

Dec. 23, 1930.

H. C. JONES

1,786,070

APPARATUS FOR MAKING REGISTERED PRINTS

Filed April 21, 1926

3 Sheets-Sheet 1

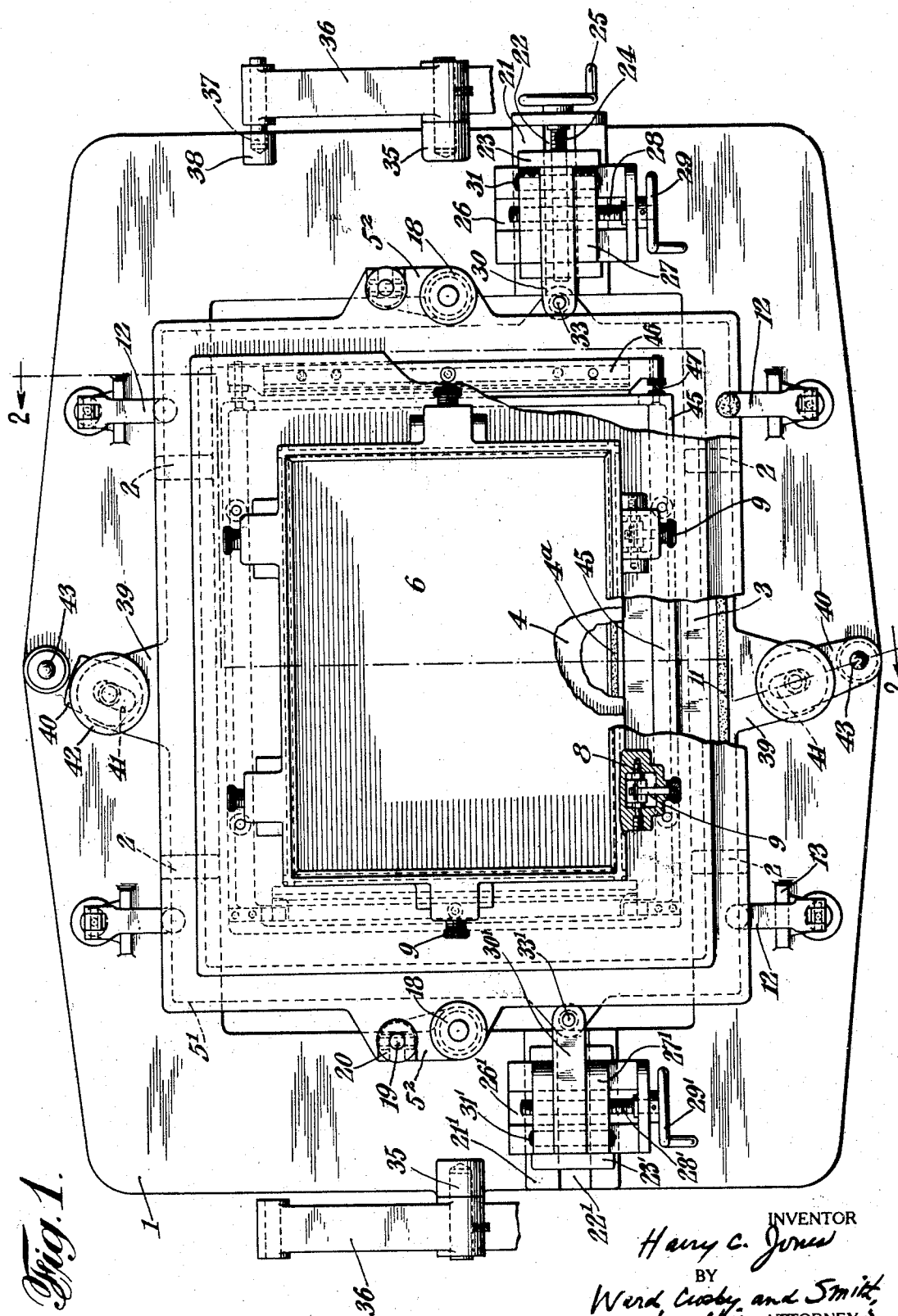


Fig. 1.

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3 Sheets-Sheet 2

Fig. 2.

