May 7, 1940. G. W. BUNGAY 2,199,614

PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING

Filed Dec. 30, 1936 4 Sheets-Sheet 1

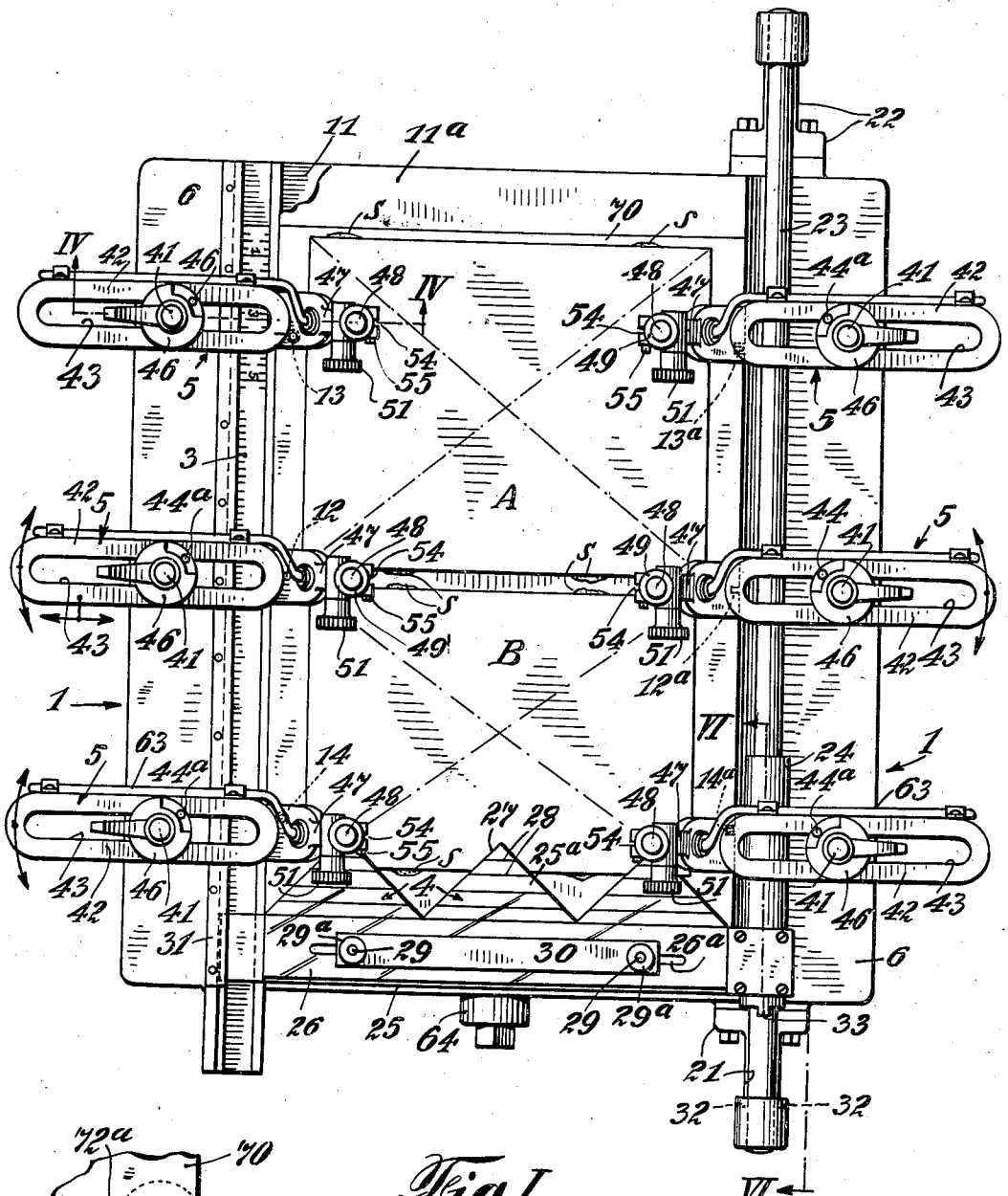


Fig. I

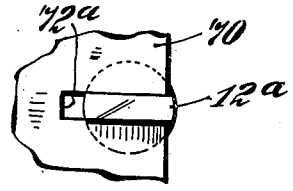


Fig. II

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PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING

