

(No Model.)

2 Sheets—Sheet 1.

F. I. GETTY.  
CHROMATIC PRINTING BLOCK.

No. 523,308.

Patented July 17, 1894.

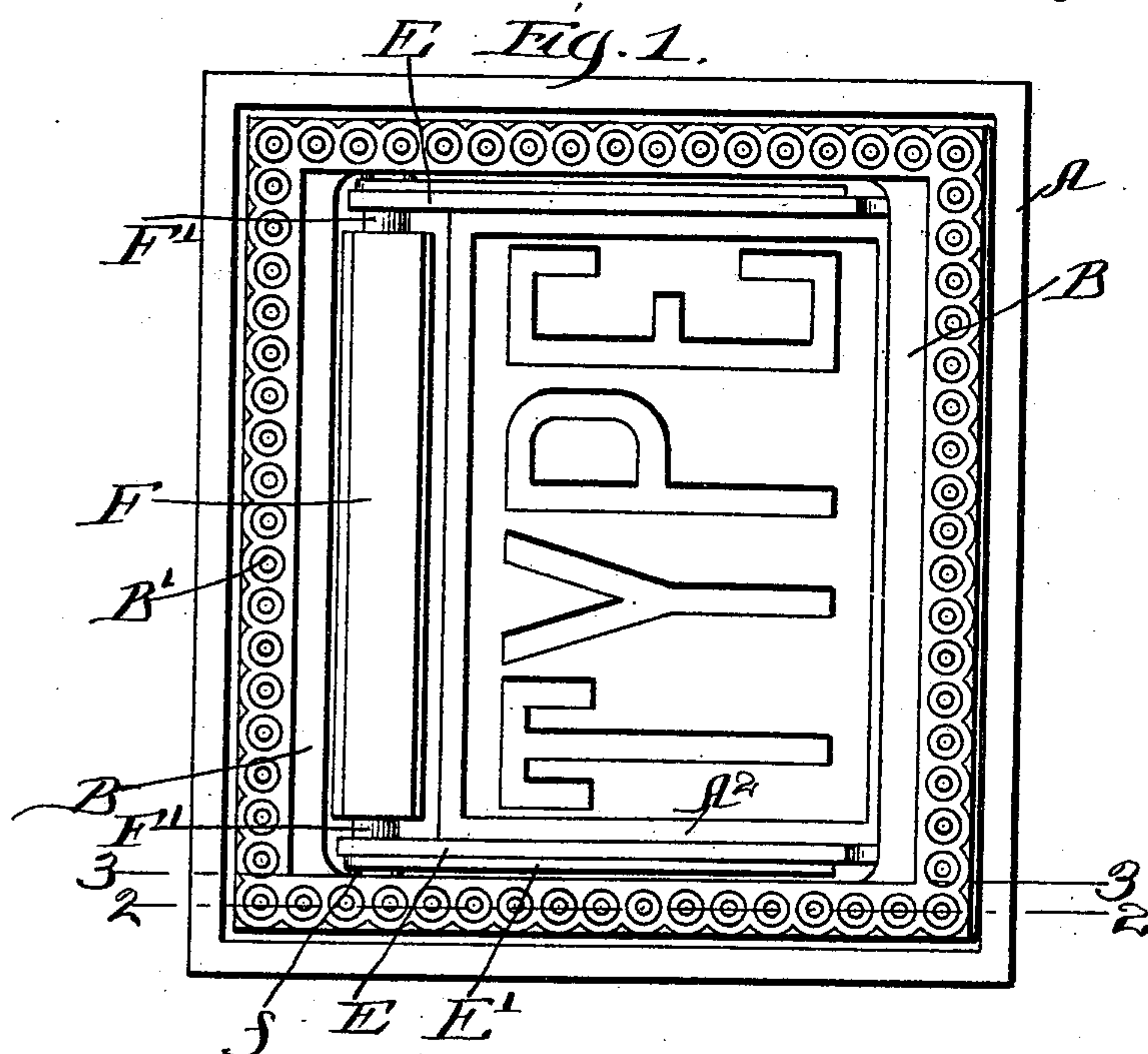
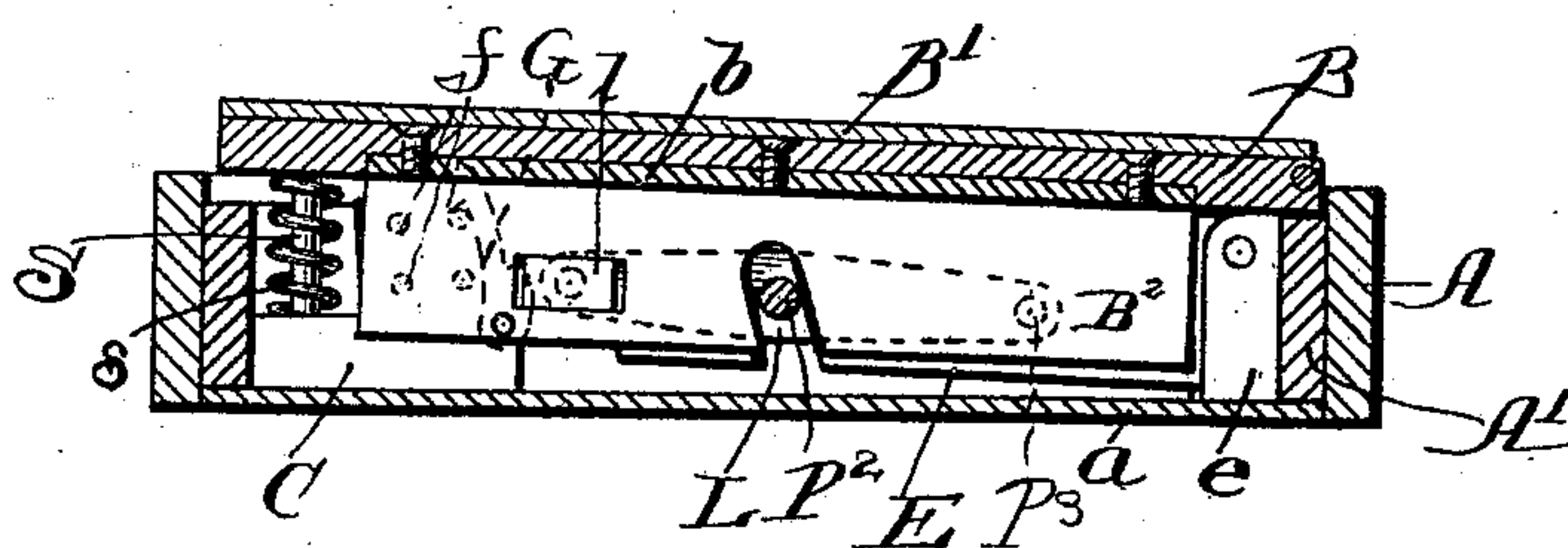
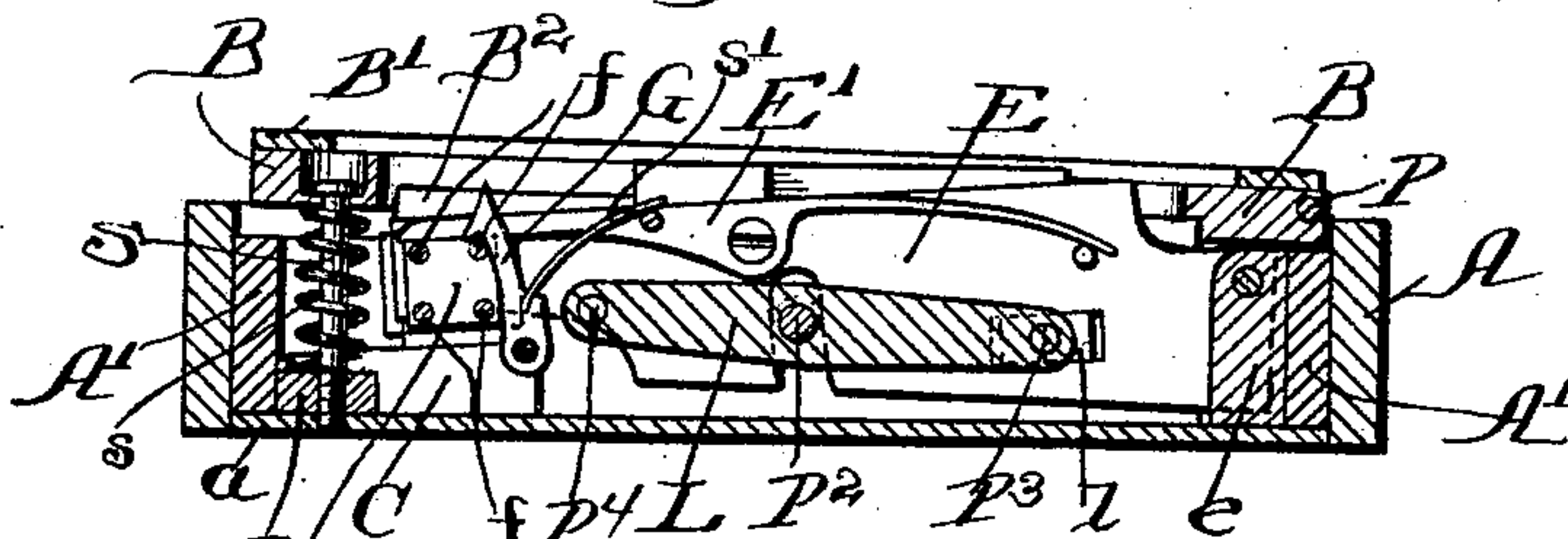


