rolls at least twice daily. Rubbing the rolls well with alcohol removes any stencil oil or wax which may be on the rolls. This wax, if allowed to accumulate, will cause the rolls to swell and eventually affect paper alignment.

Keep the anvil slot clean by running a 3 x 5 card through the slot. During the typing operation, remove the type and brush the *face* of it briskly with a dry type brush. Do this at least three or four times while typing a page. Also clean the back of the type carefully

with a soft cloth dipped in denatured alcohol. This will prevent the type from becoming sluggish in the anvil. When the stencil work is completed, clean each type font thoroughly. Dip the brush in denatured alcohol, brush the type, and dry it with a cloth. *Never soak your types in alcohol.*

The frequency with which types are cleaned during the typing operation varies somewhat according to size. Naturally, the smaller types must be cleaned more frequently. Whenever letters begin to fill up, the type should be cleaned.

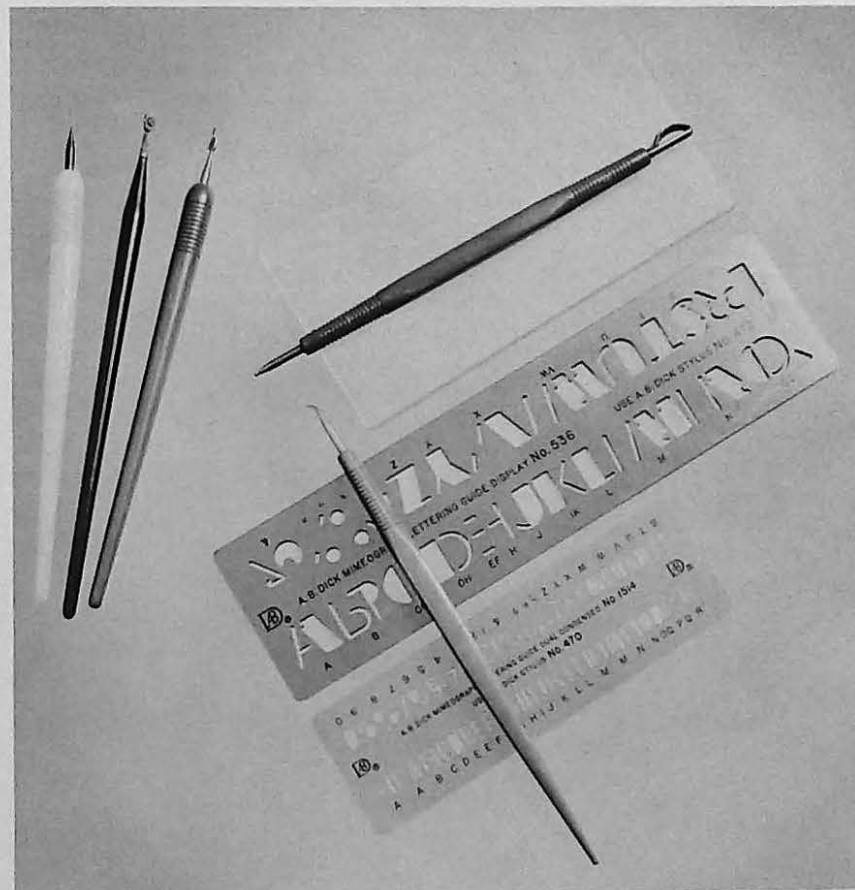
The stencil you use may have a typing film attached to the front of it. This film will prevent stencil wax from accumulating on the feed rolls or the type font and will eliminate much of the cleaning. It is lightly pasted to the top of the stencil and may be easily separated and brought forward whenever it is necessary to make a correction.

RECOMMENDED TYPES FOR GENERAL STENCIL WORK

224	320-8	122A	345 Series	80	232
224-7	325-8	434	270	25	233-7
320-10	361-9	96	180LB	145	233
325-10	361-7½	97B	180L	23B	158
320-9	361-6¾	226	180	24	169
325-9	380-10	27	350 (Copper Plate Series)	260-9	68
330-10	385-10	228-8 (border)		211	28

FOR HEADINGS

170	271	382-12
362-9	362-7½	265
434-14	229	97B



A variety of styli (stencil pencils) are available to do ruling, writing, or art work on stencils. Each stylus has a special use, but there are three basic types which will suit most purposes. The *wire loop* stylus is used for ruling straight lines; the *ball point* stylus, for signatures or curved lines; and the *wheel* stylus, for dotted lines. Of course, if you have a Forms Design Model of the *Vari-Typer* or *DSJ*, all but the ball point stylus may be eliminated.