Filed Dec. 30, 1936 4 Sheets-Sheet 2

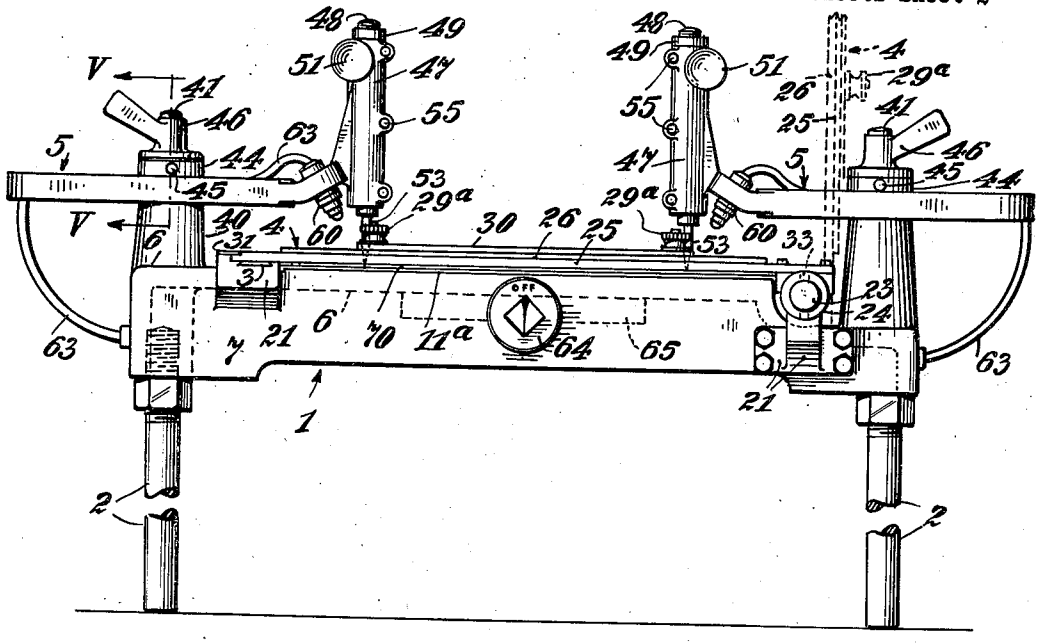


Fig. III

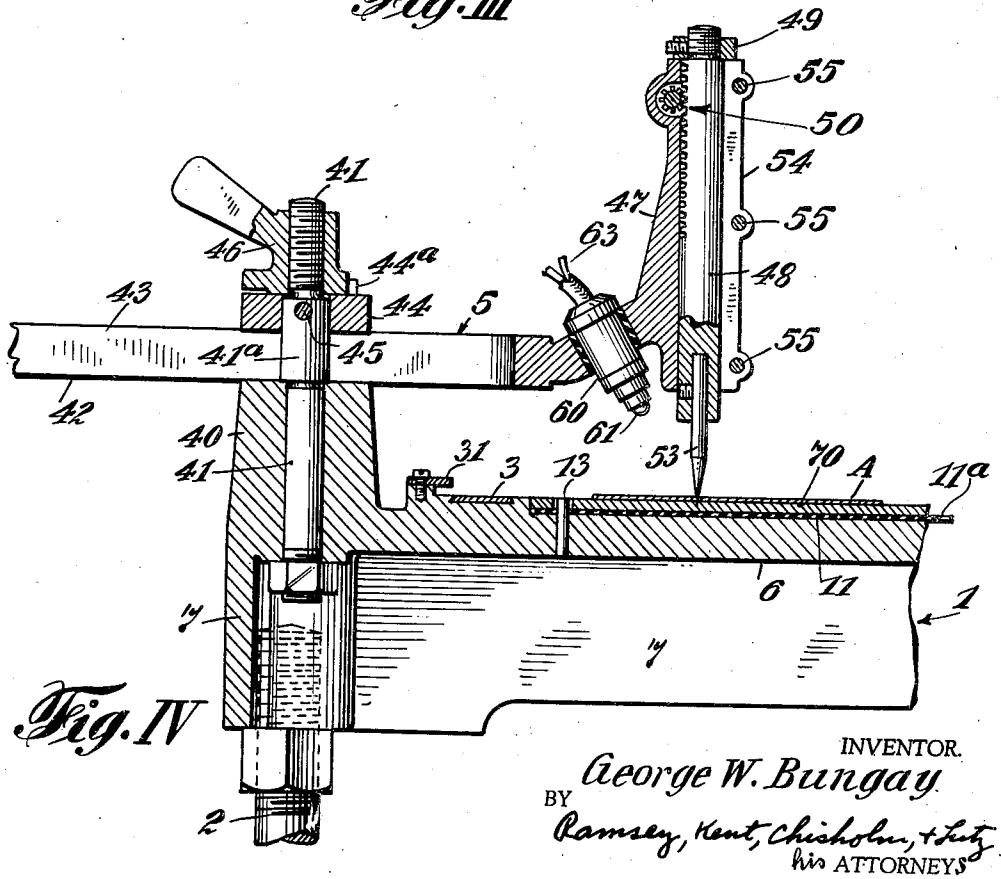


Fig. IV

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PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING

