No. 703,180. Patented June 24, 1902.

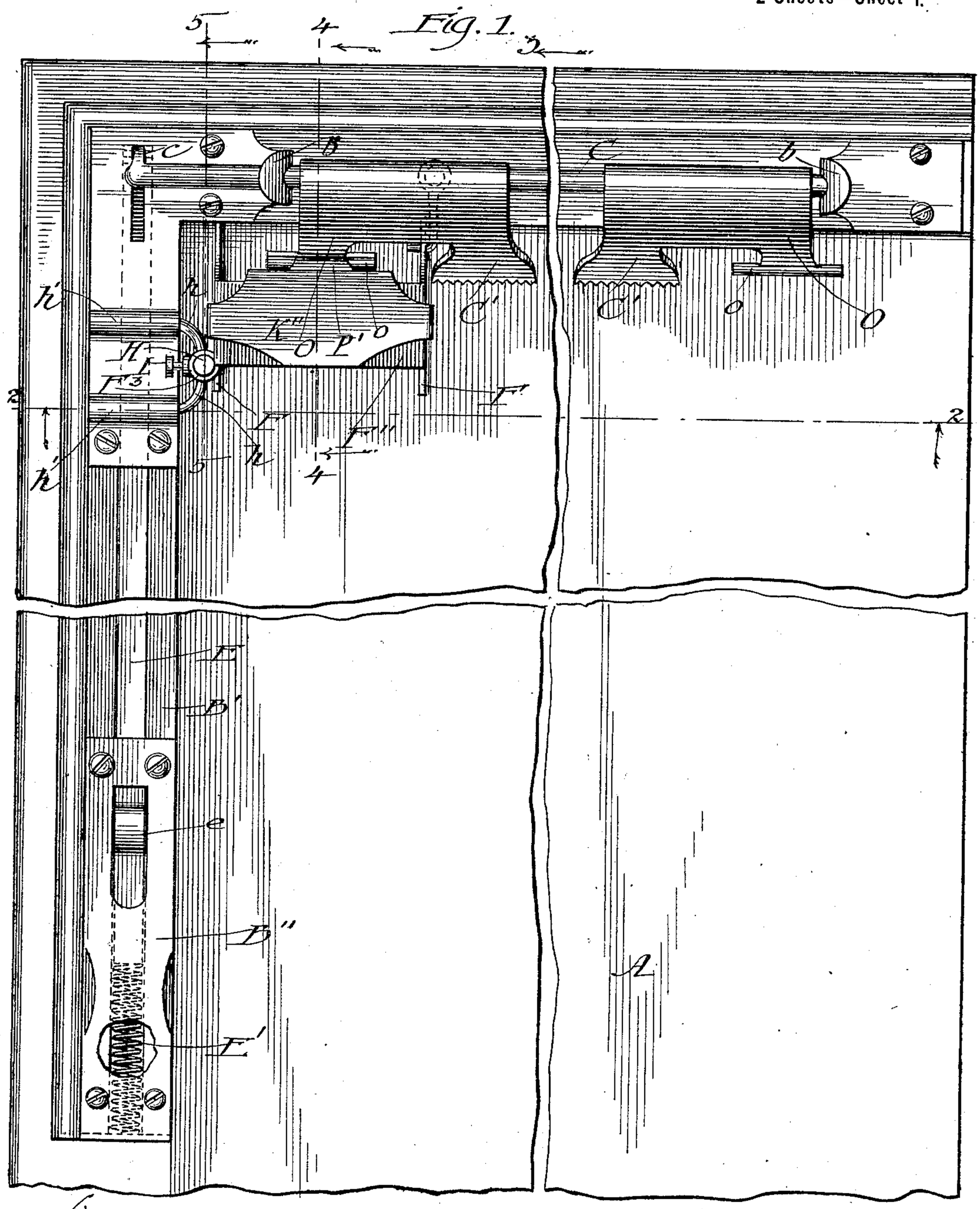
J. I. CARR.

PRINTING ATTACHMENT FOR PAPER CLIPS.

(Application filed Mar. 3, 1902.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses:
Frank L. Blanchard
Bella Ervine.

Inventor:
John I. Carr,
By L. W. Hopkins
Attorney.