There are numerous other items which will add interest to your stencil composition. Lettering guides, screen plates for shaded copy, and stencils for special

layouts are available for this purpose. The latter includes stencils with guides for handwriting, two or three-column newspaper layouts, and stencils for four-page folders. You can also obtain special illustration inserts which can be cut and cemented into position in the same manner as corrected copy is cut and cemented into position (described under "*corrections*").

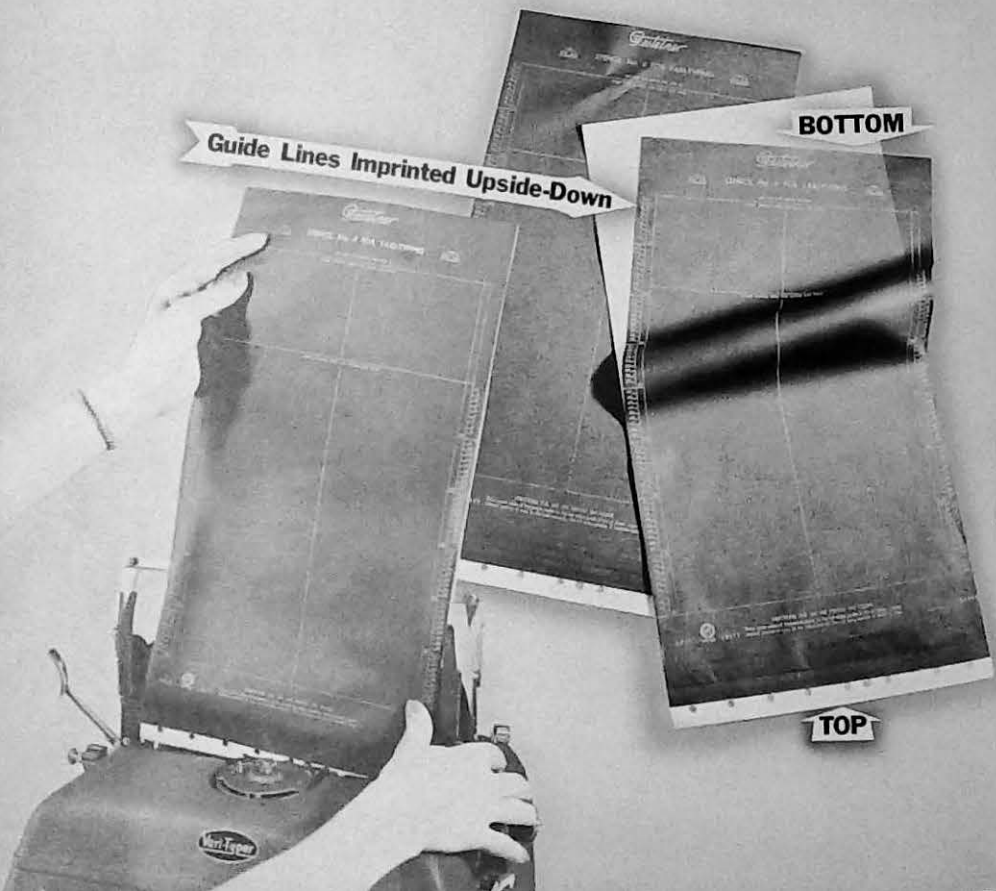
If art work or ruling are to be done, it is advisable to have either a mimeoscope or light table. The manufacturer of your preferred brand of stencils can supply you with complete information concerning these items.

The great extent to which stencils are being used today on *Vari-Typer* has prompted one duplicator manufacturer—*Gestetner*—to design a stencil especially for use on this machine. This stencil is inverted so that the closed end which is used to fasten the stencil to the duplicator, is at the *bottom* rather than at the top. Both the coated cushion sheet and the backing sheet are attached to the stencil at the bottom. Remove the backing sheet, leaving the coated cushion sheet attached to the stencil. Then simply drop the stencil (and cushion) into the machine and roll it down in the same manner as described under "Inserting Stencil."

