

No. 898,075.

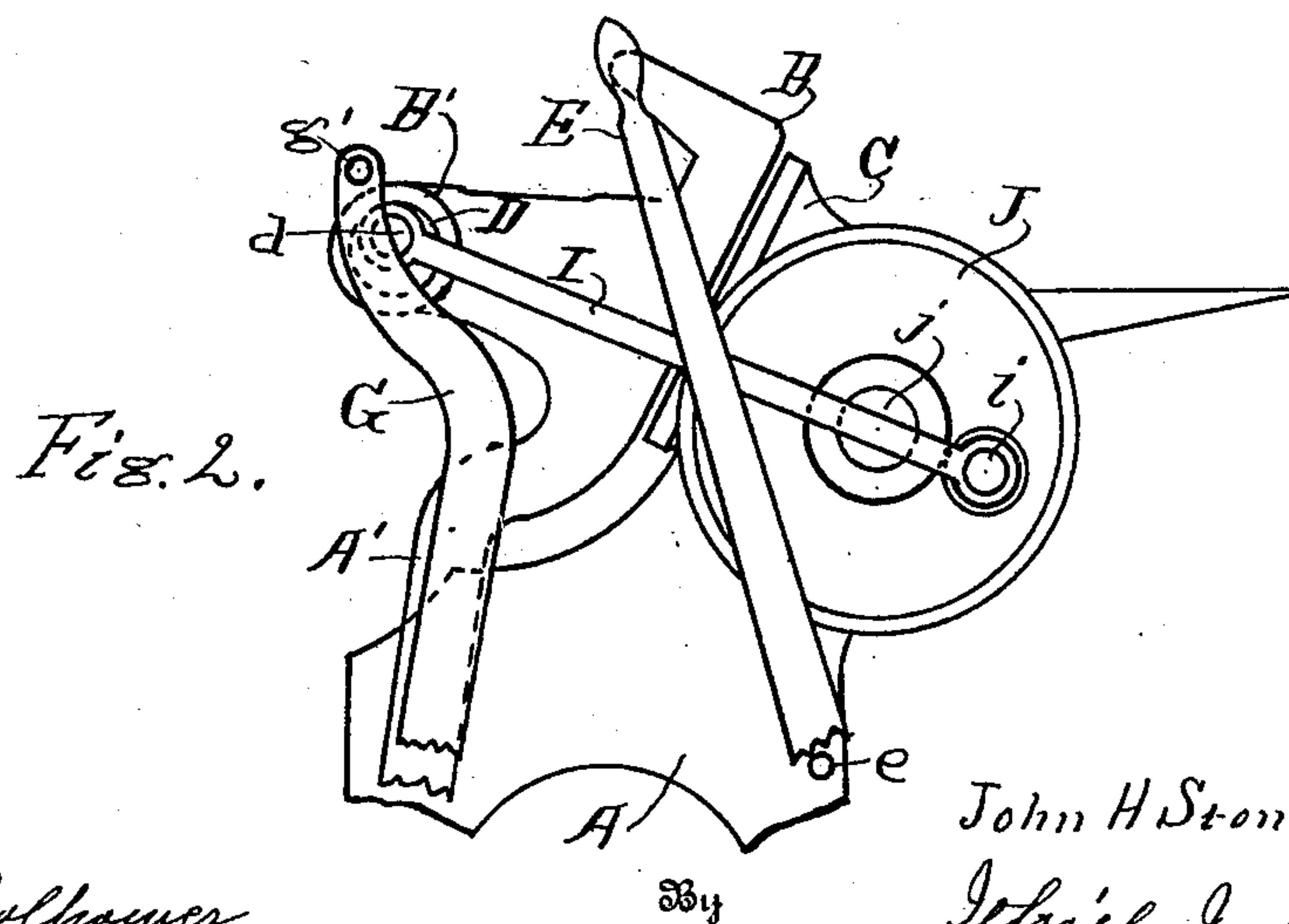