No. 703,180. Patented June 24, 1902.

J. I. CARR.

PRINTING ATTACHMENT FOR PAPER CLIPS.

(Application filed Mar. 3, 1902.)

(No Model.) 2 Sheets—Sheet 2.

Fig 2.

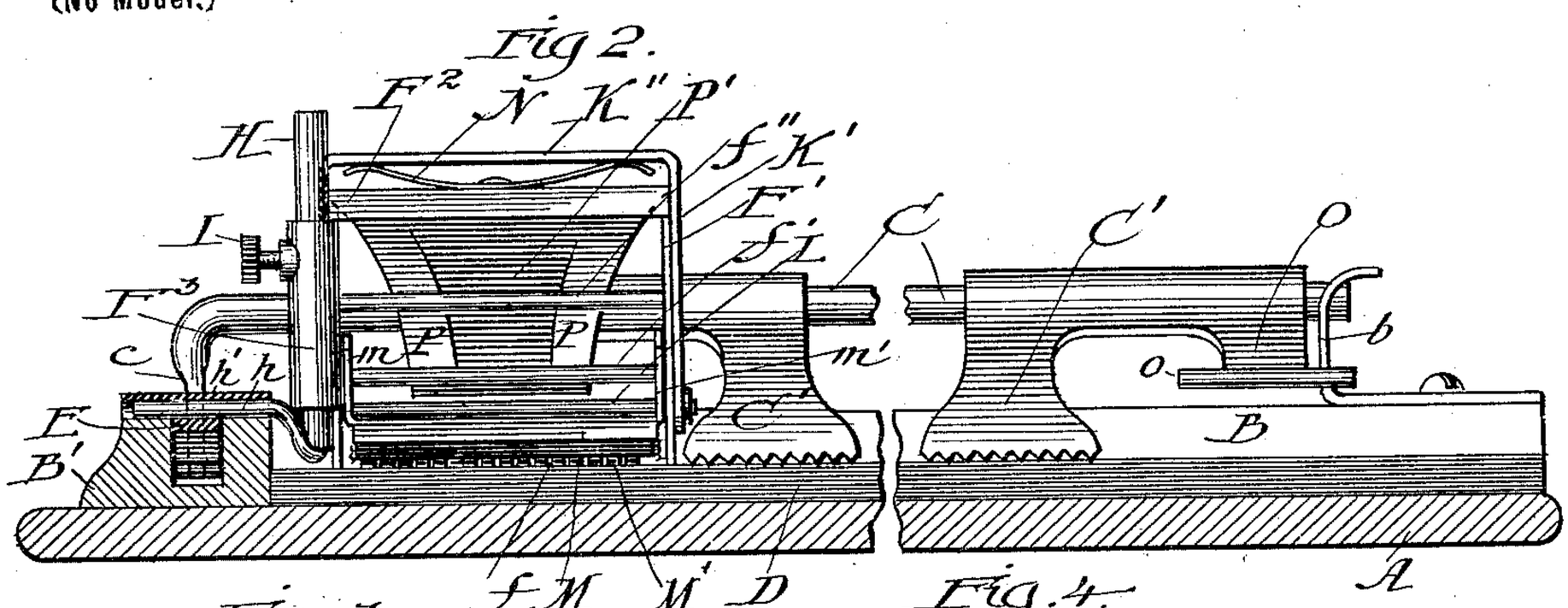


Fig. 3.