Below — The Gestetner Stencil, designed for Vari-Typing, has cushion backing sheet attached and guide lines imprinted upside-down to facilitate stencil insertion and typing operation.

Not only does the stencil have numbered lines but every tenth line is particularly emphasized, making the lines extremely easy to count. For a legal size page the *Vari-Typist* starts typing near the top of the stencil; for a letter size page she starts further down. The starting position for either size is accurately designated on the stencil.

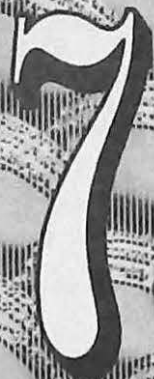
The introduction of this specially designed stencil has caused other stencil manufacturers to investigate the possibility of designing their own stencils for *Vari-Typer* use, and it is very likely you will see such stencils on the market soon.



This is Vari-Typer Model M-11, especially designed for stencil copy.... Price — \$480.

Stencil copy may be composed on any model of *Vari-Typer*, the *DSJ*, or *DSJ Composomatic*. The inherent nature of the process, however, makes it particularly suited to the standard *Vari-Typer*, and a special stencil light is provided

for this type of work. One model, the M-11, has become extremely popular for stencil copy. More information about this model may be obtained by returning the postcard enclosed with this issue of "The Anvil."



New Type Faces For All DSJ Models

We are pleased to announce the recent release of several new DSJ types which complement existing series or faces.

NEW BELL GOTHIC

One prominent design is the *Bell Gothic Light* (720-10B). This type matches the *Bell Gothic Medium* (730-10B). Both of these faces are particularly suited to telephone directory work but also may be used for tabular or statistical jobs. They are excellent, too, for photographic reductions, according to the following scale:

- Reducing copy 10% gives 9 point size
- Reducing copy 20% gives 8 point size
- Reducing copy 30% gives 7 point size
- Reducing copy 40% gives 6 point size

The two types, when used together, produce an interesting contrast in the same basic design.

COPPERPLATES COMPLETED

Another series which has recently been completed is the *Copperplate Gothic* family (800 series), featured in the June, 1953, issue of *The Anvil*. The new types in this series are the 800-8B, 800-10B, 800-11A, and 800-13A. These types, like others of the series, are especially good for the composition of forms. The types

have only capital letters, no lower case, but numerous special symbols, boxes, etc., that are used so frequently on forms. There are now *three* sizes of this style in *each* of the four horizontal spacings—a total of 12 sizes of this face.

NEW MODERN ROMANS

Two new types have been added to the existing *Modern Roman* family (770). One is the six-point size of the series (770-6C); the other, the eight-point of the *Modern Roman Italic* (775-8B). This series, also described in the June, 1953, *Anvil*, has a wide or broad face, providing maximum readability at a minimum height. The other types in this series are the 770-10A and 770-8B (two larger sizes of the *Modern Roman* group), the ten-point size of the *Modern Roman Italic* (775-10A), and the ten-point size of the *Modern Roman Bold* (820-10A).

All of these types are valuable additions to the ever-increasing number of DSJ and *Vari-Typer* designs. A look at the 1954 design schedule shows great promise in the way of new and attractive designs, adaptable to both the DSJ and standard *Vari-Typer*. Some examples of the new types mentioned above are displayed on these pages. Any you desire may be ordered on the enclosed postcard.

COPPERPLATE GOTHICS

800-13A

THIS IS A SPECIMEN OF THIRTEEN POINT COPPERPLATE STYLE (BY COXHEAD). THIS TYPE CONTAINS ALL THE LETTERS OF THE ALPHABET
▲ ÷ ± [§ +] * - ° " = ' ! ¢ × □ ● " ■ ⊕ [] ◆ † ^ ‡ ; -
1 ' @ 2 # ¼ 3 \$ ¾ 4 % £ 5 - ¢ 6 & * 7 ' ? 8 (, 9) . 0 ½ /