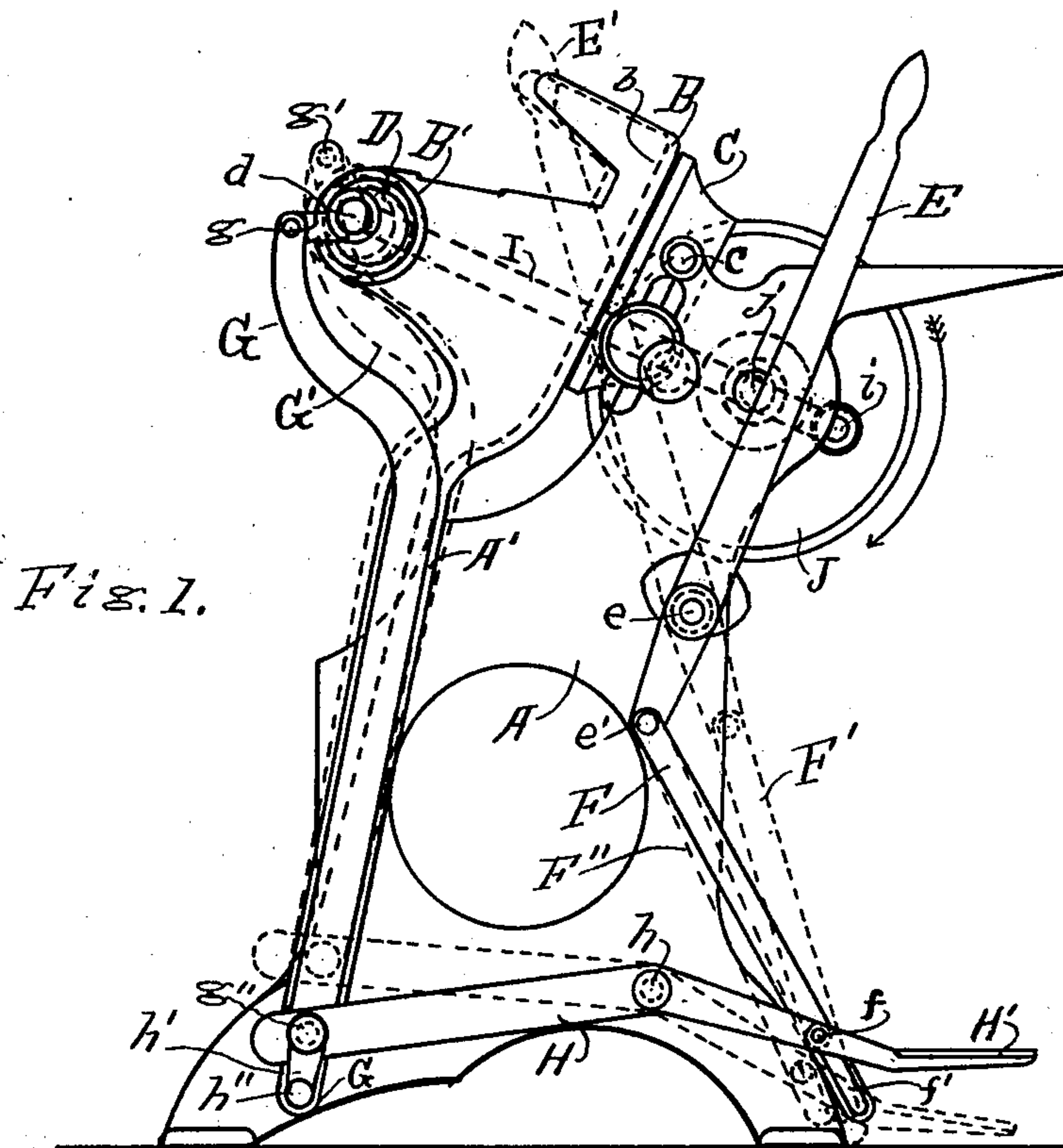
PATENTED SEPT. 8, 1908.