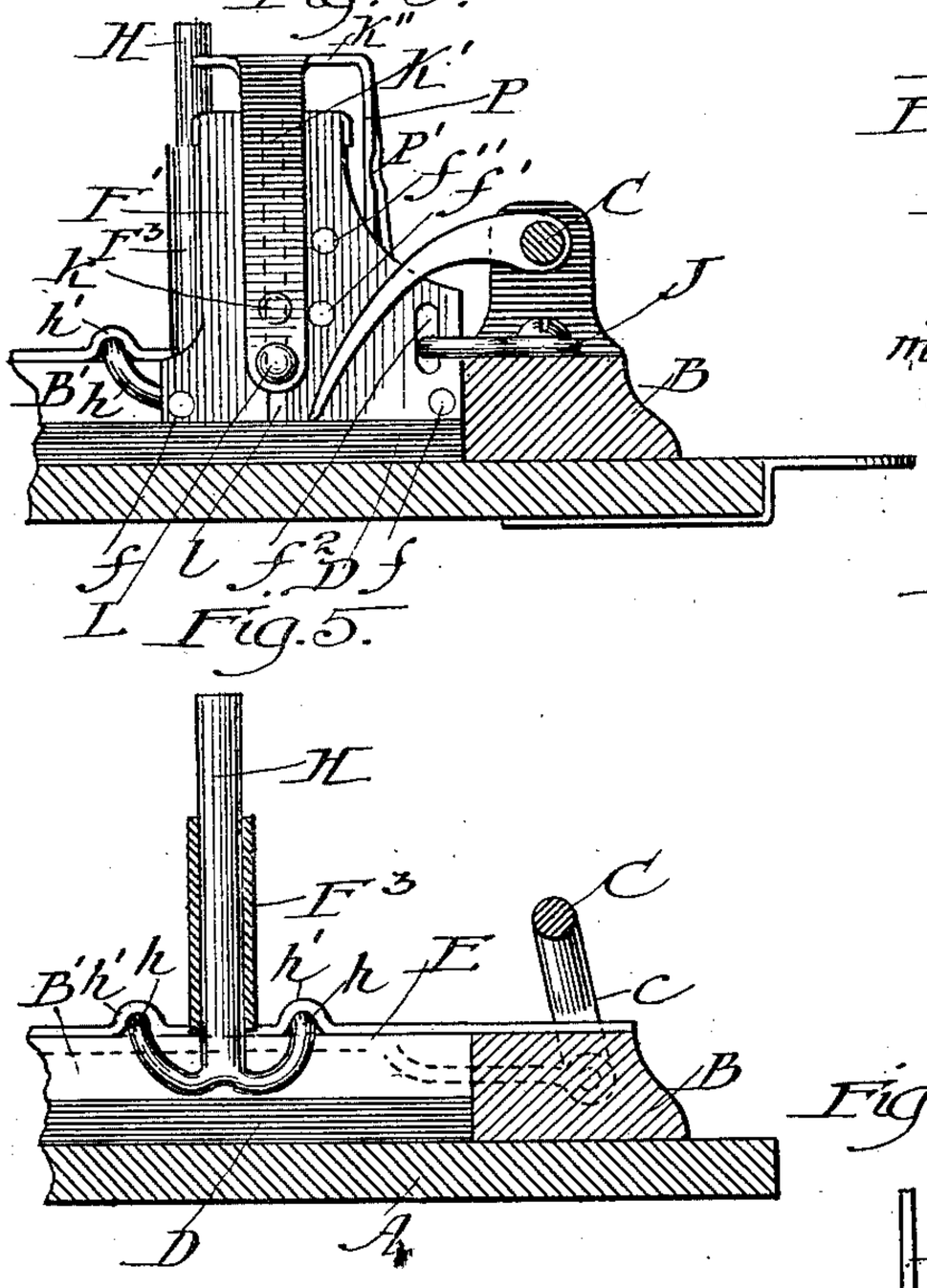


Fig. 4.