Filed Dec. 30, 1936 4 Sheets-Sheet 3

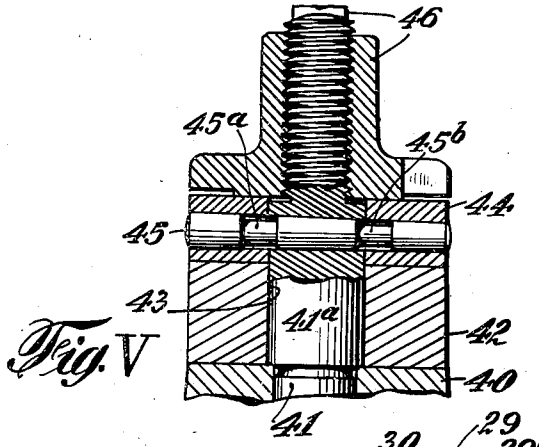


Fig. V

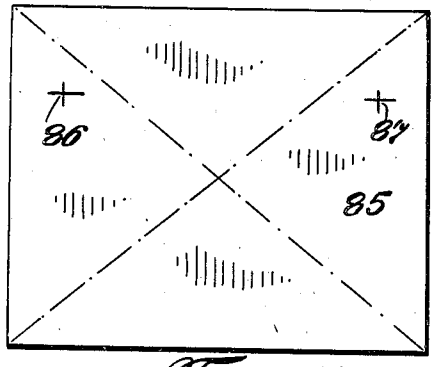


Fig. VIII

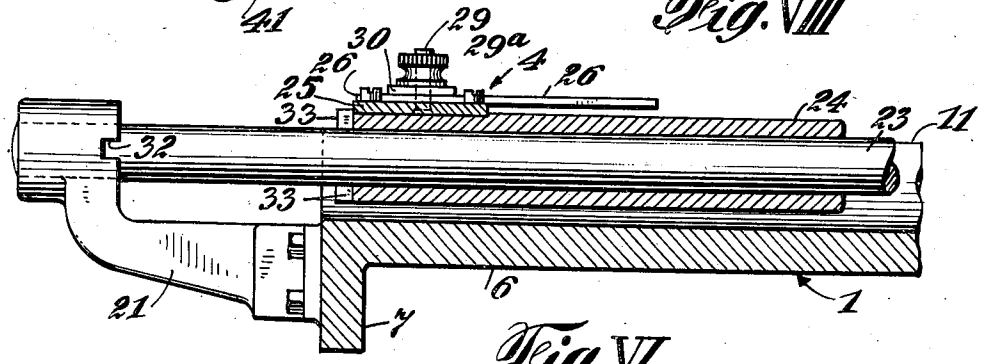


Fig. VI

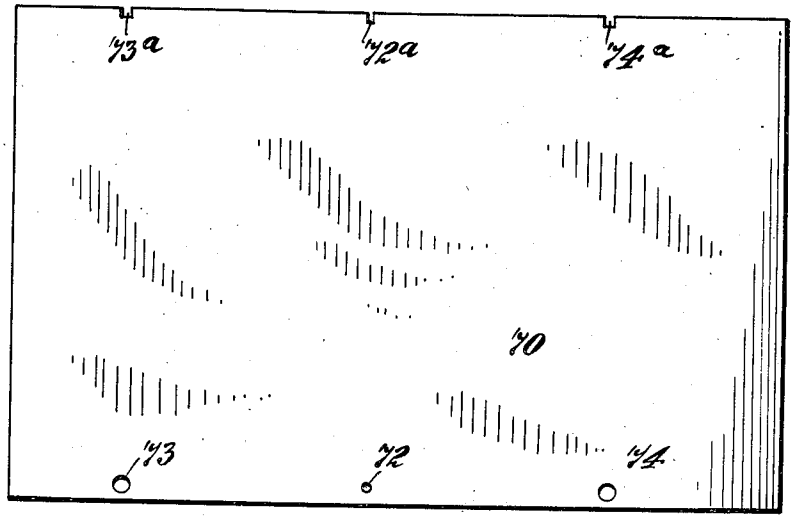


Fig. VII

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PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING

Filed Dec. 30, 1936 4 Sheets-Sheet 4

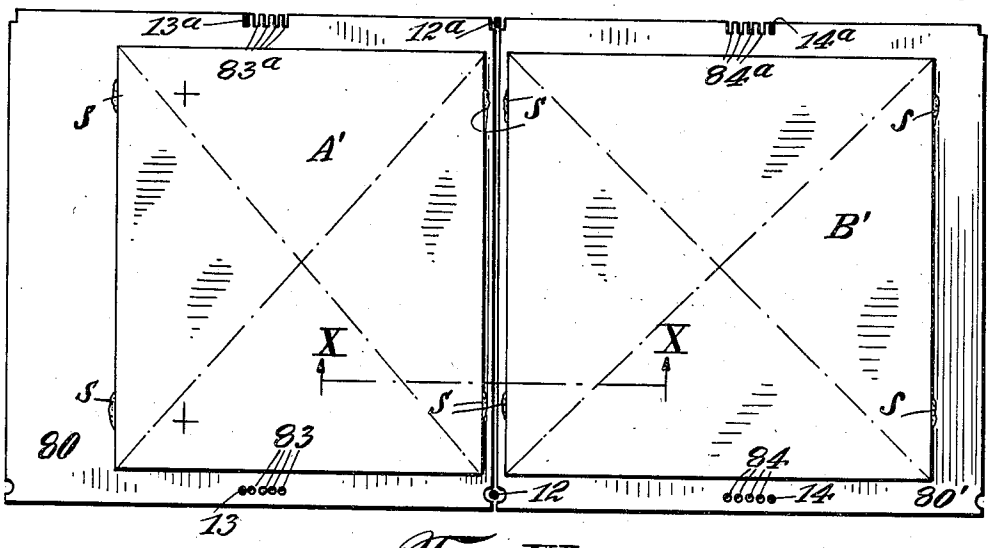


Fig. IX

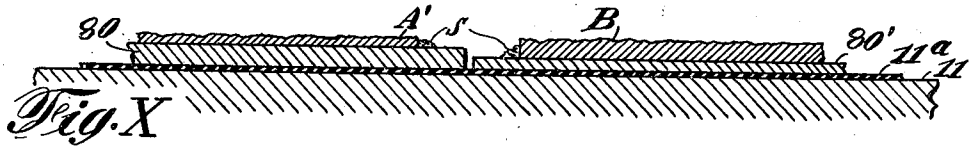


Fig. X

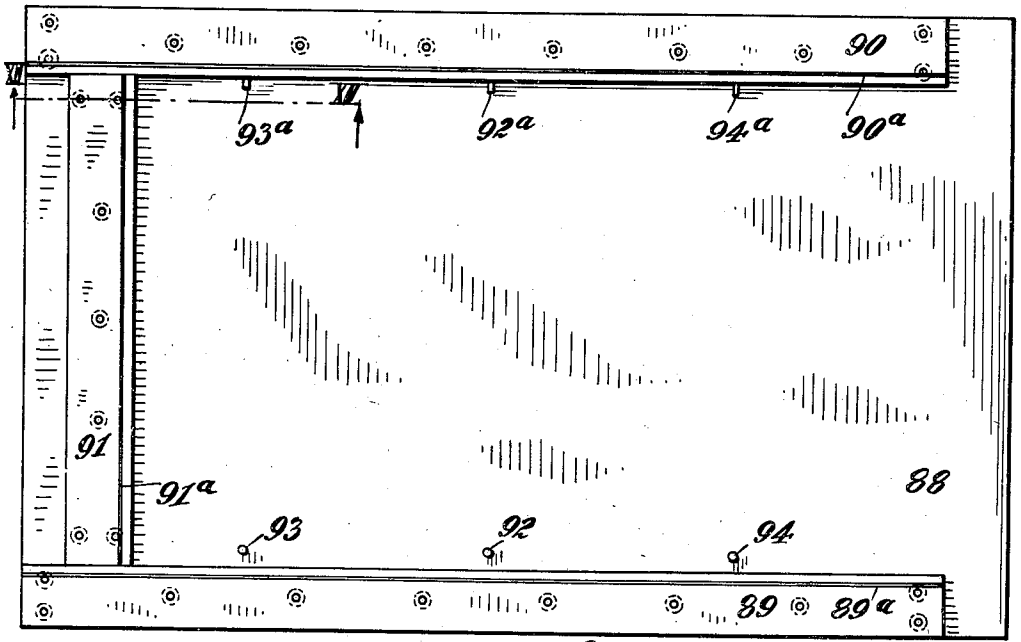


Fig. XI

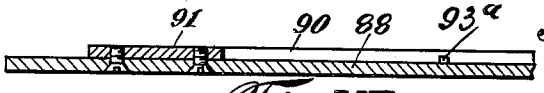


Fig. XII

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UNITED STATES PATENT OFFICE

2,199,614

PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING

George W. Bungay, New York, N. Y., assignor to Electrographic Corporation, New York, N. Y., a corporation of Delaware

Application December 30, 1936, Serial No. 118,188

8 Claims. (Cl. 33—184.5)

This invention relates to the preparation of type for superimposed printing. One application of the invention is the preparation of type for printing comics and comic advertisements in newspapers; and the invention will be disclosed and discussed in that connection.

In producing a comic, the artist prepares and colors the original drawings by hand. For the sake of having definite colors to which reference can be made, a comic will be assumed which has certain areas in black, other areas in red, still other areas in blue, and the remaining areas in yellow. From the drawings, a series of four plates or representations are prepared, one representation corresponding to the black areas, the next to the red areas, etc. These four representations are prepared by photographing the original drawings through color screens and making four zinc or copper etchings which represent respectively the portions of the comics having the different colors. Then types (e. g., stereotypes) are prepared corresponding respectively to each of the four etchings; and the printed comic is synthesized by successive superimposed printings from the four types, one type printing the black areas, the next printing the red areas, and so on.

In general, each stereotype printing plate covers an entire printed page; and the page will ordinarily contain headings or titles, and may contain more than one comic. Thus, while each plate is to print but a single color, the stereotype matrix may be made from an assembly of several impression members. For example, with two comics on a page, two impression members may be assembled to produce a single stereotype matrix, one impression member corresponding to the black area of one comic, and the other to the black area of the other comic.

In order that a satisfactory printed comic page may be obtained, the type for the several printings must, of course, be so coordinated that proper registration, or relative location, of the several printings will be achieved. In general, coordination in the preparation of the type for the superimposed printing has been effected by trial and error methods, which are very laborious and time consuming.

A general object of the present invention is to provide a speedy and accurate method for producing coordinated stereotype matrices for use in preparing type for superimposed printing.

Another object of the invention is to provide apparatus which may be used to quickly and accurately coordinate impression members used in producing stereotype matrices for superimposed printing, whether one or more impression members are to be used for producing a single matrix.

A further object of the invention is to provide apparatus by means of which impression members of different thickness can be readily coordinated for the production of each of the several coordinated stereotype matrices, that are to be used in producing type for superimposed printing.

Various additional objects of the invention will be apparent to those skilled in the art from the following disclosure.

The present invention is applicable to printing in any number of colors, but it will be discussed on the assumption of printing in the four colors previously referred to, viz. black, red, blue and yellow. Impression members corresponding to the black areas of a printed page are assembled on and attached to a backing plate. Then impression members corresponding (e. g.) to the red areas of the same page are assembled on a second duplicate backing plate in proper coordination with the black assembly on the first backing plate. Similarly assemblies of impression members corresponding to the blue and yellow are made on third and fourth backing plates, respectively. From these four assemblies, four stereotype matrices are made, each matrix corresponding to an entire printed page. From the four matrices, four stereotypes are made; and all are used for superimposed printing on the same page.

