

(No Model.)

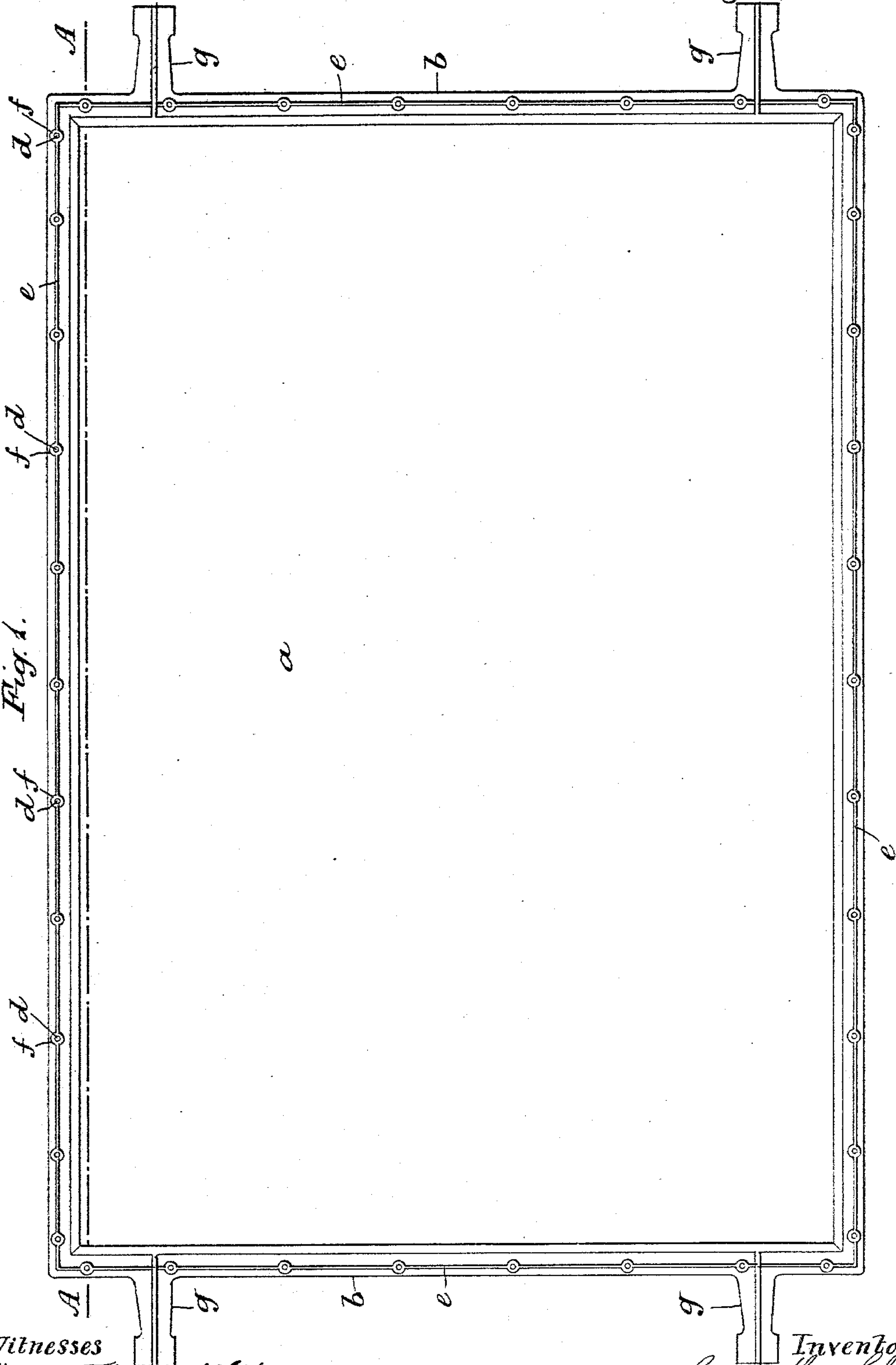
2 Sheets—Sheet 1.

C. H. COHEN.

IMPLEMENT FOR OBTAINING CORRECT REGISTER IN COLOR PRINTING.

No. 565,153.

Patented Aug. 4, 1896.



Witnesses

William Thomas Whiteman
Percy Charles Ruoken

Inventor

Cosman Henry Cohen

(No Model.)