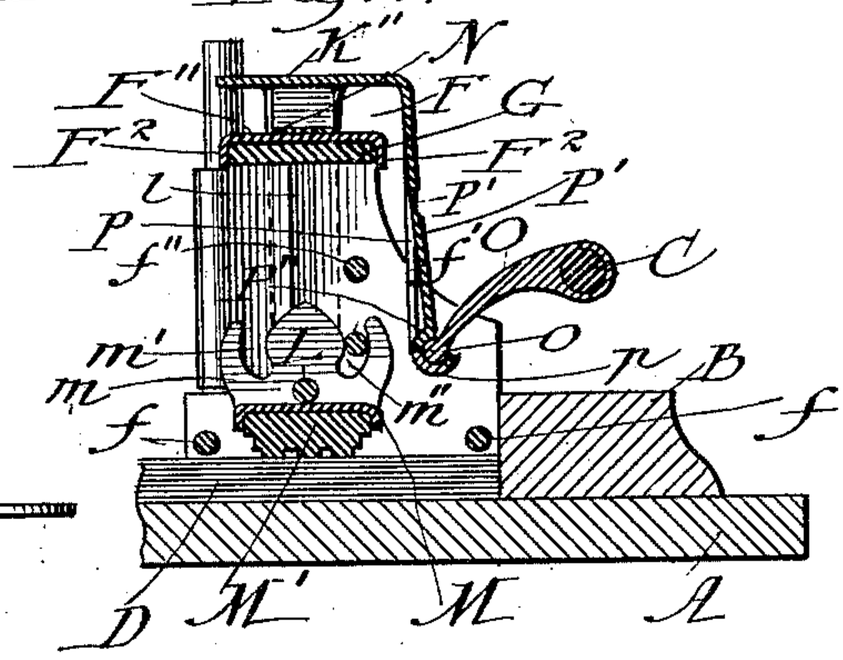


Fig. 5.

Fig. 6.

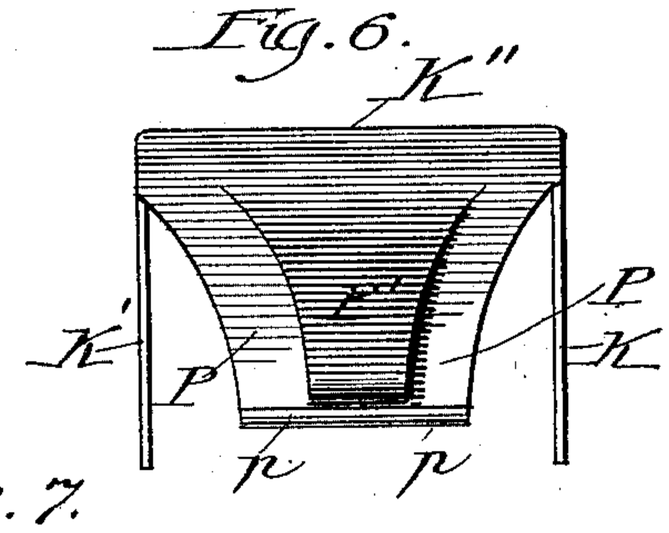
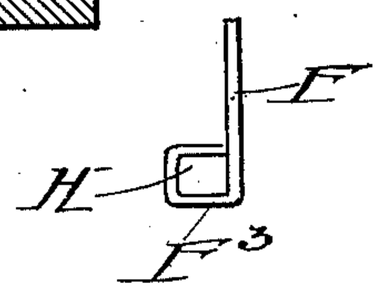


Fig. 7.



Witnesses:
Frank L. Blanchard
Bella Evans

Inventor:
John I. Carr,
By W. W. Hopkins
Attorney.

UNITED STATES PATENT OFFICE.

JOHN I. CARR, OF CHICAGO, ILLINOIS.

PRINTING ATTACHMENT FOR PAPER-CLIPS.

SPECIFICATION forming part of Letters Patent No. 703,180, dated June 24, 1902.

Application filed March 3, 1902. Serial No. 96,485. (No model.)

To all whom it may concern:

Be it known that I, JOHN I. CARR, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Printing Attachments for Paper-Clips, of which the following is a specification.

There are at present in use many paper-clips that are designed to hold a considerable number of sheets of writing-paper piled one upon another for convenience in writing upon the top sheet of the pile. Some of these clips have a broad flat base made out of a thin piece of wood or other suitable material, upon which the pile of paper rests, and a jaw pivotally mounted upon the base and adapted to engage the top sheet of the pile, said jaw being under the influence of a spring which tends constantly to press it firmly against the top of the pile, means being provided for lifting the jaw when the top sheet is to be removed. In others the base is not broad and long enough to completely underlie the pile of paper, but extends only far enough to cooperate with the upper spring-actuated jaw in holding the paper. In still others two jaws of more or less similar construction are used. In all, however, there is a spring-actuated jaw that is adapted to engage the top of the pile of paper and a part which engages the bottom of the pile and coöperates with said spring-actuated jaw for holding the paper. This part, whatever may be its construction, may appropriately be termed the "base" of the clip, and with this understanding the term "base" will be used herein to designate the lower part or member upon which the spring-actuated jaw of a paper-clip is mounted and with which it coöperates.