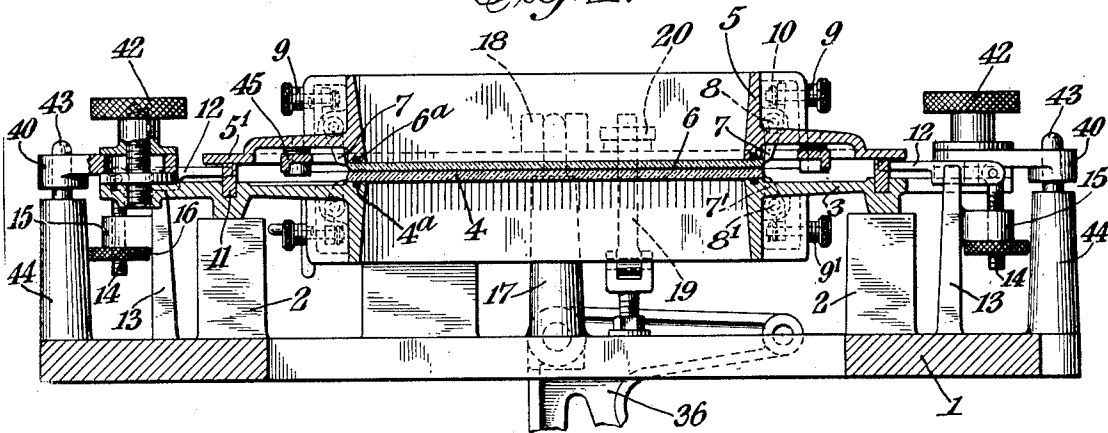


Fig. 3.

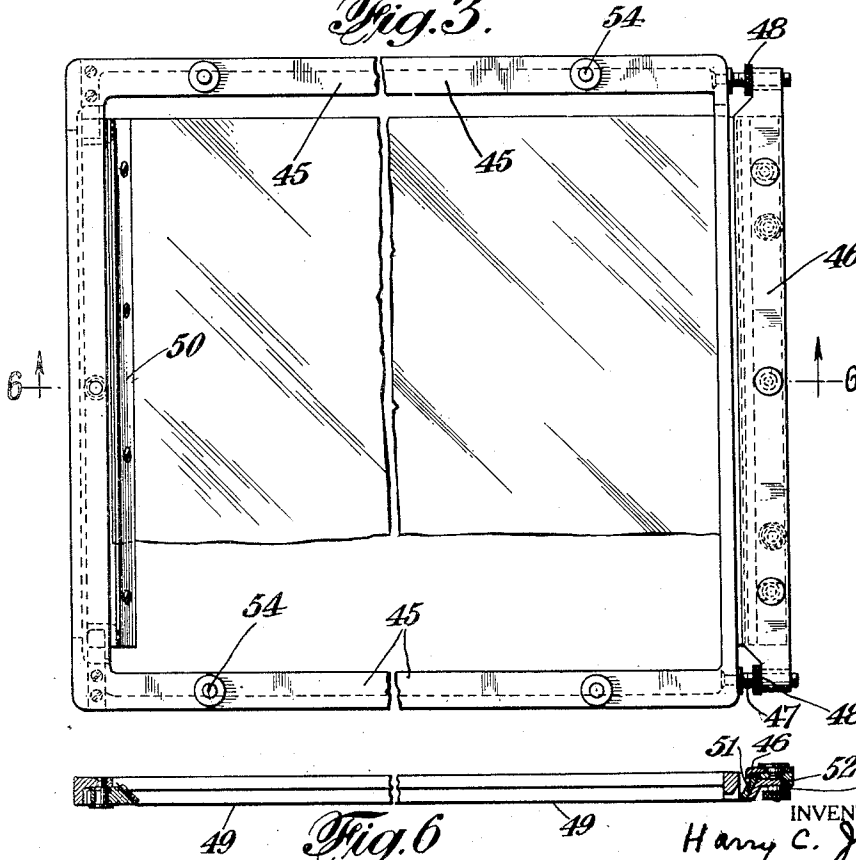


Fig. 6

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3 Sheets-Sheet 3

Fig. 4.