2 Sheets—Sheet 2.

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Fig. 2.

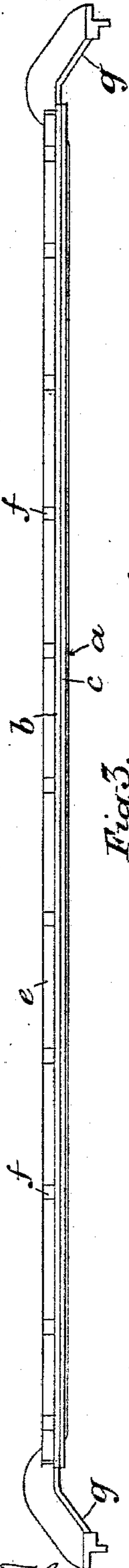


Fig. 3.

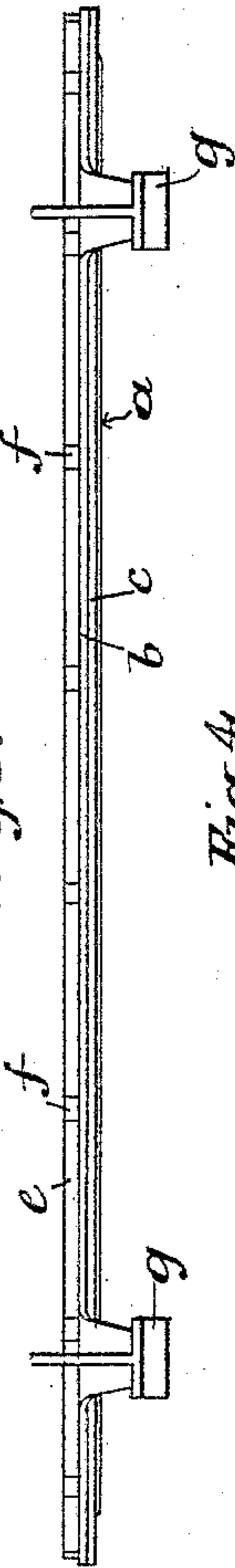


Fig. 4.

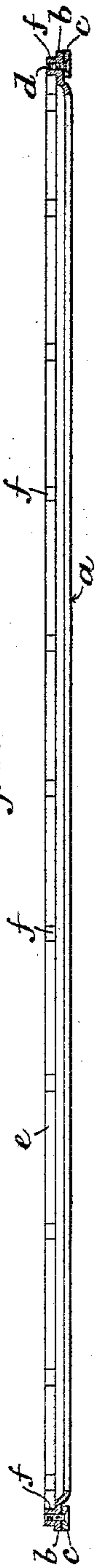


Fig. 5.

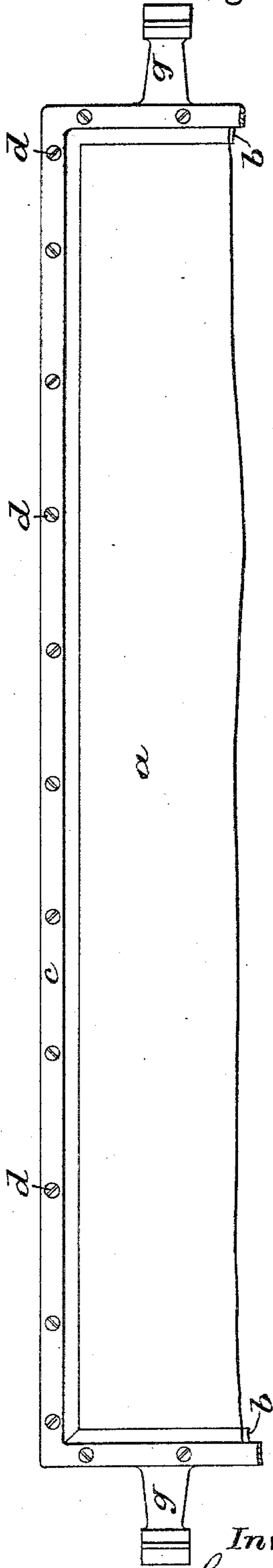
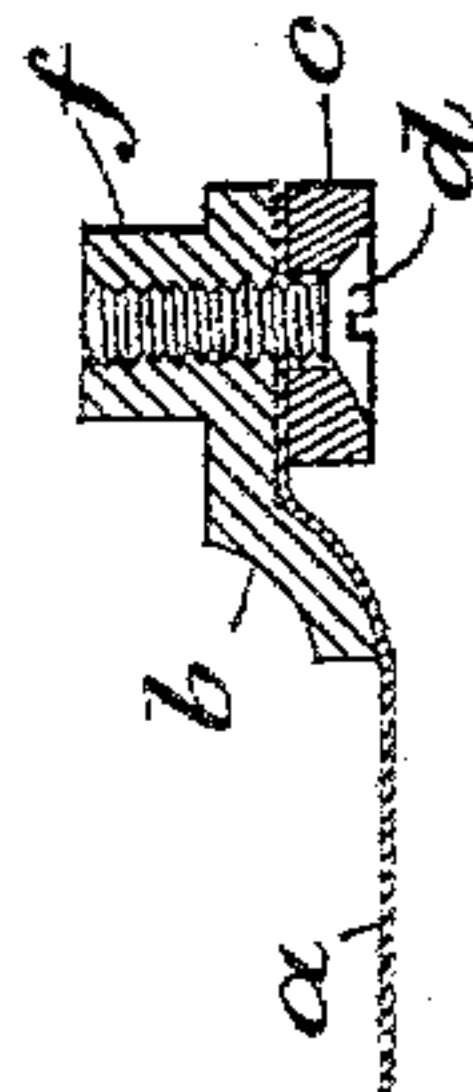


