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AUXILIARY PHOTOTYPOGRAPHICAL MATRIX

Filed June 25, 1963

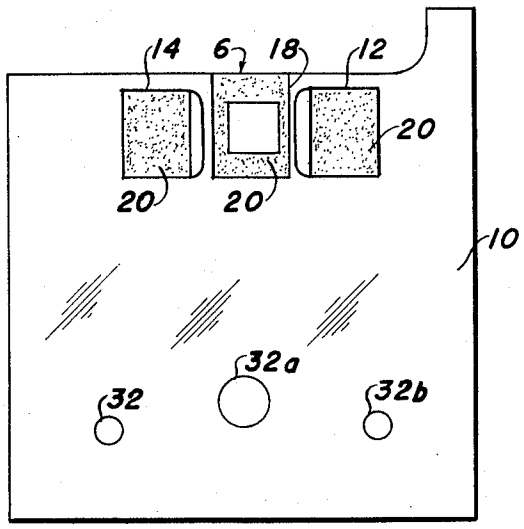



FIG. 2




FIG. 4

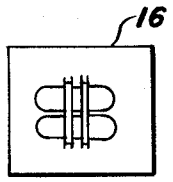



FIG. 3

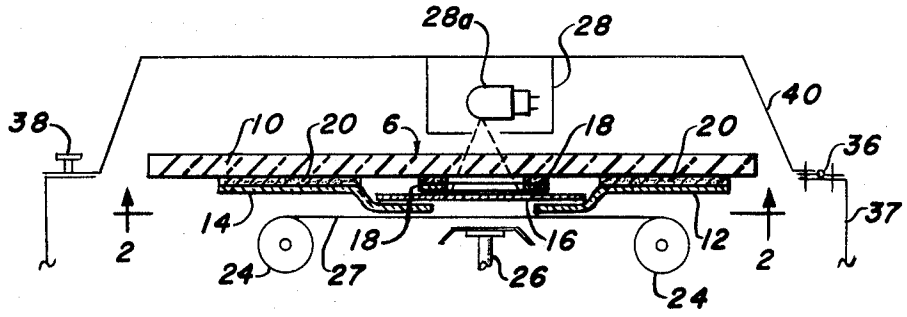



FIG. 1

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# AUXILIARY PHOTOTYPOGRAPHICAL MATRIX

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1 Claim. (Cl. 95—85)
(Granted under Title 35, U.S. Code (1952), sec. 266)

The invention described herein may be manufactured by or for the Government for governmental purposes without the payment of any royalty thereon.

This invention relates to improvements in a multiple and exchangeable phototypographical matrix.

More particularly, this invention relates to improvements in a universal matrix in the form of a special negative adapter for a phototypographical matrix similar to that described in U.S. Patents Nos. 2,742,830 and 2,649,036.

The invention is especially adapted for preparing copy with large size type or characters, depending on proper spacing which is necessary and desirable for advertising layouts, headlines or captions or other special matter. This invention is especially useful in the rapid preparation of military instructional training aids. The invention is moreover designed to accomplish these results at a small fractional cost of the usual printing techniques heretofore used in the form of individual matrices in the form of large letter discs. The invention is furthermore adapted for a wide scope of printing uses not common to indicia disc type of printing machines. However, in the disc type of machine the disc type of matrix may be replaced by a multiplicity of negatives, as taught by the invention, quickly at a great economy of storage space during military use in a remote locale.

Because of the problem of expensive matrix duplication in the form of letter discs and wastage of storage space the instant matrix adapter was invented as a solution to the problem.

The new matrix is made to fit a headliner type of phototypographical printing machine. The adapter takes an original symbol drawn and reproduced by any of the desired conventional processes on sensitized film, either positive or reversal. By inserting the negative in the adapter, as many copies of the symbol as desired can be reproduced on the machine in only a few minutes.

An object of this invention is to provide a negative holder of such thin dimensions as to permit contact printing of a phototypographical character on a sensitized film and not sacrifice the flexibility of choice of characters to be printed.

Another object of the invention is to provide a matrix for phototypographical printing in which the subject matter to be printed is a film negative of individual and selective art form.

Other objects and advantages of the invention will become apparent in the following specification considered with reference to the accompanying drawings throughout which like parts are designated by like numerals.

The new matrix includes a special negative adapter holder, mask and template made to be used with a headliner type of phototypographical printing machine. The adapter is made to receive an original symbol on a negative which is produced by being photographed from a negative on sensitized film, either as a positive or reversal negative. By inserting the final negative in the adapter holder of the new matrix, as many copies of the symbol as desired may be printed or reproduced on photographic film; at a great saving in expense without loss of time over present conventional means, and methods.

