

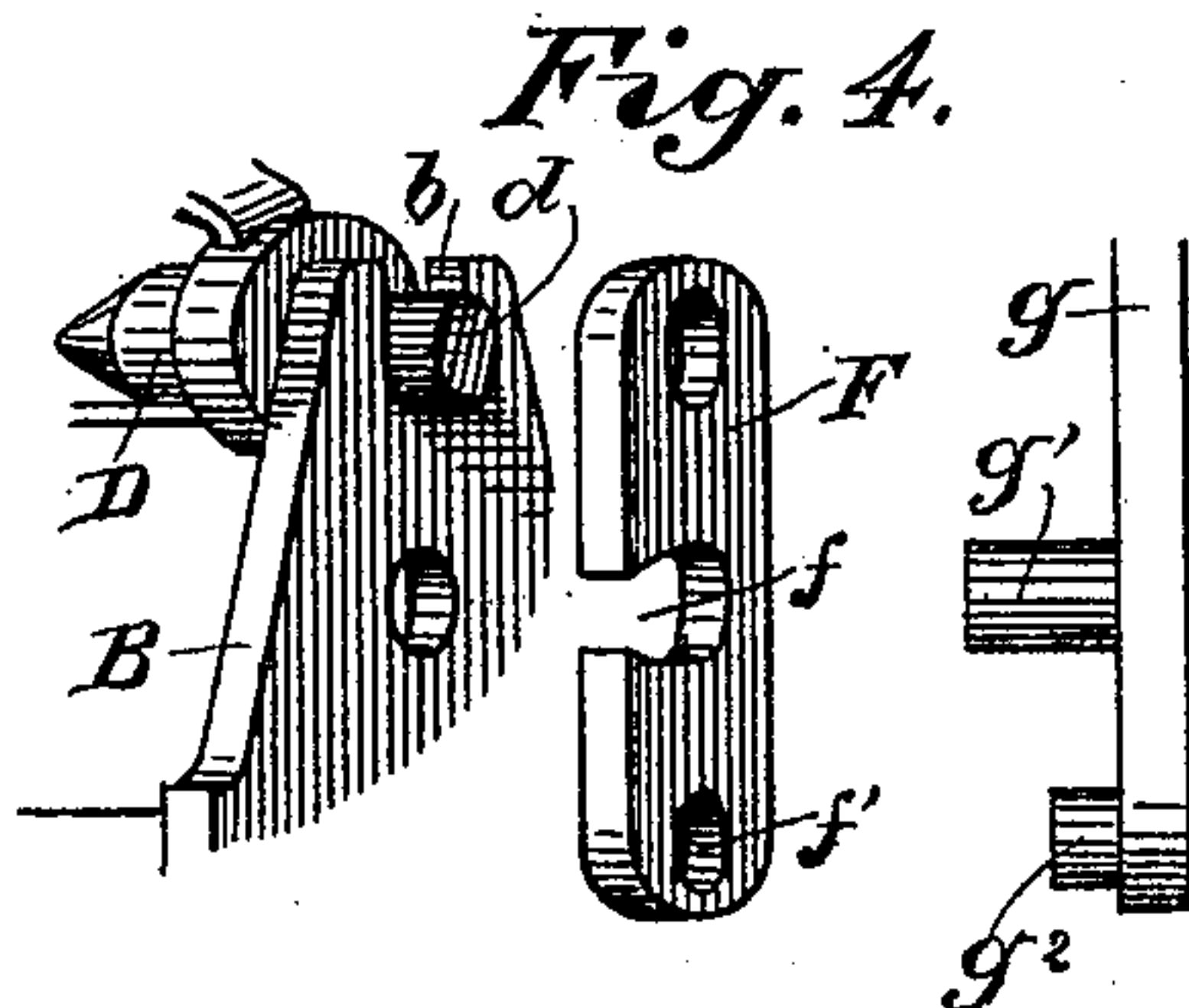