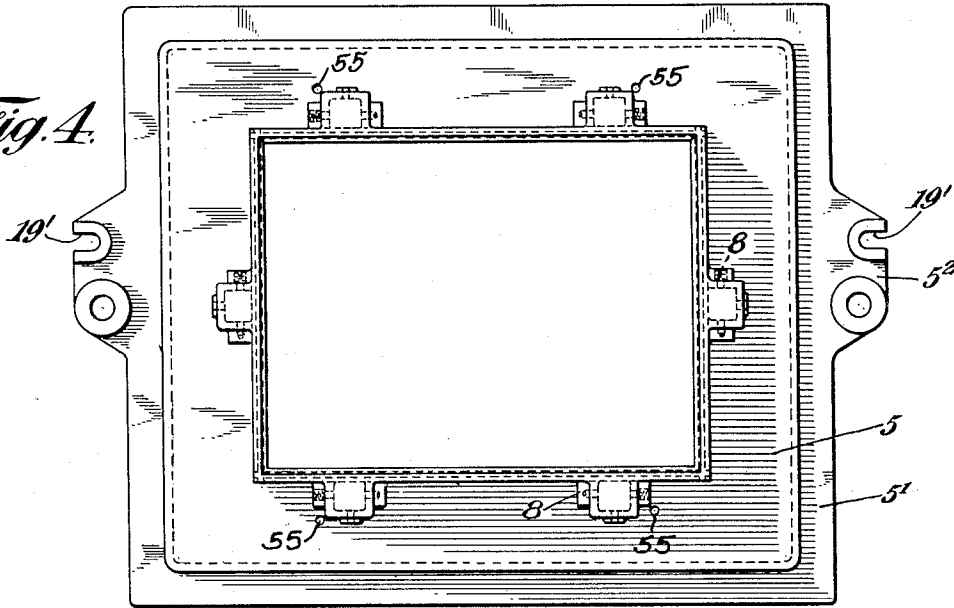
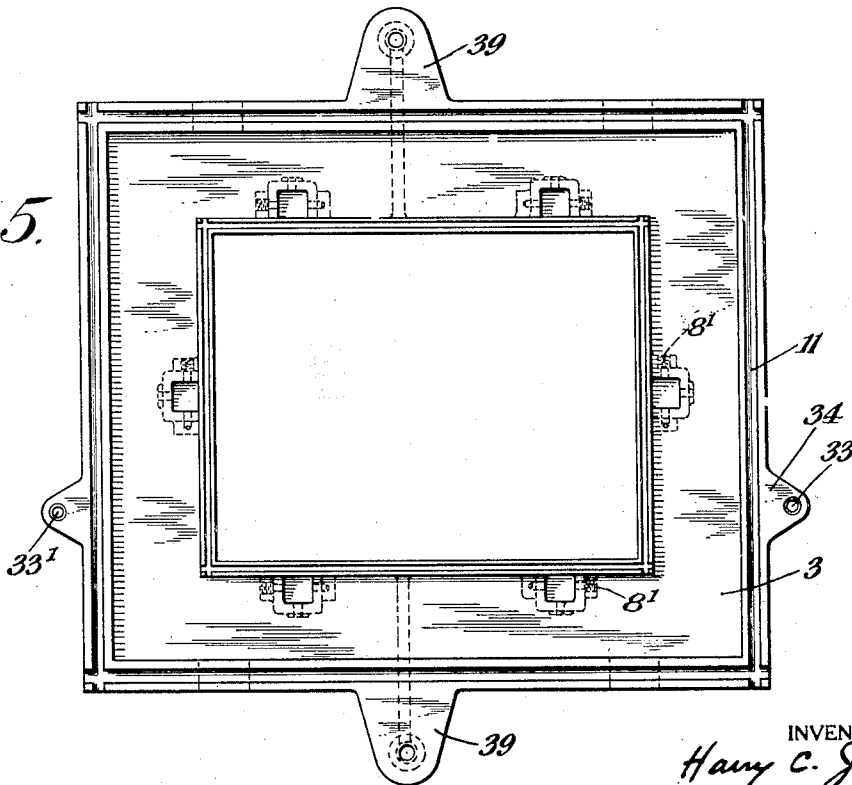


Fig. 5.



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APPARATUS FOR MAKING REGISTERED PRINTS

Application filed April 21, 1926. Serial No. 103,462.

The invention relates to apparatus for making surprints, or other registered prints. It relates more particularly to means whereby photographic printing may be readily accomplished with one print or portion of the subject matter superposed on or partly on another print or portion of the subject matter, and to apparatus by which such purpose may be accomplished. In some aspects of the invention, the prints need not be superposed one on another, but may be positioned adjacent to each other, in the final print. The invention is particularly directed to means whereby registration of the parts may be obtained very readily and quickly.

In accordance with the invention a print is made, which may comprise a copy of one of the subjects which is to be embodied in the final print which is to be made later, or a portion thereof. The various subjects which are to be printed in the complete surprint are, or may be, registered with this special registration copy or print. The registered positions of the various subjects, or pieces of "copy" are fixed, so that when the final surprint is to be made these various subjects, such as photographic negatives or positives, may be positioned, in the same relative alignment, in respect to the sensitized surface on which the final print is to be made, and the print then made. Such apparatus for obtaining registration of the various subjects with a special registration print distinguishes it from apparatus previously in use, in which the subjects from which the prints are to be made are registered with certain marks on the printing machine, which is less accurate than contemplated herein.

The present invention also comprises the use of a screen or mask which is interposed between the photograph or other object from which the print is to be made, and the sensitized surface on which the same is to be printed, this screen being aligned with a portion of the photograph or subject, whereupon a print is made from the photograph on the sensitized surface. Afterwards a surprint subject is positioned in alignment or partially in alignment with the space left blank on the sensitized surface, by the use of the screen,

the registration of the surprint subject being predetermined, after which a print is made from the surprint subject on the sensitized surface. The screen is of any suitable character, calculated to leave a blank or white space on the sensitized surface, when one or more prints are made during which time the screen is used. The screen is preferably held in fixed position relative to the sensitized surface during the various printings with which it is used.

The invention consists in the novel features, arrangements, combinations and construction of parts of the apparatus also hereinafter described in accordance with certain preferred embodiments thereof.

Objects of the invention comprise the provision of improved apparatus for efficiently, accurately and quickly obtaining surprints as described hereinafter.