Fig. I of the drawings is a plan view of a make-up table, which is used to locate the impression members in coordinated relation on the backing plates.

Fig. II is a detail plan view, showing the indexing of one point of the backing plate on the make-up table.

Fig. III is a front elevation of the make-up table.

Fig. IV is a double-scale section through one of the swinging arms, taken in general on the line IV—IV of Fig. I.

Fig. V is a detail quadruple-scale sectional view showing the structure for supporting and clamping the swinging arms. The view is taken in general on the line V—V of Fig. III.

Fig. VI is a detail double-scale sectional view showing the mounting of a sliding square incorporated in the table. The view is taken in general on the line VI—VI of Fig. I.

Fig. VII is a plan view of one of the backing

plates used to receive the impression members for forming the stereotype matrix.

Fig. VIII is a plan view of an impression member to be located on and affixed to the backing plate of Fig. VII.

Fig. IX is a more or less diagrammatic plan view showing how a two-part backing plate may be used in accordance with the present invention.

Fig. X is a detail sectional view taken approximately on line X—X of Fig. IX.

Fig. XI is a plan view of the bed of the press for pressing the stereotype matrices.

Fig. XII is a detail double-scale view taken in general on the line XII—XII of Fig. XI.

GENERAL ORGANIZATION OF MAKE-UP TABLE

The table has a top, designated as a whole by 1, which may be supported at a convenient height by legs 2. The backing plates, previously referred to, are successively oriented on top of the bed 1; and the coordination of impression members is facilitated by devices which form a part of the table organization. Slidably mounted on top of the table is a ruler 3 and a square 4, which are used in so locating the impression members on the first backing plate as to make an appropriate arrangement of printed page. Slidably and rotatably mounted above the table are a plurality of arm units 5 (six shown) that are set in accordance with the arrangement of impression members made on the first backing plate (usually corresponding to the black printing) and then used to produce the identical arrangement and location of the impression members on the remaining backing plates (corresponding respectively to red, blue, and yellow).

The table top

The top 1 may be a single piece of cast iron having a horizontal portion 6 and a depending skirt portion 7. Preferably suitable bosses, enlargements, etc. are cast integral with the top to receive the legs 2, arm units 5, and other elements of the complete organization. The horizontal portion 6 of the table top has a flat depressed surface 11 which constitutes a bed to receive the backing plates. Preferably this bed is surfaced with a sheet 11a of fibre or other material which is a poor conductor of heat and will withstand a reasonably elevated temperature.

Closely adjacent one longitudinal edge of the bed 11 are three accurately located dowel pins 12, 13, and 14 (see also Fig. IX) each of which is round and each of which projects a slight distance above the bed 11. Directly opposite the pins 12, 13 and 14 are accurately located pins 12a, 13a, and 14a, each of which has a rectangular portion that projects a slight distance above the surface 11. These pins are used, as will be explained later, to locate and orient the backing plate in definite positions on the table.

Ruler and square

The ruler 3 parallels the line established by pins 12, 13 and 14; and as shown in Fig. IV, the ruler is slidable longitudinally of itself in a track in the table top, but cannot be lifted directly up from the table.

Referring to Figs. I and VI, cast metal brackets 21 and 22 are secured, as shown, to the opposite ends of the table and have fixedly mounted therein a round guide rod 23 which extends longitudinally on the table a slight distance above its top. Slidably mounted on the guide 23 is sleeve 24, which can move the full length of the guide. The square, designated as a whole by 4, is fixedly attached to the sleeve 24, and is composed of several parts which will now be described.

A metal arm 25 extends transversely of the table at right angles to the guide 23 and is screwed or otherwise secured to sleeve 24. Attached to and carried by the arm 25 is a member 26 of transparent material which is the sighting element of the square. Preferably the sighting element has a plurality of saw-toothed formations such as 27, the edges of which all extend at an angle of 45 degrees to the guide 23. Also the sighting element 26 is preferably marked with a plurality of lines such as 28, each of which is perpendicular of the guide 23.

The attachment of the sighting element 26 to the arm 25 is such that element 26 can be shifted on the arm 25 without disturbing the angularity of element 26 with respect to guide 23. This adjustable attachment of the sighting element to the arm 25 may be made in any suitable way. As shown, the element 26 lies on top of the arm 25 and has a slot 26a which is pierced by two bolts 29, 29 that are affixed to the arm 25. A metal clamping strip 30 is positioned on top of the sighting element 26 and is also pierced by the shanks of the bolts 29, 29. On the free ends of bolts 29, 29 are knurled thumb screws 29a, 29a, by means of which the clamping strip 30 is forced against the sighting element 26 to secure it in adjusted position.

To the left of the ruler 3 there is an elevated retainer strip 31 (Figs. I and IV) which runs substantially the full length of the table and under which the free end of arm 25 projects. Thus the retainer strip 31 retains the arm 25 in a horizontal position as it is being moved lengthwise of the table. However, by pulling the sleeve 24 close enough to the bracket 21, the end of arm 25 passes out from under retainer strip 31. This permits the arm 25 to be rotated on guide 23 to bring it into a vertical position, as indicated in dotted lines in Fig. III. The bracket 21 is provided with a pair of horizontal notches 32, 32, and the end of sleeve 24 is provided with corresponding tongues 33, 33. When the arm 25 has been moved to a vertical position, as indicated in Fig. III, the tongues 33 align with the notch 32 so that the tongues can be slipped into the notches to retain the arm 25 in a vertical position.