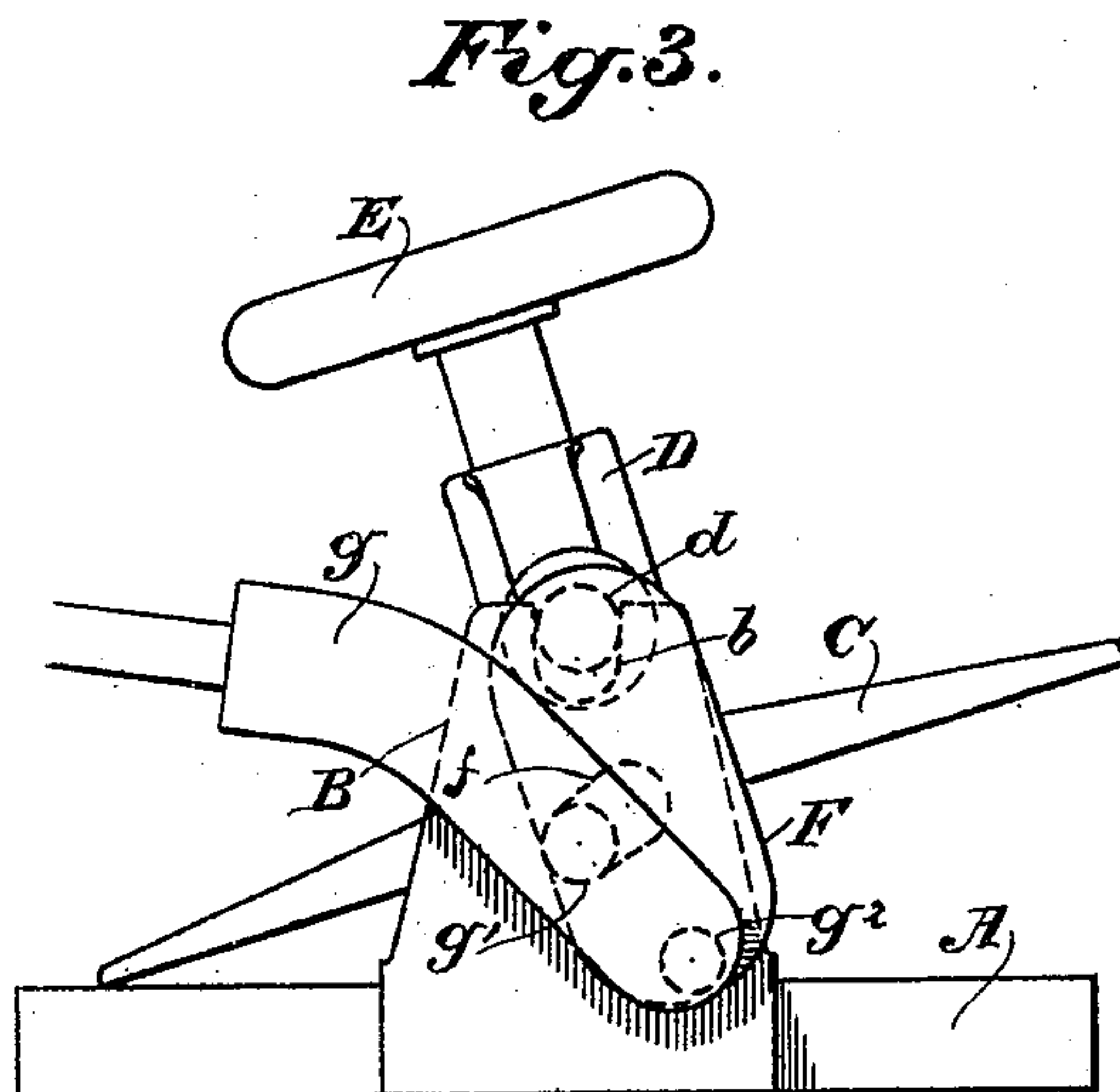