The object of the present invention is to provide a printing attachment that may be applied to a paper-clip of any construction and that will have a printing-form so associated with the spring-actuated jaw of the clip or the mechanism for operating said jaw that it will partake of the movements thereof, so that as the jaw is lifted the form will be lifted and pressed against an inking-pad and as the jaw descends to contact with the top sheet of the pile of paper the form also will descend to contact with said sheet and be pressed against it with sufficient force to make an impression thereon. By this means headings for letters and bills, dates, numbers, or, in fact, any desired matter may be printed on the top sheet of the pile of paper without any manipulation of the device other than what is required to release the top sheet of paper, the inking of the form and the printing of the paper being done automatically.

Another object of the invention is to provide the printing attachment with means whereby it may be so attached to the base that it may be easily and quickly thrown out of action or entirely removed, leaving the paper-clip without any unsightly adjuncts that would detract from its ornate appearance.

Another object of the invention is to provide a printing attachment of the class described with a frame which is adapted to be secured to the base, so that it will remain in fixed relation thereto during operation, and with means for permitting the surface of the form to follow the top of the pile downward as the sheets are removed therefrom, so that the form automatically accommodates itself to the top sheet of the pile.

In the accompanying drawings, which are made a part of this specification, Figure 1 is a plan view of a paper-clip and a printing attachment embodying the invention, the parts being shown full size, excepting that intermediate portions of the base are broken away. Fig. 2 is a vertical section thereof on the line 2 2, Fig. 1, looking in the direction of the arrow toward the top of the clip. Figs. 3, 4, and 5 are vertical sections thereof on the lines 3 3, 4 4, and 5 5, respectively, Fig. 1, looking in the direction of the arrows toward the left-hand side of the clip. Fig. 6 is an elevation of the yoke viewed from the top of the clip. Fig. 7 is a detail view of a modification.

Although the invention is not limited thereto, yet I prefer to use a paper-clip of the type shown and described in United States Letters Patent No. 233,069, which were granted to me October 12, 1880. This clip has a base comprising a flat board A and a pair of cleats B and B′, running along its top and left-hand sides, respectively, and having

straight inner edges that form a right angle for assisting in piling the paper evenly. Rising from the cleat B are brackets *b*, in which is journaled a rock-shaft C, carrying a clamping-jaw C′, the lower edge of which is serrated in order to take a firm hold on the top sheet of the pile of paper D. Any desired number of clamping-jaws may be used. One end of the rock-shaft has a crank-arm *c*, which engages a loop on the end of a rod E, slidably mounted in a groove in the cleat B′ and having a projection *e*, by which it may be moved in one direction, its movement in the opposite direction being produced by a coiled spring E′, which is disposed between the end of the rod E and the downturned end of a housing-plate B″. With the parts thus constructed and arranged the spring acting through the rod E, crank-arm *c*, and rock-shaft C exerts a constant pressure tending to hold the jaw down in contact with the pile of paper. When a sheet is to be removed, a pull is exerted on the projection *e* of the rod in opposition to the spring, and this acting through the same parts will lift the jaw and free the paper. When the pressure is removed from the projection, the spring will automatically close the jaw against the paper.

The stamp attachment comprises a suitable frame, means for attaching the frame to the base, a yoke slidably mounted upon the frame, a rocker carrying the printing-form, and means for connecting the yoke with the jaw-operating mechanism of the clip. The frame comprises vertical sides F and F′, a horizontal top F″, connecting and formed in one with the sides and rods *f f*, *f′*, and *f″*, extending from one side to the other and connecting them, so as to hold them in proper relations to each other. The top F″ has downturned marginal flanges F^2, and between these flanges is arranged an inking-pad G.

For securing the frame to the base of the clip one of its sides is provided with a sleeve F^3, which slips over a post H, rising from the base. The sleeve is preferably integral with the side F of the frame and is made by bending the margin of the metal of which said side is made into the form of a tube. It is provided with a boss, and this boss and the sleeve beneath it are provided with a threaded perforation for the passage of a set-screw I, by which the sleeve may be secured to the post, and thus hold the frame in any position to which it may be adjusted. It may be adjusted vertically to meet conditions hereinafter described, or it may be swung around to one side, so as to carry the whole stamping attachment out of operative position.