Further objects of the invention will more fully appear from the following description taken in connection with the accompanying drawings. The invention will be more particularly pointed out in the appended claims.

In order that the invention may be more clearly understood attention is hereby called to the accompanying drawings forming a part of this application and illustrating by way of example one form of the apparatus used.

Referring to the drawings, Figure 1 represents a top plan view of the apparatus used in practicing the process, certain parts being shown broken away;

Fig. 2 is a vertical cross-section taken on the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of a screen holder used in the apparatus;

Figs. 4 and 5 are respectively the upper and lower photographic plate holders utilized in the apparatus; and

Fig. 6 is a cross-section taken on the line 6—6 of Fig. 3.

A brief description of one manner in which the invention may be practiced will first be given. It may be desired to make a print in which one or more subjects are to be shown superposed upon an underlying subject, the underlying subject being for example a photograph and the superposed print being for

example one or more lines of printed advertising matter.

In one form of procedure a negative, for example, is utilized, a print of which is to be made on a sensitized surface with surprinted matter thereon. A print is made from this negative, which is to be used as a special registration print. This special registration print may then be fastened in position in a frame which will have an invariable position in the registration and printing apparatus. The original negative may now be placed in another frame, which is mounted in the apparatus, and this frame adjusted so as to bring this negative into registration with the special registration print. This frame with the negative contained therein is then removed, its adjusted position being known so that it can be replaced later. Another negative or other subject, in another frame, is then put in the apparatus and adjusted to register this negative with a portion of the registration print, and its adjusted position being predetermined, this frame and negative are removed. This procedure may be repeated for as many subjects as are to be used to form surprints on the underlying print. The special registration print is then removed and replaced by a member having a sensitized surface on which the final print is to be made. The separately registered negatives, or as many of the same as are needed, are now exposed in contact with this sensitized plate, one after the other, after which the prints thus formed may all be developed together.

It will also be understood that the screen member referred to may be interposed between the photograph from which the print is to be made, and the sensitized surface on which the print is to be made, so as to leave a desired area of the sensitized surface blank. The screen may be left in the same position relative to the sensitized surface while prints from several photographs are made thereon, so as to leave the same blank space on the sensitized surface as a result of these various printing operations. After this a surprint can be made on the space thus left blank on the sensitized surface, as by printing thereon from a photograph of the surprint subject, which may be registered to exactly fit the entire blank space on the sensitized surface, or partially in this space and partly outside the same as desired. The screening member may be of any desired character such, for example, as a photographic positive of certain lettering to be superposed, when the underlying print is to be made from a photographic negative, (or a negative of the lettering when the underlying print is to be made from a photographic positive, on the sensitized surface).

Description of a preferred form of apparatus, as shown in the drawings will now be given. A table or support 1 is provided with

a plurality of upwardly extending bosses 2 on which may be supported the lowermost plate holding frame 3, which frame is adapted to carry a photographic plate, such as is shown at 4, with the sensitized surface of the plate uppermost. Another plate holder 5 is adapted to be positioned above the plate holder 3, the upper plate holder carrying a sensitized photographic plate 6 which is adapted to be positioned immediately above the plate or negative 4, with its sensitized surface at its under side. The upper frame is adapted to be held in fixed position while the under frame is adjusted in position. Thus the upper frame may hold the special registration print, with which a photograph held by frame 3 is to be registered. Or, the upper frame may hold a sensitized surface such, for example, as a sensitized zinc plate, on which prints are to be made from negatives carried by the holder 3 and other similar holders which may successively be positioned in adjusted position beneath the sensitized surface held by the fixed upper frame 5.

Plate 6 carried by the upper frame may be secured to this upper frame in any suitable manner, as by means of the pivoted dogs 7, 7 on opposite sides of the frame. Each of these dogs is pivoted on a pivot pin 8. The lower ends of the dogs are adapted to press against opposite surfaces of the photographic plate 6, while the upper ends of the dogs may be drawn outwardly by means of screws 9 having nuts or abutments 10 on the inner ends thereof so as to draw the upper ends of these dogs outwardly and thus apply clamping pressure to the plate 6 by means of the lower ends of the dogs. Plate 4 may be secured to the upper surface of the lower frame 3 in a similar manner, as by means of the pivoted dogs 7' which are pivoted to frame 3 on pivot pins 8', the lower ends of these dogs being drawn outwardly by means of screws 9' to cause the toes of the dogs to clamp plate 4 to the frame 3.

The lower frame may be adjusted horizontally by means presently to be described. The upper frame 5 is provided with an outer flange 5' which is adapted to bear upon a sealing strip 11 of rubber, carried by the outer flange of the bottom frame. Photographic plates 6 and 4 may bear against sealing strips 6a, 4a, in the plate holders or frames 5 and 3.