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

COSMAN HENRY COHEN, OF LONDON, ENGLAND.

IMPLEMENT FOR OBTAINING CORRECT REGISTER IN COLOR-PRINTING.

SPECIFICATION forming part of Letters Patent No. 565,153, dated August 4, 1896.

Application filed February 29, 1896. Serial No. 581,849. (No model.)

To all whom it may concern:

Be it known that I, COSMAN HENRY COHEN, a subject of the Queen of Great Britain, residing at London, England, have invented certain new and useful Improvements in Implements or Appliances for Use in Obtaining Correct Register in Color-Printing; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in an appliance of the kind hereinafter described for use in the operation of obtaining correct register in color-printing by adjustment of the position in a printing-machine of the lithographic stones or printing blocks or plates from which impressions are successively taken in the production of a print in two or more inks or pigments or other printing materials. The said operation is usually performed by first placing the stone or block or plate in what is judged to be approximately the required position and then taking impressions therefrom, and altering its position after taking each impression until it is found that an impression which registers correctly is produced. This method of proceeding is very troublesome and usually occupies considerable time, whereas by means of my invention the said operation is easily and quickly effected.

A convenient form of appliance embodying my said invention consists, essentially, of a sheet of transparent or semitransparent material (hereinafter termed the "register-sheet") provided with a support which is adapted to be readily placed in a determined position relatively to the part of the machine in which the stone or block or plate to be printed from is mounted, by means of which support the register-sheet, when the appliance is in use, is held immediately above the said stone or block or plate and quite independently thereof. The register-sheet may consist of any material which is sufficiently transparent to admit of marks on the printing stones or blocks or plates being readily discerned through the said sheet when in position for use, and on which distinct impressions may be obtained from designs on the said stones, plates, or blocks by means of inks or pigments such as those ordinarily used for printing

therefrom. The support of the register-sheet may consist of a structure or frame of any form admitting of the said sheet being readily placed and securely retained in a determined position relatively to the part of the printing-machine in which the printing stones or blocks or plates are mounted.

I prepare the said appliance for use by marking the register-sheet with "key-marks" corresponding with key-marks on the stones or blocks or plates to be printed from, and in order to place a stone or block or plate in register in a printing-machine by means of the said appliance I place the said appliance in the determined position and adjust the position of the stone or block or plate relatively to the machine by means of the ordinary adjusting-screws until the key-marks on the said stone or block or plate are immediately under those on the register-sheet.

An appliance embodying my said invention is illustrated in the accompanying drawings and is hereinafter described with reference thereto.

Figure 1 of the said drawings is a plan view showing the face of the said appliance which is uppermost when in use. Fig. 2 is a side view and Fig. 3 an end view thereof. Fig. 4 represents a section taken on the line A A, Fig. 1; and Fig. 5 is a face view of a portion of the side of the said appliance which is undermost when in use. Fig. 6 is a transverse section of a portion of the frame of the said appliance and the register-sheet.