800-11A

THIS IS A SPECIMEN OF THE ELEVEN POINT COPPERPLATE STYLE (BY COXHEAD). THIS TYPE CONTAINS ALL THE LETTERS OF THE ALPHABET
▲ ÷ ± [§ +] * - ° " = ' ! ¢ × □ ● " ■ ⊕ [] ◆ † ^ ‡ ; -
1 ' @ 2 # ¼ 3 \$ ¾ 4 % £ 5 - ¢ 6 & * 7 ' ? 8 (, 9) . 0 ½ /

800-10B

THIS IS A SPECIMEN OF TEN POINT COPPERPLATE STYLE (BY COXHEAD). THIS TYPE CONTAINS ALL THE LETTERS OF THE ALPHABET PLUS SPECIAL SYMBOLS.
▲ ÷ ± [§ +] * - ° " = ' ! ¢ × □ ● " ■ ⊕ [] ◆ † ^ ‡ ; -
1 ' @ 2 # ¼ 3 \$ ¾ 4 % £ 5 - ¢ 6 & * 7 ' ? 8 (, 9) . 0 ½ /

800-8B

THIS IS A SPECIMEN OF THE EIGHT POINT SIZE COPPERPLATE STYLE (BY COXHEAD). THIS TYPE CONTAINS ALL THE LETTERS OF THE ALPHABET PLUS SPECIAL
▲ ÷ ± [§ +] * - ° " = ' ! ¢ × □ ● " ■ ⊕ [] ◆ † ^ ‡ ; -
1 ' @ 2 # ¼ 3 \$ ¾ 4 % £ 5 - ¢ 6 & * 7 ' ? 8 (, 9) . 0 ½ /

BELL GOTHIC LIGHT STYLE

720-10B

THIS IS A SPECIMEN OF THE TEN POINT BELL Gothic Light Style (by Coxhead), leaded two points. The directory is playing an increasingly important role in the American way of

MODERN ROMAN STYLE

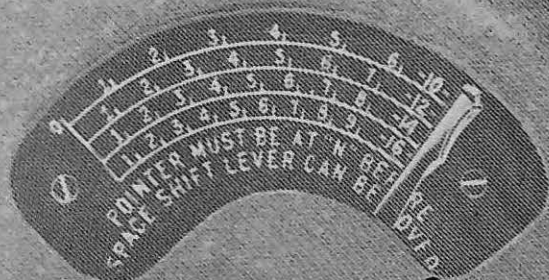
775-8B

THIS IS A SPECIMEN OF EIGHT POINT MODERN Roman Italic Style (by Coxhead), leaded two points. *Typography is architecture and the typographer is the architect. The building*

770-6C

THIS IS A SPECIMEN OF THE SIX POINT MODERN ROMAN Style (by Coxhead), leaded two points. *Typography is architecture and the typographer is the architect. The building bricks he uses are the*

Hints on



Justifying....

The operation of the Automatic Justifier on the Standard Model *Vari-Typer* is relatively simple, but there are many tricks, new to some operators, which can greatly enhance the appearance of the justified copy. These ideas seem elementary once we know them, but often they do not occur to us unless called to our particular attention.

HINT NO. 1 – ALL CAP HEADINGS IN TEXT COPY

ALL CAP TITLES or HEADINGS that occur within the body of the justified copy often appear cramped or crowded, the letters touching or overlapping. The reason for this is simple. Many of our standard type styles are so designed that the proper spacing for a type in *text work* is smaller than that same type requires in all caps. This is no problem, providing you know how to handle such a type in justified copy. Whether you use the *Dial Pointer* (pre-type) Method

of justification or the *Automatic Method* (rough and justified, line by line), simply allow a large amount of stretch on any line where an all-capital heading occurs. For example, you might be using the ten-point *Bodoni Book* (380-10) type. This type requires a setting of 14 characters per inch for lower case or text matter, but a setting of 12 characters per inch for all-capital titles or headings. You would set the machine for 14 characters per inch, since the bulk of the copy is text matter. At 14 spacing the maximum "stretch" is 8 characters or spaces, so you would type the rough copy in such a way as to allow a stretch of 8—or as close to it as possible. This would automatically stretch the capital letters to a more attractive spacing.