The upper frame may be adjusted vertically, so as to maintain the plate 6 carried thereby horizontally, or in a position closely adjacent to and parallel to the plate 4 of the lower frame. This may be accomplished as shown, by means of the fingers 12, 12 which extend under the outer flange 5' of the top frame. Each of these fingers 12 may be pivoted on a standard 13 extending upwardly from the bottom table 1. The opposite end of each finger 12 has pivotal con-

nection with the upper end of an adjusting screw 14 which extends through a suitable opening in an extension 15 of standard 13 to serve as a bearing. A thumb nut 16 at the lower end of each screw 14 serves to raise or lower the outer ends of the fingers 12 and to thereby adjust the plane in which the upper frame is held.

The upper frame 5 is fixed in position, when its horizontal plane has been adjusted as stated. The outer flange 5' of the upper frame has enlarged portions 5² on opposite sides thereof which rest upon standards 17 to which the frame 5 may be clamped by thumb screws 18 extending into openings in the posts 17. The frame 5 may additionally be locked in position by means of pivoted bolts 19 which may be swung upwardly into openings 19' in the extensions 5² of the upper frame and the nuts 20 at the upper ends of pivoted bolts 19 then tightened to lock the frame 5 in position.

The lower frame may be adjusted by various suitable means, to register, for example, a negative carried by the lower frame with a print carried by the upper frame. I prefer to adjust the position of the lower frame by the devices, or in the manner, described in my application Serial No. 90,749, filed Feb. 26, 1926, for method of and apparatus for securing registration position of an article, the adjusting means of the character described therein being applied to the lower frame or plate holder in the present application.

Referring briefly to said adjusting means, a standard 21 extends upwardly from table 1, Fig. 1, adjacent one end thereof. This standard is provided with a slideway, preferably a dove-tailed groove 22 extending longitudinally thereof. A sliding block 23 is provided with an engaging portion sliding in the groove 22, and is adapted to be moved lengthwise thereof by the screw 24 operated by hand-wheel 25. The block 23 is provided with a dove-tailed groove 26 extending at right angles to groove 22 and adapted to receive a cooperating portion formed on the slide block 27 which is adapted to be moved with respect to the sliding block 23 by means of screw 28 operated by hand wheel 29. The block 27 is provided with a recess to receive a dog 30 which is pivotally attached thereto by means of its pivot pin 31. The inner or free end of the dog 30 is provided with an opening through which may be inserted a pin 33 formed on the outwardly extending lug 34 at one side of the bottom frame 3, see Fig. 5.

A standard 21', corresponding to standard 21, is positioned on the opposite end of table 1, opposite to standard 21, and is provided with a longitudinal dove-tailed groove 22' adapted to receive an engaging portion of the sliding block 23'. This block is provided

with a dove-tailed groove 26' extending at right angles to dove-tailed groove 22' and is adapted to receive an engaging portion formed on a slide block 27' which is adapted to be moved with respect to the dove-tailed groove 26' by means of the screw 28' operated by hand wheel 29'. Block 27' is provided with a suitable recess in which is seated the dog 30' pivotally connected to block 27' by means of pivot pin 31'. This dog has an opening at its inner or free end which is adapted to engage the pin 33' extending upwardly from bottom frame 3 on the side opposite to pin 33.

With this arrangement bottom plate 3 may be moved in various directions in a horizontal plane to secure registration of the negative or other subject carried by the lower plate with a print carried by the top plate 5. Thus by rotating the hand wheels 29 and 29' in the same direction and at the same speed the blocks 27, 27' are moved in parallelism to move the bottom holder in one direction relative to the top frame 5. By rotating the hand wheel 25, block 27 is moved in a transverse direction moving dog 30 with it and through the frame 3 moving dog 30' and its block 27'. Also by rotating wheel 29 only, or by rotating wheel 29 in one direction and wheel 29' in the opposite direction, or by rotating wheel 29' only, the bottom frame is given an angular motion with respect to the top frame 5. By these various adjustments a negative or positive or other subject carried by the bottom frame member may be brought into accurate registration with a plate carried by the upper frame 5. This may be readily accomplished, if the plate carried by top frame 5 is made of glass, by looking downwardly through this top plate and manipulating the hand wheels mentioned until registration is accomplished.

It may be remarked at this point that table 1 is preferably so mounted that it may be swung through 180° to turn it upside down. As indicated, table 1 is pivotally connected at its opposite ends as shown at 35, 35 to a pair of standards indicated at 36, 36 which may stand upon the floor. The table may be locked in position with either side up by inserting a pin 37, extending from one of the arms 36, into a suitable opening 38 in one edge of the table. With this arrangement, it may be noted, in case the plate 6 carried by frame 5 is of metal instead of glass, the table may be reversed and registration obtained by looking through the plate 4 rather than through the plate 6.