The swinging arms

The six swinging arm units 5 are all alike except that those on one side of the table are mirror reversals of those on the other side of the table. Accordingly, only one arm unit will be described; and reference will be had more particularly to Figs. IV and V, though the arms also appear in Figs. I and III.

A flat topped boss 40 is integral with the table casting and projects an appropriate distance above the top of the table. This boss is pierced by a vertical stud 41 which is firmly held in a stationary position and is secured against rotation in any suitable way. The swinging arm unit 5 has a horizontal arm portion 42, in which there is a longitudinal slot 43 (Fig. I) that makes a close sliding fit with enlarged cylindrical portion 41a of the stationary stud. A collar 44 embraces the stud 41 above the horizontal arm 43. This collar makes a bearing fit with the stud 41 but is fixed to the stud by a taper pin 45. The upper and lower surface of the arm 42 are accurately ground in parallelism and make an accurate fit with the bottom surface of collar 44 and the top surface of boss 40. The elevation at

which collar 44 is normally held by the taper pin 45 is such as to give arm 42 only the slight clearance needed to permit the arm to rotate about and slide on stud portion 41a. Thus, the arm 42 is held at all times against any tilting from the horizontal plane. However, the taper pin 45 is reduced in diameter at 45a and 45b; and when pressure is applied to collar 44 by clamping nut 46 the pin flexes slightly and allows collar 44 to move downwardly the very small amount needed to clamp the arm 42 in a fixed position. It will be noted that this clamping of the arm 42 in a fixed position is effected without any change in the position of the arm, as the arm is at all times held in a perfectly horizontal position and pin 45 prevents the rotary movement of clamping nut 46 from being imparted to collar 44. Affixed to collar 44 there may be a pin 44a which prevents needless backing off of nut 46.

On the inner end of the arm 42 there is formed a vertical housing 47, in which a reciprocating rod 48 makes a sliding fit. A collar 49 limits the descent of the rod 48; and a rack-and-pinion connection at 50 provides for easy adjustment of the position of rod 48. Preferably the pinion of the rack-and-pinion movement is connected with a thumb screw 51 for easy manual adjustment. Fixed in the lower end of the rod 48 is a hardened stylus 53. The housing 47 is severed from top to bottom at 54; and clamping screws 55 (three shown) are effective to contract the housing slightly to impose friction upon the sliding of member 48, for a purpose which will be referred to later.

Electrical system

Each of the swinging arm units 5 is provided with a light which illuminates a small area surrounding the point of the stylus 53. A socket 60 may pass through the arm and be provided with a small electric bulb 61 having a built-in lens which focuses a beam of light around the point of the stylus. Wiring 63 extends from the socket to beneath the table and is so connected that all of the lights will be simultaneously energized upon closing a connection switch 64. The six lights may be connected in series, but it is preferable to connect them in parallel. Also, it is convenient to use small low voltage bulbs, similar to flashlight bulbs, and a series resistance unit 65 may be mounted beneath the table and be so connected into the circuit as to permit the lamps to be operated from a 110 volt supply.

Backing plate and impression members

In Fig. VII there is shown a one-piece backing plate 70 used with the present invention. This plate is preferably made of zinc and in accordance with present practice is either .063" or .152" thick. At one side of the plate and on the transverse axis thereof, there is a hole 72 which accurately fits the dowel pin 12 on the table. Directly opposite on the other side of the plate there is a rectangular notch 72a the sides of which accurately fit the rectangular pin 12a, as shown more particularly in Fig. II. Holes 73 and 74 are so positioned that they pass over dowel pins 13 and 14 on the table, but are large enough to completely clear the pins. Notches 73a and 74a pass over pins 13a and 14a on the table, but are also large enough to completely clear the pins.

In Figs. IX and X there is shown a two-piece backing plate having two similar parts 80 and 80'. Part 80 has a series of holes 83, any of which will accurately fit dowel 13 on the table. Opposite the holes 83 are notches 83a any of which will accurately engage rectangular pin 13a on the table. Similarly part 80' has a series of holes 84, any of which will accurately fit dowel 14; and opposite holes 84 are notches 84a, any of which will accurately engage the sides of rectangular pin 14a. When the two-part plate is placed upon the make-up table, part 80 is positioned by pins 13 and 13a and part 80' is positioned by the pins 14 and 14a. As shown in Fig. IX the adjacent edges of the two parts 80 and 80' are so recessed as to completely clear pins 12 and 12a.

Fig. VIII shows an impression member 85 which is to be located on and attached to the backing plate. Of course, it will be understood that in four colors printed, the impression members will be in sets of four, of which member 85 is one. On the original drawings the artist places suitable index marks which are photographically reproduced on all of the impression members taken from the drawings. Thus the index marks appear in the same identical location on each member of a set. These index marks may take various forms, but are often a cross mark such as crosses 86 and 87.

Sometimes the impression member 85 is an original copper or zinc photo-engraving and sometimes it is a duplicate of the original etching. In accordance with present practice original etchings are .063" thick, whereas duplicates are .152" thick.