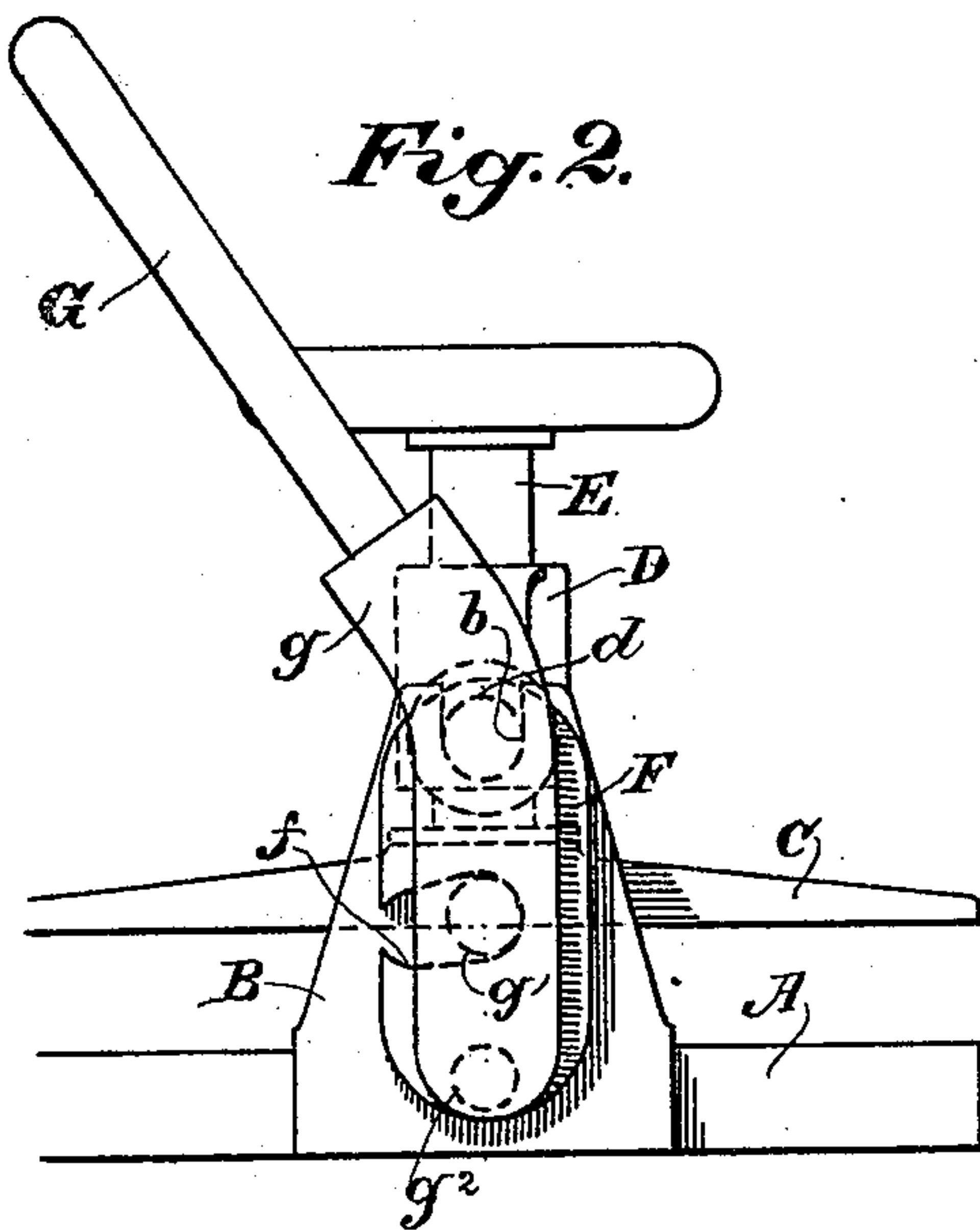