Bottom plate 3 is provided with a pair of lugs 39, 39 on opposite sides thereof, these lugs being provided with threaded openings therethrough. Arms 40, 40 are provided at their inner ends with slots 41, 41 through which pass the threaded ends of thumb screws 42, 42, which are adapted to screw down into

the threaded openings in lugs 39 of the bottom frame 3. The outer ends of the arms 40, 40 have openings therethrough adapted to receive the dowel pins 43, 43 which extend upwardly from posts 44, 44 on table 1. Arms 40 are adapted to swing about dowel pins 43 as pivots.

With the above arrangement, it will be seen, arms 40 will take various angular positions in accordance with the adjusted position of bottom frame 3; when the adjusted position of the bottom frame has been secured thereby clamping the arms 40, 40 rigidly to the frame or plate holder 3 in the adjusted position of the latter. It will be evident therefore that, when plate 3 has been removed from position and is to be returned into the same adjusted position relative to the apparatus, this may be accomplished by replacing dowel pins 43 in the openings at the outer ends of arms 40 which will bring the frame 3 back to exactly the same position in which it was previously adjusted.

One further feature of the apparatus remains to be described, namely, the frame 45 which carries the screening member, or mask, used for blanking out portions of a print, during the printing operation. The screening member may, for example, comprise a photographic film, a desired portion of which may be made opaque; it may be a positive, or a negative, photograph of the surprint matter, when the print, a portion of which is to be blocked or masked, is a negative, or a positive, respectively.

Referring to Figs. 3 and 6, frame 45 carries a clamping member 46 at one side thereof which is adjustable towards and away from the adjacent side of frame 45 by means of screws 47 carrying thumb nuts 48. A screening member 49, such as a flexible film, as described, may have one end thereof secured to one side of frame 45 by means of a clamping strip 50. Film or screen member 49 extends between a strip 51 carried by the clamping frame 46, and a strip 52 which is carried by a screw 53, which screws into member 46 so as to be movable towards and away from strip 51; the film or screening member being extended between members 51 and 52 is clamped between the same by adjustment of screw 53 whereupon clamping member 46 may be moved outwardly a slight distance by means of thumb nuts 48 to tighten the film or screening member into a taut position. Frame 45 with screening member 49 held therein may be interposed between the plates carried by the upper and lower frames, when prints are to be made on a sensitized surface carried by the upper frame. Frame 45 may be secured to the top frame 5, if desired, as by the insertion of split dowel pins 54, 54 carried by frame 45,

in corresponding openings 55 in the peripheral flange of the top frame 5.

The manner in which the apparatus is used will now be described. A print is made on a suitable sensitized surface, either glass or metal, from a photograph, a print of which is to form one of the elements of the complete finished print. Thus, for example, having a negative from which the underlying print of the surprinted picture is to be made, a print may be made of this. This print will serve as the registration print or copy and will be fastened in the top frame 5. The negative from which this registration print was made is put in the bottom frame 3, frames 3 and 5 being mounted in the apparatus as described, and the bottom frame 3 then adjusted, by manipulation of the various hand wheels as described, so as to register this negative exactly with the registration print. The movement of frame 3 into its registered position will cause the arms 40 of this frame to assume certain angular positions and these arms are locked in such positions by screwing down the thumb nuts 42. Frame 3 is now removed from the machine and can be replaced into exactly the same position at any subsequent time, by inserting the dowel pins 43 of the machine through the corresponding openings in the outer ends of arms 40.

Other negatives, as many as necessary, each mounted in a frame which is a duplicate of frame 3, are now successively mounted in position in the machine, in place of frame 3 and each registered to the registration print in frame 5 and removed. It will be understood that frame 5 is fixed in position during these printing operations by screws and nuts 18, 19 and 20, but frame 5 is removed to replace frame 3, or substitutes therefor.

Having registered to the registration print all of the negatives which are to form elements of the complete surprint, and the adjusted position of these negatives having been fixed by tightening the thumb screws 42 of the frames carrying these different negatives, the registration print, carried by upper frame 5, is now removed and a sensitized plate put in its place. This sensitized plate may be formed of metal or glass or other suitable material. A zinc plate may, for example, be used for the manufacture of a printing plate for the surprint. This sensitized plate may be substituted for the registration print in the frame 5 previously referred to, in exactly the same position relative to frame 5 as was occupied by the registration print, or, of course, a duplicate of frame 5 may be provided carrying this sensitized plate.

Frame 5 carrying the sensitized plate, or a duplicate of frame 5 carrying the sensitized plate, is now replaced in the machine, and

the negatives which have previously been registered with the registration print are now separately exposed in contact with the sensitized plate, one after the other. That is to say, frame 3 carrying the original negative in registered position is replaced in the machine in the same position originally occupied and a print made therefrom onto the sensitized plate carried by frame 5, after which this frame 3 is removed and duplicates of frame 3 carrying the other negatives in their registered positions are successively substituted therefor and prints made therefrom on the sensitized plate in the upper holder. All of the images thus made on the sensitized plate may be developed at the same time, or, if desired, each exposure may be developed separately in which latter case the sensitized plate will have to either be kept in its frame during developing or replaced in exactly the same position after each development.