Referring to the said figures, *a* is the register-sheet.

b c are the parts of the frame or support of the register-sheet, between which the said sheet is secured by means of screws *d d*, which bind the said parts *b c* together, thereby holding or clamping the marginal parts of the sheet *a*.

e e are ribs formed on the part *b* of the frame for the purpose of stiffening it, and *f f* are bosses into which the screws *d d* pass.

g g are feet or projecting lugs formed on the said part *b* of the frame for engagement with the frame of the bed of the printing-machine or with brackets, projections, or recesses secured or formed on or in the said part of the machine, by means of which feet or lugs *g g* the frame carrying the register-sheet is

supported in the required position relatively to the machine, which position may be determined in any convenient manner, as, for instance, by the form or position of the parts of the machine with which the feet *g g* engage.

Where the said appliance is to be used in connection with the production of a picture or other printed work from lithographic stones, I proceed as follows: To produce the required key-marks on the register-sheet *a*, I first place in the printing-machine either a stone expressly prepared for printing the said marks or one of the stones which have been prepared for use in the ordinary way in the production of the picture or other printed work to be executed, and I apply to the said stone an ink or pigment of any kind suitable for printing from lithographic stones and then place the appliance in the determined position relatively to the machine (the register-sheet when the appliance is in the said position being immediately over the said stone) and I press the register-sheet on the said stone, thereby producing on the under side of the said sheet an impression of the key-marks or design on the said stone. This being done, I remove the said appliance, which is then ready for use in severally placing in register in the printing-machine each of the stones required for use in succession in the execution of the printed work, and if the stone by means of which the marking of the register-sheet, as above described, has been effected be one prepared expressly for that purpose I also remove the said stone from the machine and place therein the stone which is to be first used in the production of the picture or printed work to be executed, which stone I adjust to the exact position which it is required to occupy in the printing-machine by use, as hereinafter described, of the appliance constituting my invention.

In using the said appliance I place it in the determined position relatively to the machine, (which is the precise position it occupied while the key-marks were being printed on the register-sheet,) and I adjust the position of the stone by means of the ordinary adjusting-screws until the key-marks on the said stone coincide exactly with or are immediately under the key-marks on the register-sheet of the said appliance. The stone being then in the position necessary for accurate printing, I remove the said appliance and proceed with the printing as usual. After the required number of impressions have been obtained from the said stone and another stone is required to be printed from in continuation of the same work, I remove the stone which has been printed from and place in the machine the stone which is next to be printed from, and adjust its position in the machine by use of the said appliance as de-

scribed with reference to the adjustment of the stone used in the production of the first set of impressions, and I thus proceed until the printing of the picture or other printed work to be executed has been completed. That is to say, I use the appliance hereinbefore described in the way hereinbefore described to obtain accurate adjustment of each of the several stones required to be successively placed in the machine and successively printed from therein to produce the required work, the printing from the said stones being effected in the ordinary manner. It will be understood that where the stone used in the marking of the register-sheet is one of the stones designed for use in the printing of the picture or other work to be executed the said stone may be allowed to remain in the machine until the required number of impressions for the said work have been obtained from it, unless it be desirable to print from another stone before printing from the one referred to.

Where blocks or plates are to be printed from, I proceed as hereinbefore described with reference to lithographic stones.

It will be understood that my invention has no reference to adjustment of the "lay" of the work or sheets to be printed, which adjustment must be effected in the ordinary manner or in any convenient manner before the printing is begun.

A suitable transparent material for the register-sheet is celluloid or xylonite, but any other sufficiently transparent material capable of being marked as required may be used for the said purpose.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The herein-described appliance for use in ascertaining the required correct position of a printing stone, or block, or plate, in a printing-machine, the said appliance consisting of a register-sheet of transparent or semitransparent material adapted to receive the impression of marks with which like marks on a stone, or block, or plate, are to coincide when the said stone or block, or plate, is in correct position for accurate register-printing, and a support for said sheet adapted to be removably secured to that part of the machine in which the printing stone, or block, or plate, is mounted and in a determined position relatively to the said part of the machine, to permit correct adjustment of the stone, block, or plate, for obtaining accurate register-printing, substantially as specified.

COSMAN HENRY COHEN. [L. S.]

Witnesses:

WILLIAM THOMAS WHITEMAN,
WILLIAM JOHN HENRY HOLMES.