Fig. 2.



*Fig. 3.*



Witnesses: *D. F. 12*  
*Charles O. Shewey*  
*H. A. Rogers*

Inventor.  
Fred. J. Getty  
by Niles G. Warner & Co.  
Attorneys

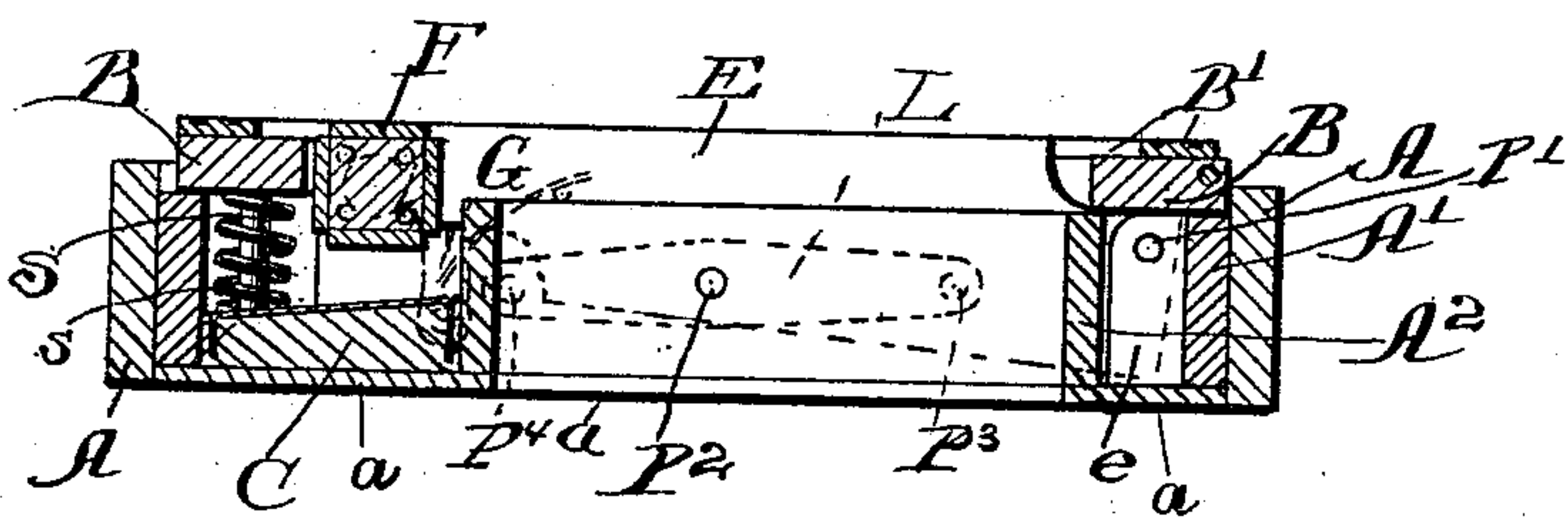
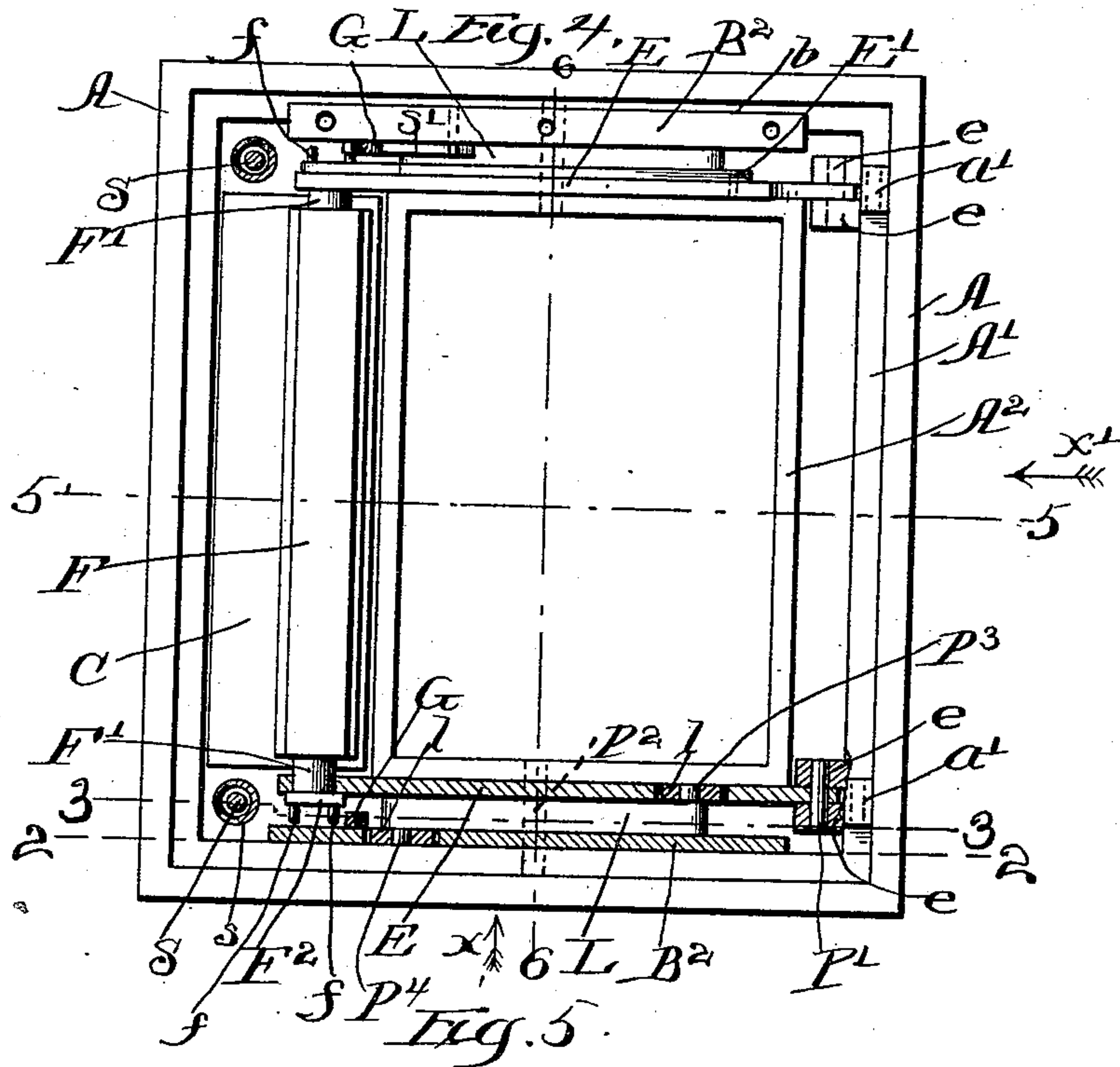
(No Model.)