The matrix press

The matrix press has a flat bed 88 along the edges of which are fixed parallel strips 89 and 90. These strips in accordance with present practice are .216" thick; and the two strips are spaced far enough apart to permit the backing plate 70 to be placed between them. On the top surfaces of strips 89 and 90, grooves 89a and 90a are formed parallel to the longitudinal axis of the bed 88. A stationary but removable strip 91 extends transversely from strip 89 to 90, as shown, and is provided with a groove 91a. Fixed in the bed 88 are round dowel pins 92, 93 and 94, the size and arrangement of which duplicate pins 12, 13 and 14, on the make-up table. Also fixed in the bed are pins having rectangular projecting portions 92a, 93a and 94a, the size and arrangement of which duplicate pins 12a, 13a and 14a on the make-up table.

Operation

Assume that the impression members which are to be used in the make-up of a page are either all original etchings or all reproductions, so that the page will not involve impression members of different thicknesses. If the impression members are original etchings a backing plate 70 (Fig. VII) will be selected which is .152" thick. If the impression members are all reproductions a backing plate 70 will be selected which is .063" thick. The backing plate 70 of selected thickness is placed upon the make-up table with hole 72 located by pin 12 and notch 72a located by pin 12a. Assume also that there are to be two impression members placed upon the backing plate, the top one being designated as A (Fig. I) and the bottom one as B. Members A and B will, of course, be from different drawings, but both will correspond to the same color of printing.

The impression members A and B are laid on the backing plate and ruler 3 is used to suitably position them lengthwise of the plate 70. Impression member A is also placed in the desired position transversely of the plate, and square 4

can be used to check the angular position. Then two of the arm units 5 are so set that their styluses 53 accurately align with the two index marks 86 and 87 (Fig. VIII) on the impression member; and the styluses are moved firmly into contact with the member A, in which position the styluses are held by the friction of housing 47 (Fig. IV). Thus, the impression member A is held temporarily in the desired position on the backing plate 70.

With thumb screws 29a, 29a loosened, sighting member 26 is so shifted along arm 25 as to align the center sawtooth with the center line of impression member A. This adjustment can readily be made by means of square lines 28 and the edges of the sawtooth formations. The thumb screws 29a, 29a are tightened to secure the sighting member in the adjusted position on arm 25. The square is then moved over impression member B and by means of the sawtooth edges and the lines 28 the member B is located on the center line of member A and in the proper angular position. Then two more of the swinging arm units 5 are set to bring their styluses in registration with the index marks in member B and the styluses are moved against the impression member to temporarily clamp it in located position.

The impression members A and B, thus located, are secured to the backing plate in any suitable way as by soldering the edges at S. The soldering is facilitated by the fibre facing 11a of the table, which acts as a heat insulator. Without disturbing the position of the clamped arm units 5, the styluses are raised from the impression members and the backing plate 70 removed with impression members A and B attached to it. A second duplicate backing plate is then placed on the table; and the impression member of the next color and corresponding to plate A is located by means of the first pair of set styluses and the index marks on such plate. Once positioned the impression member is temporarily clamped in place by means of the stylus. Similarly the impression member for the second color and corresponding to plate B is located and clamped by the second pair of set styluses. Then these two impression members for the second color are soldered down or otherwise fixed to the backing plate. This procedure is continued in this way for the third and fourth colors, the impression members for those colors being also located by the set styluses.

To make the matrices, the thus prepared backing plates are placed one at a time on the bed of the matrix press. The space between the free ends of strips 89 and 90 is closed by a strip of proper thickness which is laid on the edge of the backing plate, and then the stereotype mat is placed over the impression member and pressed in the usual way. Grooves 89a, 90a and 91a form guide lines on the finished mat by means of which the mat can be trimmed and fitted accurately to the casting box for casting of the type. It will be seen that on the make-up table the impression members for the several colors are accurately coordinated, and that the indexing of the backing plates on the make-up table is duplicated on the matrix press. Accordingly, the mats (and stereotypes produced therefrom) for the super-imposed printing are all accurately coordinated.

The backing plates as they come to the make-up table may vary in temperature, but despite expansion and contraction due to temperature changes will fit on the make-up table and be accurately located thereon. Only one point of the backing plate is indexed and fixed on the table, viz. the point established by hole 72 and dowel pin 12. The point established by notch 72a is maintained on the line fixed by pin 12a, but as shown in Fig. II the plate can expand and contract with sliding movement at pin 12a. The result is that the only fixed point is that of dowel pin 12 and the plate can expand or contract in all directions from this point. Similarly the plate can expand and contact in all directions when it is on the matrix press.

The two-part backing plate shown in Figs. IX and X permits impression members of different thicknesses to be incorporated into the make-up for a single page of printing. Assume that the impression member A' is an original etching and therefore .063" thick and that the impression member B' is a duplicate and therefore .152" thick. For part 80 of the backing there would be selected a plate .152" thick and for part 80' there would be selected a plate .063" thick. As shown in Fig. X the make-up then brings the two impression members to the same level for the pressing of the stereotype matrix.

Another use for the two-part backing plate is in preparing make-ups for different sizes of pages. In locating the two-part backing plate on the make-up table different holes may be used in the series of holes 83 and 84, thus in effect changing the length of the backing plate to adapt it for different sizes of pages. Of course, this use of the two-part backing plate may be either with or without the use of parts 80 and 80' of different thicknesses to accommodate impression members of different thickness. In placing the two-part backing plate on the matrix press the same holes must be used in locating the parts as were used in locating the parts on the make-up table. The make-up man may attach to the backing plates a tag or note indicating which holes were used, so that the operator of the matrix press will know which holes to use on the matrix press.