HINT NO. 2 – SUBHEADINGS WHICH REQUIRE WIDER SPACING

We often place subheadings between sections of justified copy, and the subheading type may require a wider spacing

than the text copy. *Do not change the spacing set for the text copy*; that disturbs the precision of the justifier setting and also moves the margins of the text matter which follows the subheading. If you are typing the rough copy and justified copy side by side (line by line), you are using the *Automatic Method* of justification. In this method, to center and stretch the subheading properly, simply type it at the left side of the rough copy; then space (and count spaces) until the justifier pointer has reached the highest number on the dial (for that spacing). *If your counting is an EVEN number (10, 14, 16, etc.),* press the tabulator key and indent *one-half* the number of spaces you counted. *If your counting is an ODD number (7, 9, 11, etc.),* space *once more* bringing the count to an even number, tabulate, and indent *one-half* the number of spaces you counted; then type the subheading. The heading will be stretched enough to look well and will be simultaneously centered.

The Dial Pointer Method of justification, where the rough copy is pre-typed and the justifier dial set by hand) requires a somewhat different system for centering and stretching subheadings. Count the characters (and spaces) in the heading. Add this number to the highest number on the justifier dial (i.e. 8 at 14 spacing, 9 at 16, etc.). Subtract that total from the number of characters in the column width. The result will be either an odd or even number. If it is an *odd* number, use the *next highest* figure on the dial (7 at 14, 8 at 16, etc.), and repeat the calculation. This will change

the final result to an even number. One-half of the resulting number is the number of spaces to space in to center the subheading. Before you do space in to type the subheading, *be sure to set dial pointer* on figure used in calculations.

Although this method involves the use of some arithmetic, it is simple when you have tried it once or twice, and it enables you to center and stretch a subheading, *without changing spacings.*

HINT NO. 3 – SPACING OF TYPE ON JUSTIFIED COPY

Each type has a proper or recommended spacing for text (lower case) matter and for headings. However, the spacing recommended refers to the type when it is not used in justification. Copy looks best when the letters are as close together as possible without touching. Therefore, when the type is set at the recommended spacing and then justified, the letters are pulled further apart, and the printed effect is spoiled. To overcome this, set the copy in a spacing smaller than that recommended and let the justifier stretch the spacing of the letters just enough to achieve the desired effect. For example, types such as the 380-10 (*Bodoni Book*) or the 361-9 (*Tribune News*), which usually require 14 spacing, may be set at 16 spacing and, properly justified, will produce copy that has a compact, printed appearance. The amount of "stretch" required (for the best results) will vary according to the type style and column width. Try it on your *Vari-Typer*. You'll notice a decided improvement in the appearance of your justified copy.

COPY AT SMALLER SPACING THAN USUALLY REQUIRED

This is a sample of justified copy set in a spacing smaller than the type usually requires. This is the Alexandria (320-10) style which ordinarily is set at 14 characters per inch, but

This is a sample of justified copy set in a spacing smaller than the type usually requires. This is the Alexandria (320-10) style which ordinarily is set at 14 characters per inch, but

MIMEO-DUPLICATING CAN BE MIMEO-PRINTING

READ INSTRUCTIONS CAREFULLY BEFORE TYPING

This issue of the ANVIL was composed on the Vari-Typer (Composomatic Model) using Garamond Bold Style for the main-body text (No. 680-8C) with the matching italic (No. 685-8C). Sans-serif style (No. 660-8C) was used for subheadings and Garamond Bold Italic (No. 685-8C) for picture captions. Larger heads were photo-composed on the Coxhead-Liner. The entire publication was reproduced by the photo-offset lithographic process in the U.S.A. The ANVIL is distributed, free, to all Vari-Typer operators and others interested in the new developments and new applications of the Vari-Typer machine process. It is published by the Ralph C. Coxhead Corporation, manufacturers of Vari-Typer; 720 Frelinghuysen Ave., Newark 5, N.J. Officers of the Corporation are Stuart P. Coxhead, President; G. J. Farmer, Vice President; William Dreichler, Secretary-Treasurer. Copyrighted 1954 by the Ralph C. Coxhead Corporation. Reproduction of any or all parts of this issue may be made by special permission of the publishers.

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