2 Sheets—Sheet 2.

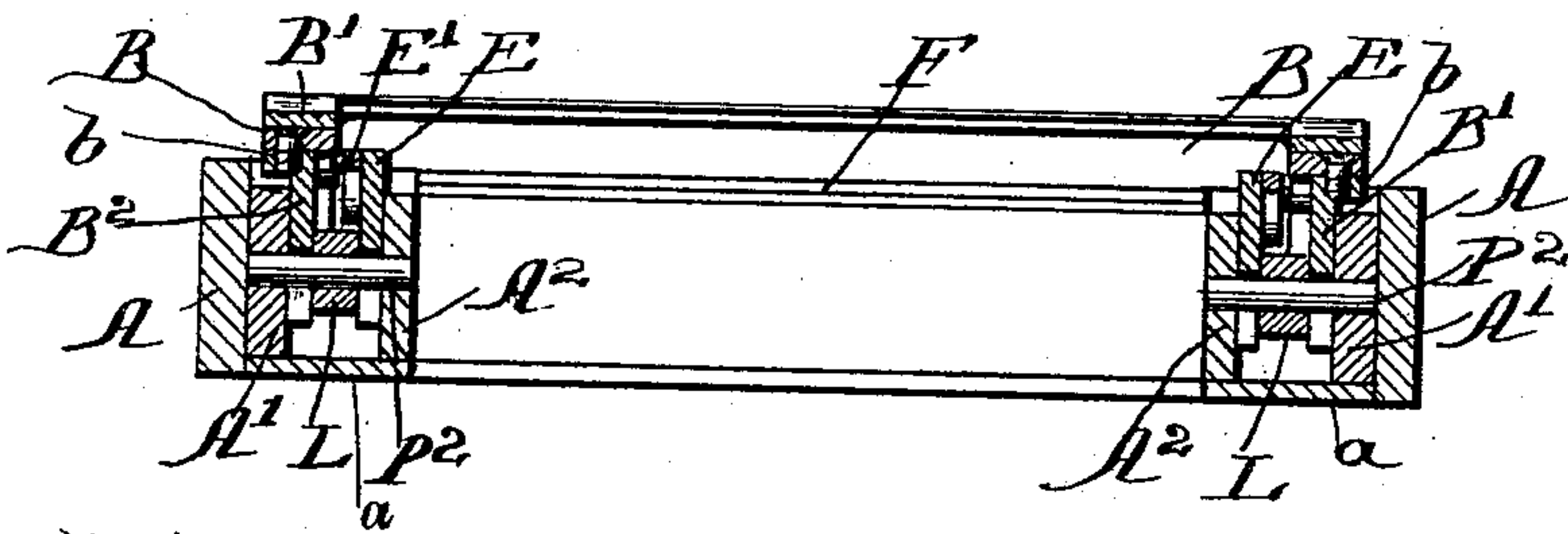
F. I. GETTY.  
CHROMATIC PRINTING BLOCK.

No. 523,308.

Patented July 17, 1894.



*Fig. 6.*



Witnesses:

*Charles O. Hurvey*

*H. A. Rogers*

Inventor:

*Fred. I. Getty*  
*by W. L. G. & Co. Attorneys*



# UNITED STATES PATENT OFFICE.

FRED I. GETTY, OF SPRINGFIELD, ILLINOIS, ASSIGNOR TO THE NATIONAL CHROMATIC PRINTING COMPANY, OF SAME PLACE.

## CHROMATIC-PRINTING BLOCK.

SPECIFICATION forming part of Letters Patent No. 523,308, dated July 17, 1894.

Application filed October 2, 1893. Serial No. 486,946. (No model.)

*To all whom it may concern:*

Be it known that I, FRED I. GETTY, a citizen of the United States of America, residing at Springfield, in the county of Sangamon and State of Illinois, have invented certain new and useful Improvements in Chromatic-Printing Blocks, of which the following is a specification.

My invention relates to improvements in chromatic printing blocks, its object being to provide a frame adapted to be set in the ordinary form of type and to inclose and support two printing elements, one stationary and the other movable, the stationary element being inked by the same mechanism as the body of the form and the movable element being supplied with ink from a pad or other independent inking device.

The invention is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a plan of a complete device embodying my improvements. Fig. 2 is a vertical section through the line 2—2, Figs. 1 and 4. Fig. 3 is a vertical section through the line 3—3, Figs. 1 and 4. Fig. 4 is a top plan of the entire device except the swinging frame and the border fastened to it, certain parts being shown in section to illustrate construction. Fig. 5 is a vertical section through the line 5—5, Fig. 4. Fig. 6 is a vertical section through the line 6—6, Fig. 4. In Figs. 2, 3, and 5, the view is in the direction indicated by the arrow  $\alpha$ , Fig. 4. In Fig. 6 the view is in the direction indicated by the arrow  $\alpha'$ , Fig. 4. Figs. 2, 3, and 6, show the parts in their normal position, the vertically movable frame being at its highest limit. Fig. 5 shows the frame depressed and the printing bar raised to the position in which it prints.

In the views A is a rectangular frame adapted to be locked in an ordinary form of type and should be of less height than the type in the form. Within the frame A is a closely fitting second frame A' readily detachable from the frame A and provided with a bottom plate  $\alpha$  formed with a rectangular and approximately central opening to whose margin is fastened a third rectangular frame A<sup>2</sup>, adapted to receive and support an electro-

plate or type set in the usual manner and having an upper face in the plane of the face of the remainder of the form.