I prefer to use the set-screw to aid in holding the frame in place; but it is not essential. Whether it is used or not, the sleeve has a snug friction-fit on the post, and this in connection with a hook J, which is pivoted to the base of the clip and engages a vertical slot f^2 in the side F′ of the frame, will be sufficient to hold it in place. Furthermore, the sleeve and post may be of non-circular cross-section, as shown in Fig. 7, and this will dispense with the need for either the set-screw or the hook. I prefer, however, to use a post and sleeve of circular form, as this allows the stamp attachment to be swung around out of operative position without removing it.

Any desired means may be used for attaching the post to the base. In the drawings I have shown it as being provided with a pair of branches *h*, that are adapted to be slipped in and out of corresponding sockets *h′*, carried by the base, said branches being deflected downward, so as to permit the lower end of the sleeve to drop down below the top of the cleat B′ and bring the bottom of the frame almost into contact with the top of the pile of paper. This same thing could be accomplished without deflecting the branches *h* downward if a shorter sleeve were used; but for the sake of stability I prefer to use a sleeve of the maximum length permitted by the circumstances. In order to still further insure stability, the post H is so placed that the sides F and F′ of the frame have contact with the top cleat B.

The yoke comprises two vertical sides K and K′, which lie outside of but close to the sides F and F′, respectively, of the frame, and a top K″, which is formed in one with and connects the sides K K′. Near their lower ends the sides K K′ support a rod L, which extends from one of them to the other, passing through vertical slots *l*, that extend from top to bottom of the sides F and F′ of the frame. Upon this rod L is loosely hung the rocker M, which carries the rubber or other printing-form M′. The rocker has at its ends upturned ears *m*, that have slots *m′* and *m″*, that are adapted to receive the rods *f′* and *f″*, respectively, as the rocker is moved up and down by the yoke. This in general is a familiar construction in self-inking rubber stamps and is for the purpose of giving the rocker a half-turn at each operation of the stamp, so as to present the face of the printing-form squarely to the paper and to the inking-pad at opposite ends of its permitted travel. It will be observed, however, that the conditions of use are not the same in my device as they are in rubber stamps of ordinary construction. In using a self-inking rubber stamp of ordinary construction the frame bears upon the sheet to be printed, and therefore always bears the same relation thereto, so that at the moment of completing the impression the printing-form always bears the same relation to the frame; but in using my device, the frame being held fixedly in one position, its relation to the top sheet of the pile of paper changes as the sheets are removed and the pile becomes lower and lower. This changing condition must be met by permitting the printing-form to follow down with the top of the pile. To permit this, I make the

sides K and K′ of the yoke somewhat longer than usual, and I carry the slots *l* quite to the bottom of the frame, and as this will permit the rod L to move out of said slots at bottom I provide the sides K and K′ with short studs *k*, which project into the slots and guide the yoke after the rod L passes below the bottom of the frame.

A delicate spring N of only sufficient strength to hold up the yoke and its accessories is arranged between the top of the frame and the top of the yoke.

For operating the yoke it is connected with the clamping-jaw C′ or with the rock-shaft C, so that each time the jaw is lifted to release a sheet the printing-form will be carried upward and pressed against the inking-pad G, and when the jaw again descends to clamp the paper the same spring which forces it downward will also force the printing-form downward and into contact with the top sheet and there hold it. Here again is a difference in operation. In self-inking rubber stamps as ordinarily constructed the spring forces the printing-form into contact with the inking-pad and there holds it, that being its normal position, while in my device the spring forces the printing-form against the paper and there holds it, that being its normal position.

For connecting the yoke with the rock-shaft C, I may use an arm O, which is preferably integral with the jaw C′, a flexible arm P, which projects downward from the top K″ of the yoke and has a seat *p* for a cross-head *o* at the end of the arm O, and a spring-detent P′, which holds the cross-head *o* in the seat *p*. Preferably the arm P and detent P′ are integral with the top K″ of the yoke, and, if need be, they may be reduced in thickness at an intermediate point, as shown at *p′*, in order to make them sufficiently flexible to yield and permit the cross-head *o* to move in an arc about the axis of the shaft C. This reduction may be made by a blow of a die or hammer. The seat *p* is of practically semicircular shape and is formed by bending the lower portion of the metal of which the arm P is made, and the detent has a toe P″, which is curved on its under side, so that the surfaces of the seat and detent conform to the circular cross-sectional shape of the cross-head *o*, allowing the cross-head to turn in the seat as it moves up and down.