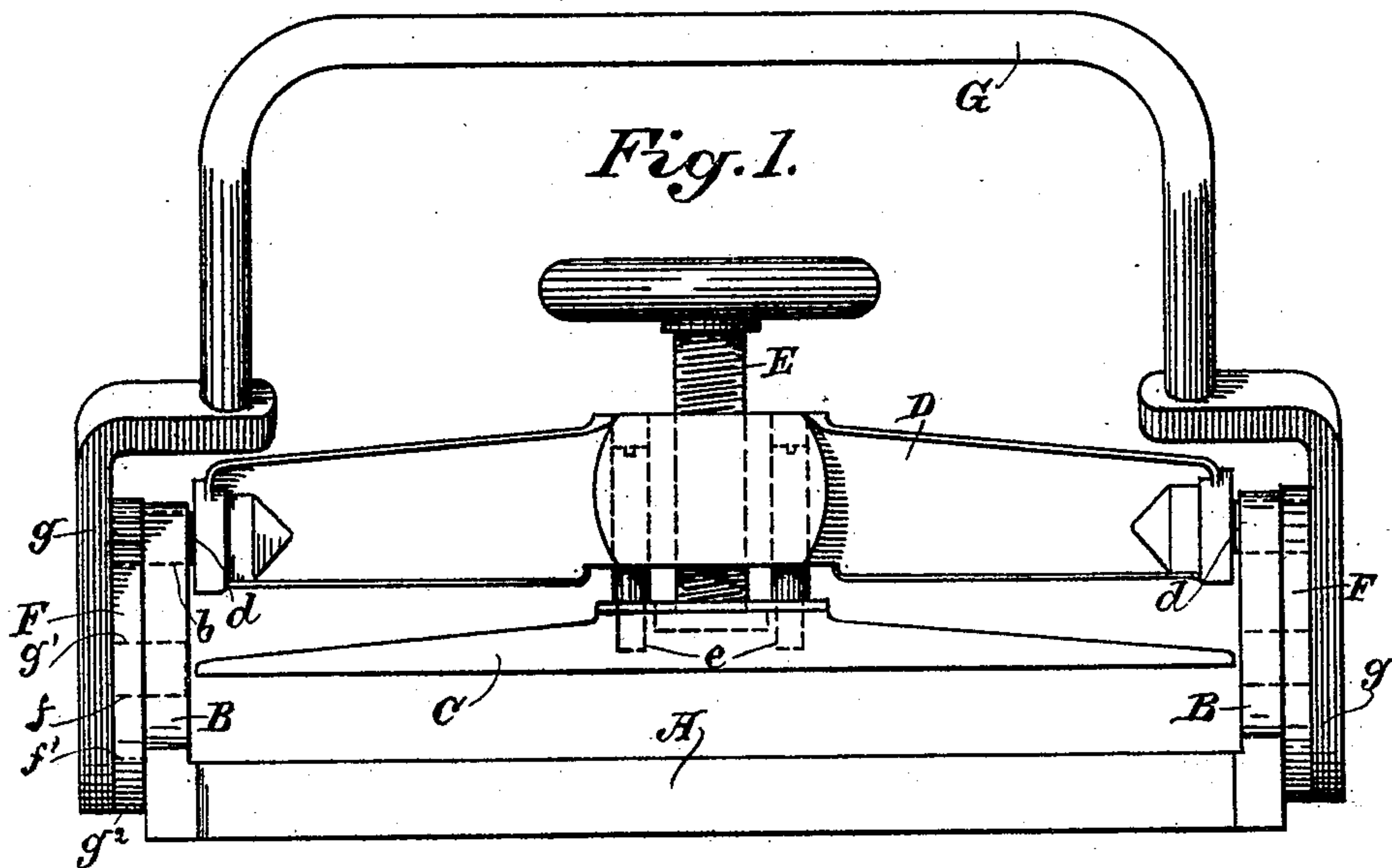
(No Model.)