The registration print to which the various negatives or subjects have been registered, may be made in the machine here described or elsewhere. It may, for example, be made by mounting a sensitized plate in the upper holder and mounting a negative from which the registration print is to be made in the lower holder, and exposing this negative in contact with the plate. If the registration print is made in the machine, it may be developed in its frame or it may be removed from its frame and developed and replaced in the frame in exact position. If either of these procedures is followed, it will not be necessary to subsequently register the negative from which the registration print was made to the registration print.

The screening or blocking out member 49, carried by frame 45, may be of any suitable character, such as a flexible film, a portion of which is opaque or is so arranged or treated as to prevent the passage of light therethrough to form an image on the sensitized printing plate. As to its use it may for example be desired to make a surprint comprising a picture with certain lettering superposed thereon and in this case it may be desired to blank out a portion of the picture to provide a space in which the surprinted lettering will fit. In this case, if exposure is to be made from a negative of the picture upon the sensitized plate, the screen may take the form of a positive image of the desired lettering. This being interposed between the negative and the sensitized surface, a positive print will be made from the negative upon the sensitized surface with, however, the area covered by the lettering left blank. A negative of the lettering may now be exposed in exact alignment with the blank space thus formed on the

sensitized surface and a print of the same made in this space.

The screening or blocking member in its frame 45 may, as stated, be removably secured to the top frame 5 so as to hold the same position thereto during the exposure of a number of negatives or subjects. Or, the screening member in its frame may be positioned in the same relative position with respect to a number of sensitized plates held in frames which are duplicates of frame 5, all of the same having holes spaced exactly the same, into which the dowel pins of the screen holder 45 will fit.

The registration of the screening member with respect to the finished print may well be provided for in the following way. When the registration print is to be made a sensitized plate is mounted in the upper frame 5, and the screen holder is secured thereto, beneath the same, the screen holder carrying a film having a screening portion comprising, for example, certain lettering. A negative from which the registration print is to be made is now placed in frame 3 which is mounted in the machine and this frame 3 is then adjusted in position by the various hand wheels of the apparatus so as to register the screening portion of the film in frame 45 into exact registry with the desired portion of the negative. The registration print is now made on the sensitized plate with the blocked out portion thereof in proper position thereon. When a surprint negative or subject is to be registered with the registration print, it is placed in a duplicate of frame 3 and registered with the registration print so as to exactly fill the blank space of the registration print, or to partly fill the same as desired.

The apparatus may be used for multi-color work as in the preparation of printing plates for making prints with surprinted portions in a number of colors. In this case prints will be made on a plurality of sensitized plates, each carried by a duplicate of frame 5. If a picture in three colors is to be made with surprinted lettering thereon, a print of all of the elements of the picture of one color will be made one on zinc or other sensitized surface, a print of all of the elements of a second color in the picture on a second zinc or sensitized surface, etc. If now the finished print containing all of the colors is to bear surprinted matter, such as certain lettering, in one color for example, it will be necessary or desirable to have the area or position to be occupied by this surprint blocked out or screened out from the various partial prints each of the one color which are made. In this case the screening member may be used with each of the sensitized plates in which the same space is to be left blank, the screening member

having the same position relative to each of these sensitized plates. In this case a special registration print may be made for each color element of the finished product with the screening member in the same relative position during the making of each of these registration prints or in this position for as many of these prints as is needed.

Registration of the negatives or subjects having been accomplished by registering the same with the special registration prints, the separate color element prints on the zinc or other sensitized plates are then made with the screening element in the same position relative to all of the same or as many of the same as is needed, this screening element being removed when a print is to be made from the negative or subject which is to form the surprinted matter which is to fit into the space thus blocked out on the sensitized plate which carries all of the color elements of the same color as that of the surprint. It is of course obvious that the surprinted matter may be of several colors in which case the procedure indicated would be correspondingly changed.

It should be understood that prints may be made from positive to negative, as well as from negative to positive, reference to "negatives", as the subjects from which prints are to be made, being given merely for convenience of description. Prints are made from any suitable subjects from which prints may be made in the apparatus described.

It will likewise be noted that the screening or blocking out member may be of any suitable character such as a positive image of the matter which is to be screened out, when prints are made from negatives; or a negative of the matter which is to be blocked out when prints are made from positives.

It will likewise be noted that the devices described are not necessarily limited for use in the identical same machine since it is obvious that duplicate machines may be provided in one of which the negatives or subjects are registered to the registration print or prints while the final print is done in the duplicate machine, this being considered equivalent of that described above.

It will also be noted that the devices are not limited to one in which adjustment of the subjects relative to the registration prints is obtained by the particular adjusting means described herein, since other means may be used for adjusting the relative positions between the element which is to be registered and the element with which the same is to be registered and for fixing these relative positions so that the parts may be returned later to the same relative positions.