While I have shown the backing plates as being located by a dowel hole adjacent to one edge of the plate and a slot at the other edge of the plate, it will be apparent that other arrangements may be used to permit the plate to expand or contract in all directions from a single fixed point. For example, the dowel hole may be on the center longitudinal axis of the backing plate, with slots on one or both of the edges. In Fig. VII the holes 72, 73 and 74 may be placed on the center longitudinal axis of the plate and notches 72a, 73a and 74a duplicated on the opposite longitudinal edge of the plate. In such case the arrangement of dowels and rectangular guide pins on the make-up table and matrix press will, of course, be coordinated accordingly. In Fig. IX the series of holes 83 and 84 may be placed on the central longitudinal axis and the series of notches 83a and 84a be duplicated on the opposite edge of the plate.

In compliance with the patent statutes I have disclosed the best forms in which I have contemplated applying my invention, but it will be understood that the disclosure is illustrative of the invention without limiting its scope.

What is claimed is:

1. In a make-up table having a bed, means to locate a backing plate on the bed, an arm movable over the bed parallel thereto, bearing members to support the arm for such movement, and clamping means to apply clamping pressure to one of the bearing members to clamp the arm

in adjusted position, the improvement which comprises: the arm having a longitudinal slot, a post connected to said bed perpendicular thereto and passing through said slot, one of said bearing members being a supporting surface adjacent to said post and contacting the under side of said arm, another of said bearing members being adjacent to said post in bearing engagement with the top of said arm, means resiliently securing said other bearing member to said post, and clamping means operable to force said other bearing member into clamping engagement with said arm.

2. In a make-up table having a bed, means to locate a backing plate on the bed, an arm movable over the bed parallel thereto, bearing members to support the arm for such movement, and clamping means to apply clamping pressure to one of the bearing members to clamp the arm in adjusted position, the improvement which comprises: the arm having a longitudinal slot and having upper and lower faces accurately ground in parallelism, a post connected to said bed perpendicular thereto and passing through said slot, one of said bearing members being a stationary boss surrounding said post and having a flat top in engagement with said lower face of the arm, the other of said bearing members being a collar having a flat face in bearing engagement with said upper face of the arm, a pin non-rotatively securing the collar to said post, and the clamping means being operative to applying clamping pressure to the collar whereby the pin is flexed and the arm is clamped in adjusted position.

3. In a make-up table having a bed and means to locate a metal backing plate on the bed, an improved construction for indexing the backing plate on the bed under different conditions of expansion due to variations in temperature, the improvement comprising: the bed and plate having interfitting formations to establish one point of the plate at a fixed location on the bed, and the bed and plate also having interfitting formations to confine a second point of the plate to positions on the bed which are located on a straight line.

4. In a make-up table having a bed and means to locate a metal backing plate on the bed, an improved construction for indexing the backing plate on the bed under different conditions of expansion due to variations in temperature, the improvement comprising: a pin-and-hole connection between one part of the plate and the bed to establish one point of the plate at a fixed location on the bed, and a pin-and-slot connection between another part of the plate and the bed to confine a second point of the plate to positions on the bed which are located on a straight line.

5. In the art of superimposed printing, a make-up table to facilitate the coordination on separate backing plates of a series of impression members corresponding to the successive superimposed printings, said table comprising: a bed to support the backing plates one after another; locating means connected with the bed and engageable with the backing plates successively to locate each of them in the same position on the bed; a square extending horizontally over the bed in a direction parallel to one axis of a backing plate located on the bed by said locating means; means slidably attaching the square to the table for movement edgewise of itself over the top of a backing plate positioned on the bed, whereby the square serves as a visual guide for orienting an impression member in a desired position on a backing plate located on said bed; means to hold the square in a horizontal position as it is being moved over the backing plate, said holding means being ineffective when the square is at the end of the bed whereby the square may be swung upwardly away from the bed to facilitate removal and replacement of backing plates on the bed; and means to releasably retain the square in such position away from the bed.

6. In the art of superimposed printing, a make-up table to facilitate the coordination on separate backing plates of a series of impression members corresponding to the successive superimposed printings, said table comprising: a bed to support the backing plates one after another; locating means connected with the bed and engageable with the backing plates successively to locate each of them in the same position on the bed; a square extending horizontally over the bed and having its axis parallel to one axis of a backing plate located on the bed by said locating means; means slidably attaching the square to the table for movement edgewise of itself over the top of a backing plate positioned on the bed, whereby the square serves as a visual guide for orienting an impression member in a position on a backing plate located on said bed; and a sighting member included in said square and having a notched edge to serve as a visual guide for positioning an impression member lengthwise of the square.

7. A make-up table as in claim 6 in which the sighting member is transparent and is marked with a series of parallel lines extending lengthwise of the square.

8. In a make-up table having a bed, means to locate a backing plate on the bed, an arm movable over the bed parallel thereto, a pair of bearing members to support the arm for such movement, and clamping means applying clamping pressure to the bearing members to clamp the arm in adjusted position, the improvement which comprises: one of said bearing members being a supporting surface contacting the under side of said arm, the other of said bearing members being above said supporting surface and contacting the top of said arm, said clamping means being operable to force said bearing members toward each other to clamp the arm in adjusted position, and means to automatically hold said bearing members in bearing relationship to said arm when said clamping means is released for movement of said arm.

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