2 Sheets—Sheet 1.

M. P. BOSS.  
LETTER COPYING PRESS.

No. 583,245.

Patented May 25, 1897.



Witnesses,  
*J. H. Stone*  
*H. F. Aschbeck*

Inventor,  
*Martin P. Boss*  
*Per Quincy & Co*  
*attys*

(No Model.)

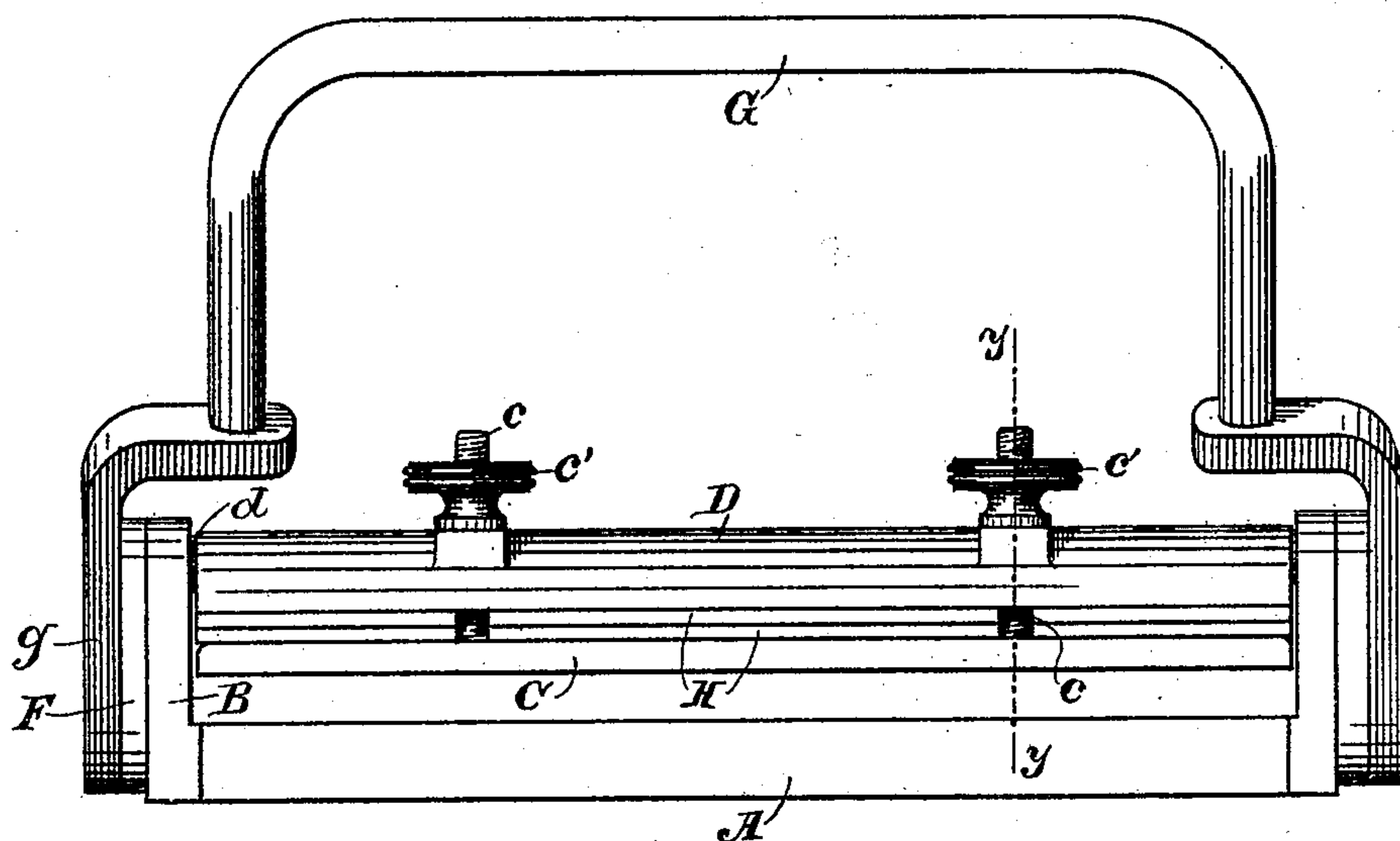
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M. P. BOSS.  
LETTER COPYING PRESS.