It will likewise be noted that the screen-

ing or blocking out element may, if desired, be permanently fastened in position in the apparatus.

It should also be noted that the devices and apparatus are not limited in their usefulness to cases in which prints are made upon, or partly upon, underlying prints. Such use comprises one of the chief functions of the invention, and has been referred to throughout, for the sake of clearness. It should be understood, however, that the general procedure described above may be carried out, with the only difference that certain prints are to appear adjacent or in spaced relation to other prints, but not actually upon the same. In this case, instead of registering several subjects into the same space on the special registration print, they would be registered into adjacent, or spaced relation to each other, as will be apparent.

It should also be understood that all reasonable equivalents of the various features of apparatus which have been specifically described, are included herein as is evidenced by the accompanying claims.

I claim:

1. In apparatus for obtaining registered prints, the combination of a holding frame for a sensitized member, a holding frame for a screen or blocking member, and a plurality of holding frames for negatives from which prints are to be made, apparatus in which said frames may be mounted in position to enable prints to be made from said negatives successively on the sensitized member, means on said first and second frames for detachably securing said second frame to said first frame, in invariable position thereto, between said first frame and one of said plurality of frames for negatives, means for slidably adjusting the positions of said plurality of frames relative to said first frame, or duplicate thereof, parallel thereto, and means whereby the positions of said frames, as adjusted, may be mechanically fixed to permit removal and replacement in the same relative positions.

2. In apparatus for obtaining registered prints, the combination of a plurality of holding frames for sensitized members, a holding frame for a screen or blocking member, said frames having cooperating means so that said screen frame may be detachably secured to any of said first named frames in the same relative position to each, parallel thereto, and a plurality of holding frames for negatives from which prints are to be made, apparatus in which one of said first frames and one of said last frames may be mounted, superposed in parallel relation, with or without said screen-holding frame being interposed between them, means for adjusting the positions of said first and third frames relative to each other, and means whereby the positions of said frames, as ad-

justed, may be fixed, so that they can be removed and returned to the same relative positions.

3. In an apparatus for registering prints, a
5 holding base frame, posts on the base, a lower
frame that rests on the posts, clamping means
on the lower frame for securing a plate by its
margins, means for adjusting the lower frame
laterally in all directions and which will cause
10 the replacing of the frame after removal in
the exact position to which it was adjusted be-
fore removal, an upper frame superposed on
the lower frame, means carried by the upper
frame for clamping a plate thereon by its
15 margins in proximity to the said plate on the
lower frame, means for adjusting the upper
frame vertically, and means on the base for
securing the upper frame in adjusted posi-
tions.

4. In an apparatus for registering prints, a
20 holding base frame, posts on the base, a lower
frame that rests on the posts, clamping means
on the lower frame for securing a plate by its
margins, means for adjusting the lower frame
laterally in all directions and which will re-
25 sult in the replacing of the frame after re-
moval in exact position to which it was ad-
justed before removal, a rubber ring on the
lower frame at its outer margins, an upper
30 frame resting on the rubber ring at its outer
margins, means carried by the upper frame
for clamping a plate thereon at its margins in
proximity to said plate on the lower frame,
means for adjusting the upper frame verti-
35 cally, and means on the base for securing the
upper frame in adjusted positions.

5. In an apparatus for registering prints, a
holding base frame, posts on the base, a lower
frame to rest on the posts, clamping means on
40 the lower frame for securing a plate by its
margins, means for adjusting the lower frame
vertically in all directions and which will re-
sult in the replacing of the frame after re-
moval in exact positions to which it was ad-
45 justed before the removal, an upper frame
superposed on the lower frame, means carried
by the upper frame for clamping a plate
thereon by its margins in proximity to the
plate on the lower frame, means for adjusting
50 the upper frame vertically, means on the base
for securing the upper frame in adjusted po-
sitions, said frames enclosing an annular space
at their margins, and a screen frame in the
space removably secured to the upper frame
55 to carry a screen interposed between the two
plates on the upper and lower frames.

6. In an apparatus for registering prints, a
holding base frame, posts on the base, a lower
frame to rest on the posts, clamping means on
60 the lower frame for securing a plate by its
margins, means for adjusting the lower frame
laterally in all directions and which will re-
sult in the replacing of the frame after re-
moval in exact position to which it was ad-
65 justed before removal, a rubber ring on the

lower frame at its margins, an upper frame
resting on the rubber ring at its margins,
means carried by the upper frame for clamp-
ing a plate thereon at its margins in proxim-
ity to the said plate on the lower frame, 70
means for adjusting the upper frame verti-
cally, means on the base for securing the up-
per frame in adjusted positions, said frames
enclosing an annular space at their margins,
75 and a screen frame in said space secured to
the upper frame and carrying a screen inter-
posed between the said two plates held by two
said frames.

In testimony whereof I have signed my
name to this specification.

HARRY C. JONES.

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