The reason for forming the bottom plate,  $\alpha$ , with an opening corresponding to the space within the frame, A<sup>2</sup>, is that electro-types as usually made are of the standard height of the forms of type used on ordinary flat bed presses, and it is therefore desirable to have the electro-types rest directly upon the bed of the press which supports the remainder of the form.

One of the side walls of the frame A' is formed with two upwardly projecting ears  $\alpha'$ , Fig. 4 and to these ears is hung one of the edges of a vertically oscillating rectangular frame B, whose upper surface is preferably provided with an ornamental border B', screwed or otherwise fastened to it.

Between the frame A<sup>2</sup> and the wall of the frame A' opposite the ears  $\alpha'$ , lies a block C, provided with an inking surface of ordinary construction and at the ends of this block and in the angles of the frame are screws S, whose heads lie in countersinks in the frame B, while their lower ends engage the bottom plate,  $\alpha$ , which is preferably reinforced by the small blocks D, Fig. 3. Each of the screws is encircled by a coiled spring s, which tends to press the edge of the frame B upward and to hold it in the position illustrated in Figs. 2 and 3. By the application of sufficient force, however, the free edge of the frame B may be pressed downward until the entire frame is horizontal, when the face of the border B' will lie in the plane of the face of the form.

The two end bars of the frame B are each provided with a downwardly extending plate B<sup>2</sup>, Figs. 2 and 4, each of the plates being preferably formed with the flange  $b$ , at its upper margin and the flange being secured in a suitable recess in the lower face of the corresponding bar.

Between each of the plates B<sup>2</sup> and the corresponding end of the frame A<sup>2</sup> is a vertically oscillating lever E pivoted at one end between two vertical posts,  $e e$ , Figs. 2, 3, 4, and 5, the posts being fastened within the frame A' and contiguous to the ears  $\alpha'$ . In the free ends of the levers E E are journaled two gudgeons F' F', formed on the ends of a prismoidal



printing bar F and extending through the levers, and on each of the ends is formed or fastened a plate F<sup>2</sup>, corresponding in shape to the cross section of the bar and having pins 5 f f, seated in and projecting horizontally from its angles.

Each of the levers E is provided with a spring pawl E' shown clearly in Fig. 3, one of the ends of the pawl being in contact with 10 the margin of the plate F<sup>2</sup> and being adapted to prevent its accidental rotation and to hold it in its exact working position either for inking or printing.

Between each of the plates and the corresponding lever E lies an oscillating lever L, 15 pivoted near its center on a stationary horizontal pin P<sup>2</sup> whose ends are supported in the corresponding walls of the frames A', A<sup>2</sup>, in the manner clearly indicated in Figs. 4 and 6. 20 Each of the levers has in its opposite ends and opposite faces two pins P<sup>3</sup>, P<sup>4</sup>, which enter blocks l l, seated, respectively, in the corresponding lever E and the corresponding plate B<sup>2</sup>, and the relation of the parts is such 25 that the movement of the plates B<sup>2</sup> either downward or upward acts through the levers L L, and moves the levers E E, in the opposite direction. This being the case it is evident that when the free edge of the frame B 30 is in its raised position as shown in Figs. 2, and 3, the free ends of the levers E E, and the printing bar F must be in their lowest position, the printing bar being in contact with the inking pad as shown in Fig. 3; and on the 35 other hand when the free edge of the frame is so depressed that the frame is horizontal as shown in Fig. 5, the free ends of the levers E E, must be raised and the printing bar be thus brought into position for printing.

40 On the inner face of each of the plates B<sup>2</sup> is pivoted a pawl G, adapted to engage any one of the pins f, in the corresponding plate F<sup>2</sup>, and each of the pawls is provided with an actuating spring s', as shown in Fig. 3.

45 When the free edge of the frame B is in its highest position as shown in Figs. 2 and 3 the pawl engages a pin at the upper angle of the corresponding plate F<sup>2</sup> but as the free edge of the frame moves downward and the free 50 ends of the levers E E, move upward, the pawl draws the pin downward and thus rotates the printing bar, the parts being so proportioned that at each complete downward movement of the free edge of the frame B, 55 the printing bar is rotated sufficiently to offer a fresh face to the inking pad and expose a new face for printing.