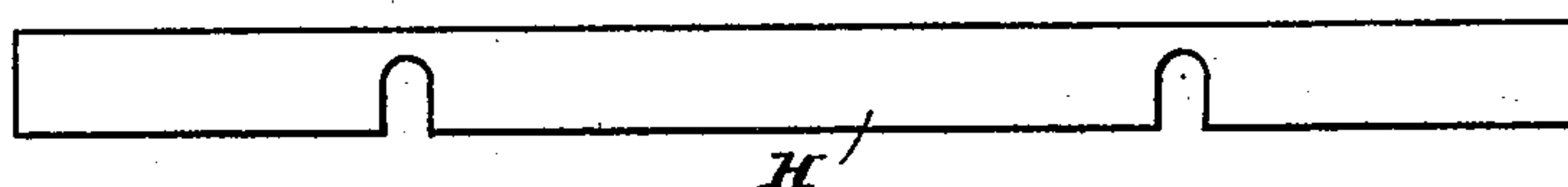
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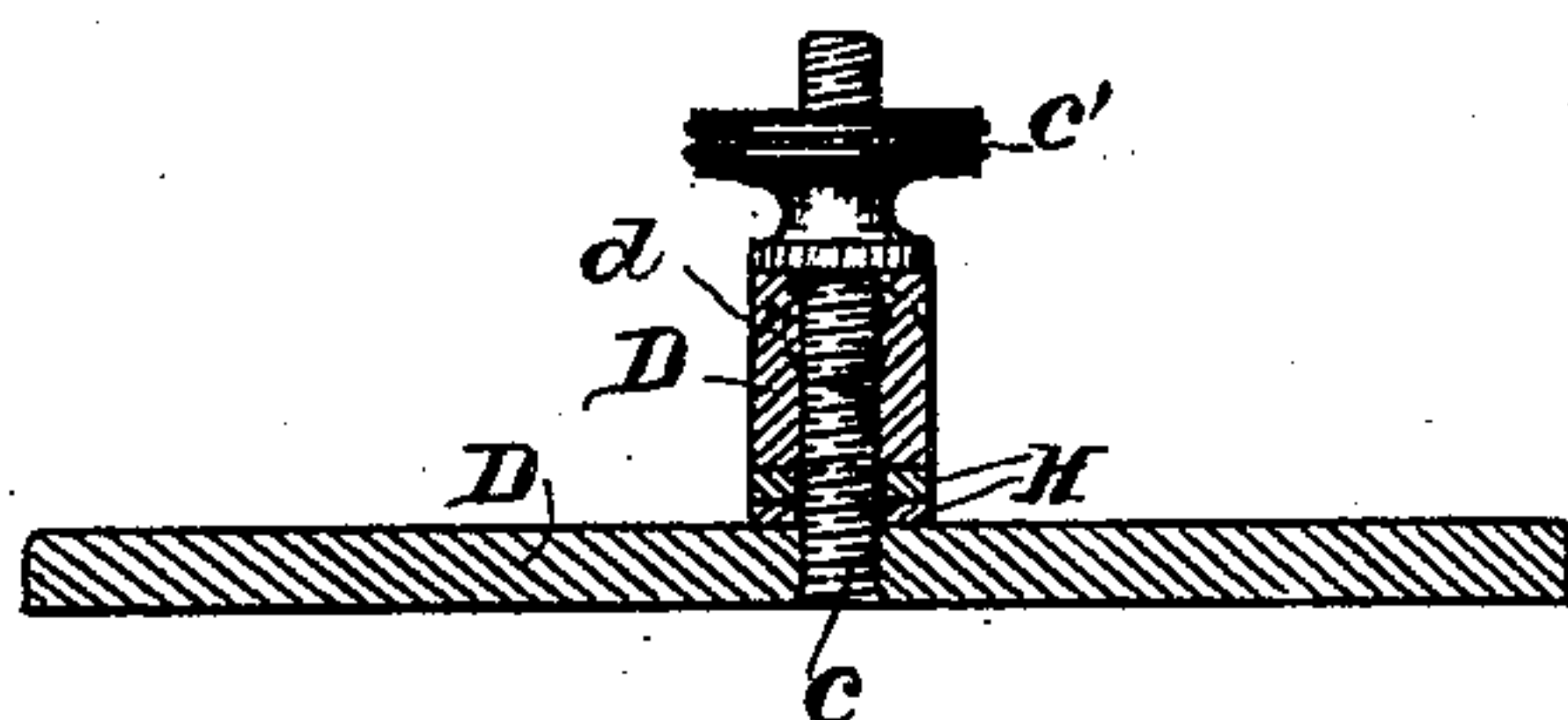
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



Witnesses,  
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Inventor,  
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# UNITED STATES PATENT OFFICE.

MARTIN PRIOR BOSS, OF SAN FRANCISCO, CALIFORNIA.

## LETTER-COPYING PRESS.

SPECIFICATION forming part of Letters Patent No. 583,245, dated May 25, 1897.

Application filed October 8, 1896. Serial No. 608,194. (No model.)

*To all whom it may concern:*

Be it known that I, MARTIN PRIOR BOSS, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Letter-Copying Presses; and I hereby declare the following to be full, clear, and exact description of the same.

My invention relates to that class of copying-presses for letters and other documents in which a vertically-movable presser-plate descends upon the copying-book, with its confined pads and letter, and presses said book against a bed-plate.

My invention consists in a tilting presser-plate adapted, when raised from the book, to tilt by gravity to afford ample space, with the minimum adjustment or movement, to remove and insert the book.