To place the cross-head in its seat, it is presented to the detent and pressed against said detent with sufficient force to move its lower end and uncover the seat, and it is then pressed downward into the seat, whereupon the detent will snap back to its normal position and hold the cross-head in the seat.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination with a paper-clip, having a spring-actuated clamping-jaw, of a printing-form and means connecting the printing-form with the jaw-operating mechanism of the clip, whereby the jaw and form move together and the one holds the paper while the other prints it, substantially as described.

2. The combination with a paper-clip, having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a printing-form, means movably mounted upon the frame and carrying the printing-form, and means connecting said means for carrying the form with the jaw-operating mechanism of the clip whereby said jaw-operating mechanism simultaneously moves the jaw and form into contact with the paper so that as the one holds it the other prints it, substantially as described.

3. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a printing-form, a yoke slidably mounted upon the frame and carrying the printing-form, and means connecting said yoke with the jaw-operating mechanism of the clip, substantially as described.

4. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame, means for removably securing the frame to the base, a printing-form, means movably mounted upon the frame and carrying the printing-form, and means connecting the said means for carrying the printing-form with the jaw-operating mechanism, substantially as described.

5. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame, means for adjustably securing said frame to the base, a printing-form, means movably mounted upon the frame and carrying the printing-form, and means connecting said means for carrying the printing-form with the jaw-operating mechanism of the clip, substantially as described.

6. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame, a post rising from the base, means for adjustably securing the frame to the post, a printing-form, means movably mounted upon the frame and carrying the printing-form, and means connecting said means for carrying the printing-form with the jaw-operating mechanism of the clip, substantially as described.

7. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame, a post for supporting the frame, means for removably securing the post to the base, a printing-form, means movably mounted upon the frame and carrying the printing-form, and means connecting said means for carrying the printing-form with the jaw-operating mechanism of the clip, substantially as described.

8. The combination with a paper-clip hav-

ing a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, a printing-form carried by the yoke, an arm projecting from the yoke, and means connecting said arm with the jaw-operating mechanism of the clip, substantially as described.

9. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, a printing-form carried by the yoke, an arm projecting from the yoke, a second arm jointed to the arm first aforesaid, and means connecting the second arm with the jaw-operating mechanism of the clip, substantially as described.

10. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, an arm projecting from the yoke, a second arm having a cross-head occupying the seat carried by the arm of the yoke, a spring-actuated detent for holding said cross-head in said seat, and means connecting the cross-head with the jaw-operating mechanism of the clip, substantially as described.

11. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, a printing-form carried by the yoke, a spring-arm projecting from the yoke and having a seat, a second arm having a cross-head occupying said seat, a detent for holding said cross-head in said seat, and means for connecting the second arm with the jaw-operating mechanism of the clip, substantially as described.

12. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, a printing-form carried by the yoke, said form being movable to a position that brings its printing-face below the bottom of the frame, and means for connecting said yoke with the jaw-operating mechanism of the clip, substantially as described.

13. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base and having vertical sides provided with slots extending quite to the bottom thereof, a yoke slidably mounted upon the frame and having vertical sides, a rod extending from one to the other of the vertical sides of the yoke and passing through the slots in the sides of the frame, a printing-form carried by said rod, and means connecting the yoke with the jaw-operating mechanism of the clip, substantially as described.

14. The combination with a paper-clip having a base and a spring-actuated clamping-jaw, of a printing attachment having a frame secured to the base, a yoke slidably mounted upon the frame, a printing-form carried by the yoke and movable to a position that brings its printing-surface below the bottom of the frame, a delicate spring interposed between the frame and yoke, and means connecting the yoke with the jaw-operating mechanism of the clip, substantially as described.

JOHN I. CARR.

Witnesses:
BELLA EVANS,
L. M. HOPKINS.