The inking pad being provided with ink of any suitable color, the operation of my device 60 is as follows: As the form moves under the inking rollers, the upper surface of the border B' and the stationary type set in the frame A<sup>2</sup> are inked in the usual manner, but the printing bar F, being wholly below the 65 level of the type face, is not touched by the inking rollers. The inking-rollers being of

yielding material do not exert sufficient force upon the border, B', and the frame, B, to overcome the resistance of the springs, s, s, and the position of the frame and border is 70 therefore not changed by the pressure of the inking-rollers. As the block passes under the paper-carrying cylinder, the border B', and the stationary type print an impression upon the paper, and at the same time the oscillat- 75 ing frame B is pressed downward to a horizontal position and the printing bar F is raised, one of its faces being brought into the plane of the face of the form so as to print upon the paper an impression in the color 80 supplied by the inking pad. As soon as the pressure of the cylinder is removed, the free edge of the frame B, rises to its normal position and the printing bar descends upon the 85 inking pad.

The result of the entire operation is the printing in two colors of a single paragraph or advertisement the heading being in one color and the body of the advertisement in 90 another.

It is not essential that the swinging frame B, be provided with a border or other printing face but I prefer to so construct it, since the border serves to connect the two parts of the advertisement. 95

I have spoken of the matter printed by the bar as the "heading" of the advertisement but it is not at all essential that it be placed at the upper margin of the matter printed from the block, as it may be equally as well 100 at either side if desired.

I do not desire or intend to limit my invention to the use of the particular means for rotating the printing bar shown in the drawings, as it is evident that it may be turned by 105 other suitable means either step by step in one direction or in opposite directions.

The use of the outer frame, A, is not essential since the frame, A', and the parts within it are readily detachable from the frame, A, 110 and may be locked in the form of type without it. I prefer to use the outer frame, as it is frequently a convenience to remove the frame, A', and the working parts within it in order to change or renew any element of the 115 mechanism, and when the frame, A, is used this can be done without disturbing the rest of the form. I do not desire or intend, however, to make the outer frame A, an element of the invention as it is merely a matter of 120 convenience and when in use may be regarded rather as a part of the form in which the printing block is set, than as a part of the printing block itself.

Having now described and explained my 125 invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a frame adapted to be set in a form of type of a vertically oscillating frame hinged at one edge to said first 130 mentioned frame vertically oscillating levers connected with said vertically oscillating



frame by means insuring their opposite movement, a printing bar journaled in the free ends of said oscillating levers, means for securing a stationary printing face within said oscillating frame and said first mentioned frame and an inking surface lying below the plane of said stationary printing face, the downward movement of said vertically oscillating frame being adapted to raise said printing bar and bring it into the plane of the stationary printing face and the upward movement of the oscillating frame being adapted to press the printing bar against the inking surface.

2. The combination with a frame adapted to be set in a form of type and to support a stationary printing surface, of two vertically oscillating levers supported within said frame, a rotatable printing bar supported by said levers and raised and lowered by their oscillation, an inking-surface lying below the plane of the face of the form, a vertically movable element projecting normally above the plane of the face of the form, and mechanism connecting said vertically movable element with said oscillating levers whereby the motion of said movable element in either direction imparts reverse movement to said vertically os-

cillating levers; substantially as shown and described.

3. The combination with the frame A' and the stationary frame A<sup>2</sup> within it, of the oscillating frame B, provided with the plates B<sup>2</sup>, the levers E E, the printing bar F, the levers L L, connecting the plates B<sup>2</sup> and levers E E, the inking pad C and means substantially as shown and described, for partially rotating the printing bar during its vertical movement.

4. The combination with the frame A' and the frame A<sup>2</sup> within it, of the vertically oscillating frame B hinged to the frame A' and provided with the border B' and plates B<sup>2</sup> B<sup>2</sup>, the levers E E, printing bar F having gudgeons F', journaled in the levers E E, the levers L L, connecting the plates B<sup>2</sup> and levers E, the plates F<sup>2</sup> mounted on the ends of the printing bar and provided with pins f f, the pawls E' E', mounted on the levers E and the pawls G G mounted on the plates B<sup>2</sup> and adapted to engage the pins f and to partially rotate the printing bar in its vertical movement, substantially as shown and described.

FRED I. GETTY.

Witnesses:

R. H. WILES,

CHARLES O. SHERVEY.