It also consists in a lever and novel connections whereby the presser-plate is operated, and, in combination with said operating connections, a means by which the initial adjustment of the presser-plate is effected, all of which I shall hereinafter fully describe.

The object of my invention is to provide a letter-copying press in which the initial or primary adjustment of the presser-plate can be effected by suitable means, and the pressing operation of said plate thereafter effected by means of a lever and suitable connections, said plate being relieved by the same means, whereby rapidity in operation is effected, and, further, to provide that the movement of the presser-plate in operating shall be as little as possible, space for inserting and removing the book being provided for by making the presser-plate tilt automatically, as by gravity.

Referring to the accompanying drawings, Figure 1 is an elevation of my press. Fig. 2 is a side view showing it closed. Fig. 3 shows it open. Fig. 4 are the parts in perspective by which the lever operates the presser-plate. Fig. 5 is a view of a press, showing a modified initial adjustment. Fig. 6 is a view of one of the adjusting-strips. Fig. 7 is a cross-section on line *y y* of Fig. 5.

A is the bed. From this at each side thereof rise the standards B.

C is the presser-plate. This is supported from the cross-yoke D by means of a hand-

screw E, and is guided by the pins *e*. The cross-yoke has end pivots *d*, which lie in vertical open-topped slots *b* in the upper ends of the standards B. Pivoted on these pins by their upper ends are the links F, lying just outside the standards. These links have slots *f* opening from their sides, and in their lower ends they have holes *f'*.

G is a bail-lever. The leg-pieces *g* of this lever have pins *g'*, and at their extremities they have other pins *g''*. The pins *g'* enter freely through the open-ended slots *f* of links F, and also enter the sides of the standards B. The pins *g''* enter the holes *f'* in the links F.

The presser-plate C is to be made to tilt by gravity, and for this purpose one of its sides, beyond the pivotal plane of the yoke which carries it, may be made heavier than the other, as by being weighted, either originally in its manufacture or by placed weights, or it may be rendered tiltable by having one of its sides longer and consequently heavier than the other, and it is this form which I have herein shown.

The operation of the press is as follows: Let it be supposed to be closed—that is, its presser-plate is down. Now to open it the lever G is pressed over farther to one side. In this movement it turns about pins *g'* as centers. This will cause the lower extremities of its legs *g* to carry, by means of the pins *g''*, the lower ends of the links F over, said links swinging about pivots *d* above, and their slots *f* playing freely over pins *g'*; but this movement of the links F is not only a swinging one, but necessarily a lifting one, so that they lift pivots *d* up in the standard-slots *b*, and thus the yoke D and the presser-plate C are elevated. By this lift the presser-plate is free of the underlying book and is high enough to permit its heavy side to drop by gravity, thus elevating its light side and providing, automatically, ample space for the ready removal and insertion of the book under the elevated side. By returning the lever the presser-plate is forced down again upon the book. By operating the screw E the presser-plate may be adjusted properly in the first place, so that the lever movement may be as small as possible. Thus there are



two adjustments of the presser-plate, the one being by means of the bail-lever G, which by its movement alone raises and lowers the plate from and to its work, thereby insuring speed, 5 and the other by means of the screw E, which initially and accurately adjusts said plate and may be used to change or increase the pressure as desired. I do not, however, confine myself to effecting the initial adjustment 10 of the presser-plate by means of the ordinary hand-screw shown by E, for, as shown in Figs. 5 and 7, I may effect this adjustment in the following manner: The presser-plate C is secured to the yoke D by being suspended 15 from it by means of pins c, which pass up freely through sockets in the yoke and have thumb-nuts c' threaded upon their upper ends. Thus the presser-plate is merely suspended from the yoke by means of the pins 20 and thumb-nuts. Now to effect the initial adjustment of the presser-plate the thumb-nuts are turned up, thus allowing the presser-plate to descend, and then between the presser-plate and yoke are inserted one or 25 more adjusting-strips H, to give the necessary depression and bearing, and then the thumb-nuts are tightened again.