A better understanding of the invention will be had by referring to the following detailed description in conjunction with the accompanying drawings in which:



FIGURE 1 is a sectional view of the new matrix in association with a portion of a conventional headline type of phototypographical printing machine;

FIGURE 2 is a view of the new matrix and negative adapter taken on lines 2—2 looking in the direction of the arrows;

FIGURE 3 illustrates one type of negative which contains a symbol, as shown, which is adapted to be placed in the negative holder for printing; and

FIGURE 4 illustrates another type of negative, as shown, containing another printing symbol adapted to be placed in the negative adapter of the interchangeable matrix for printing a desired symbol on a sensitized photographic film.

Referring to the drawings, FIG. 1 is a sectional view of an adaption of the new matrix **10** to a conventional headliner type of machine, comprising a sensitized film advancing means **24**, and a film printing contact means **26** associated with hinged light cover **40** supporting light enclosure box **28**, as shown.

FIG. 1 comprises a film advancer means **24** and printing mechanism and contact means **26**, a conventional light enclosure cover or panel **40** containing an exposure light means **28***a* and box **28** secured to cover **40** which is hinged by members **36** to machine structure **37**. Cover **40** has a handle **38** for operation and servicing the equipment during printing of a character or group of characters, as desired.

The negative adapter of FIGS. 1 and 2 contains thin plastic-like members **12** and **14**. Negative mask **18** is laminated to the under side (printing side) of transparent template member **10** by any suitable adhesive means **20**, as shown. Negative member **16** contains a symbol for phototypographical printing and is shown in printing position in FIG. 1.

Referring to FIG. 2, the matrix includes template **10** which is of a desired transparent material such as glass, plastic or the like. Apertures **32**, **32***a* and **32***b* may be positioned as desired to be adapted to fit any commercial headline machine, such that the new matrix may be substituted for a conventional letter disc during the printing of symbols phototypographically on a film, completely eliminating the need for expensive letter discs, which are very expensive and are time consuming to manufacture and to operate. The negative adapter **6** of FIG. 1 comprising thin lamination members **12** and **14** are secured in place by adhesive **20** to template **10**, as shown. Member **18** is an exposure mask placed between negative retaining members **12** and **14** adjacent to an exposure light **28***a* as a film exposure station.

FIG. 3 discloses a negative **16** which contains one symbol for a pontoon bridge which may be repeated as desired, for a long or short pontoon bridge.

FIG. 4 illustrates another negative **16** containing a letter symbol which may be similarily printed and reprinted in a headliner type of printing machine as desired.

FIGS. 3 and 4 illustrate only two of the many types of negatives which may be used for printing in the present negative adapter of the new matrix.

The new negative adapter comprises members **12**, **14** and **18**. This adapter is by no means restricted to the printing symbols of FIGS. 3 and 4, but may be used with any type of symbol having a desired configuration for printing as a single character or for printing in a multiplicity of characters in headline form without the expense of manufacturing costly and cumbersome letter disc accompanied by a long wait for the layout and lamination of a new letter disc for phototypographical printing which is inherent in some headline machines. The thin printing film negatives **16** may be made to contain any desired phototypographical character which may be economically stored in a small compact space at a great saving in cost

as compared with the large cumbersome and expensive letter discs presently known in the art.

In use, as shown in FIGS. 1 and 2, a desired negative **16** is placed in the negative holder on top of mask **18** in negative holder members **12** and **14**, as shown in FIG. 1, then contact means **26** presses, in any desired mode of operation, sensitized printing film **27** of film advance means **24** against negative **16** after which exposure light **28***a* in light box **28** is selectively operated for the correct time exposure to obtain a desired printing of the character of negative **16** on sensitized film **27** as a single character or a multiplicity of like characters in headline form.

The mechanisms for operating film contact member **26**, and advancing film **27**, operating exposure light **28***a* in sequence and developing the film may be of any desired means and forms no part of this invention. Member **37** designates the outside structure of a conventional phototypographical machine, as shown and likewise forms no part of the invention.

Referring to FIGS. 3 and 4, the size of the character to be printed may be varied, as desired, depending upon the size of the negative used with a designated size of phototypographical printing film.

While there has been described to be the preferred embodiment of the invention, it will be obvious to those skilled in the art that various changes may be made therein without departing from the spirit and scope of this invention. Furthermore, the foregoing description should not be construed as limiting this invention to the specific embodiment illustrated, excepting as it may be limited in the appended claim.



We claim:

In an auxiliary character matrix adapter for a phototypographic headliner composing machine which normally utilizes a disc means for displaying printed characters to be reproduced at a printing station, the combination of a transparent film means having a reproducible character matrix thereon and a positioning means for said film means, said positioning means including a planar transparent support means, means for holding said film means on said support means, said holding means being positioned on said support means to accurately locate the character matrix at said printing station, and aperture means in said support means for locating said support means so as to secure said film means in an accurate position for said matrix to be reproduced.

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