Having thus described my invention, what I claim as new, and desire to secure by Letters 30 Patent, is—

1. In a letter-copying press, a presser-plate having a pivotal axis about which it is adapted to tilt, said axis being out of line of its center of gravity, whereby said plate is adapted, when raised from its work, to tilt by gravity, to provide space for the insertion and removal of the book. 35

2. In a letter-copying press, the combination of a pivoted or rocking yoke and a presser-plate carried by said yoke, and so arranged with relation thereto that said plate is heavier on one side of the pivotal axis than on the other, whereby when raised from its work, said plate will tilt by gravity, to provide space 45 for the insertion and removal of the book.

3. In a letter-copying press, the combination of a pivoted or rocking yoke, a presser-plate suspended therefrom out of the line of the pivotal axis of said yoke, whereby said 50 plate will tilt by gravity, a lever and connections for operating said yoke to depress and raise the presser-plate, and a means for initially adjusting the plate with relation to its distance from the yoke.

4. In a letter-copying press, the combination of a pivoted or rocking yoke, a presser-plate suspended therefrom out of the line of the pivotal axis of said yoke whereby said plate will tilt by gravity, a lever and connections for operating said yoke to depress and 60 raise the presser-plate and a means for initially adjusting the plate with relation to its distance from the yoke, consisting of a screw carried by the yoke and suspending said plate.

5. In a letter-copying press, the combination of a bed having standards, a yoke mount-

ed and vertically movable in said standards, a presser-plate carried by the yoke, and the means for raising and lowering the yoke, consisting of the links pivoted on the yoke ends 70 and having slots opening in from their sides, and the bail-lever, the legs of which have pins playing freely in the slots of the links and pivoted in the bed-standards, and other pins engaging the lower extremities of the links. 75

6. In a letter-copying press, the combination of a bed having standards, a yoke mounted and vertically movable in said standards, a presser-plate carried by the yoke, the means for raising and lowering the yoke, consisting 80 of the links pivoted on the yoke ends and having slots opening in from their sides, and the bail-lever, the legs of which have pins playing freely in the slots of the links and pivoted in the bed-standards and other pins engaging 85 the lower extremities of the links, and a means for initially adjusting the presser-plate with relation to its distance from the yoke.

7. In a letter-copying press, the combination of a bed having standards, a rocking yoke 90 having end pivots mounted and vertically movable in said standards, a presser-plate suspended from said yoke, with its center of gravity out of line with the pivotal axis of the yoke whereby the plate when raised will 95 tilt by gravity to provide space for the insertion and removal of the book, and the means for raising and depressing the yoke for operating the presser-plate, consisting of the links pivoted upon the end pivots of the yoke and 100 having slots opening in from their sides, and the bail-lever, the legs of which have pins playing in the slots of the links and pivoted in the bed-standards, and other pins engaging the lower extremities of said links. 105

8. In a letter-copying press, the combination of a bed having standards, a rocking yoke having end pivots mounted and vertically movable in said standards, a presser-plate suspended from said yoke, with its center of 110 gravity out of line with the pivotal axis of the yoke whereby the plate when raised will tilt by gravity to provide space for the insertion and removal of the book, the means for raising and depressing the yoke for operating 115 the presser-plate, consisting of the links pivoted upon the end pivots of the yoke and having slots opening in from their sides, and the bail-lever, the legs of which have pins playing in the slots of the links and pivoted in the 120 bed-standards, and other pins engaging the lower extremities of said links, and a means for initially adjusting the presser-plate, with relation to its distance from the yoke.

9. In a letter-copying press, the combination of a bed having standards, a rocking yoke 125 having end pivots mounted and vertically movable in said standards, a presser-plate suspended from said yoke with its center of gravity out of line with the pivotal axis of 130 the yoke, whereby the plate when raised will tilt by gravity to provide space for the inser-



tion and removal of the book, the means for  
raising and depressing the yoke for operating  
the presser-plate, consisting of the links piv-  
oted upon the end pivots of the yoke and hav-  
5 ing slots opening in from their sides, and the  
bail-lever, the legs of which have pins play-  
ing in the slots of the links and pivoted in the  
bed-standards, and other pins engaging the  
lower extremities of said links, and the hand-  
10 screw carried by the yoke and suspending the

presser-plate, and adapted to initially adjust  
the latter with relation to its distance from  
the yoke.

In witness whereof I have hereunto set my  
hand.

MARTIN PRIOR BOSS.

Witnesses:

JOSEPH J. GILLESPIE,  
CHAS. D. WHEAT.