J. H. STONEMETZ.

PRINTING PRESS.

APPLICATION FILED MAR. 12, 1908.

2 SHEETS—SHEET 1.



Inventor

John H Stonemetz

Isabel J. Bailey

Attorney

**Witnesses**

Morris Galhauer  
 E. J. Robb

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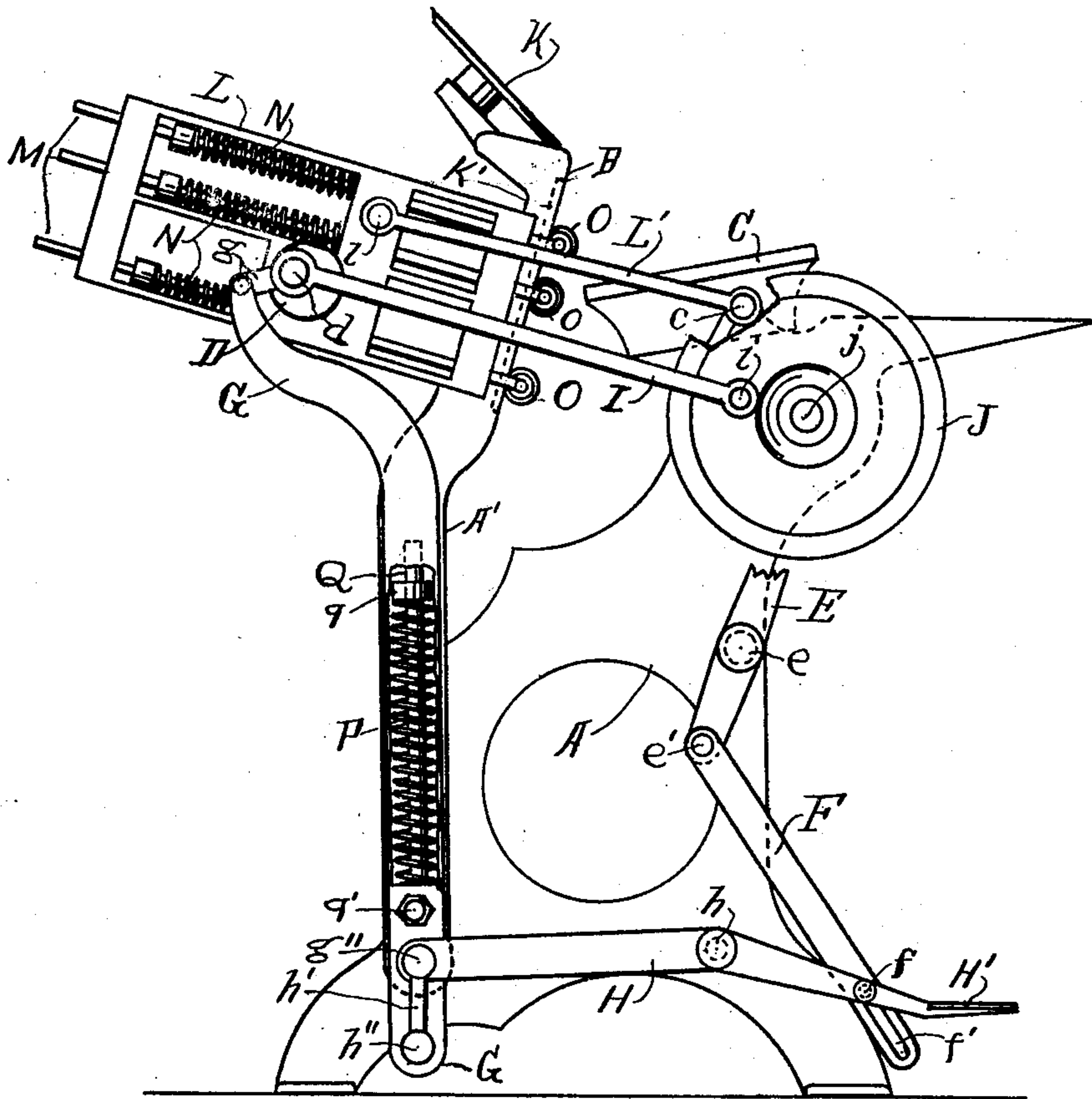


Fig. 3.

Inventor

John H. Stonemetz

Witnesses

Morris Bulhauer  
E. J. Noble

By

Edwin J. Kelley  
Attorney



# UNITED STATES PATENT OFFICE.

JOHN H. STONEMETZ, OF GRAND HAVEN, MICHIGAN, ASSIGNOR TO THE CHALLENGE MACHINERY COMPANY, OF GRAND HAVEN, MICHIGAN, A CORPORATION OF ILLINOIS.

## PRINTING-PRESS.

No. 898,075.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed March 12, 1908. Serial No. 420,732.

*To all whom it may concern:*

Be it known that I, JOHN H. STONEMETZ, a citizen of the United States, residing at Grand Haven, in the county of Ottawa and State of Michigan, have invented certain new and useful Improvements in Printing-Presses, of which the following is a specification.

My invention relates to improvements in bed and platen job printing presses, and its object is to provide a throw-off mechanism for this class of printing presses that may be operated with the hand, or the foot of the operator and may be so set that it may return to normal position automatically, or may be so locked to position that the bed and platen cannot be brought together though the bed continues to reciprocate toward and from the platen. I attain these objects by the mechanism illustrated in the accompanying drawing in which

Figure 1 is a side elevation of a printing press with the actuating wheel and connecting rod removed from one side to more clearly show the positions of the several parts that come in direct use with my appliance. Fig. 2 is a like view of the upper portion of the press showing the hand lever in position to lock the bed to place so that it cannot approach the platen close enough to make an impression upon material placed upon the platen, and Fig. 3 is a side elevation of the press showing the inking rollers in position to ink the form on the bed, and with the actuating arm cut away to show the application of its actuating spring.

Similar letters refer to similar parts throughout the several views.

It is often desirable and necessary to throw the bed of a press to such a position that a printing form on the face of the bed cannot pass forward far enough to come in contact with the face of the platen, without the necessity of stopping the press. This is accomplished by increasing the distance between the bed and the platen by placing an eccentric behind the platen or the bed, or by a wedge acting upon a false bed and heretofore these devices have been so arranged that they must be actuated by the hand, thus keeping the hand so occupied that it could not be used for other purposes, however great the necessity may be for regulating or arranging the matter being printed thereon, or

how necessary it may be to have the hand free to use for other purposes about the press.

I am aware that throw-offs have been made with which the position of the bed is controlled by an eccentric actuated by a hand lever, notably, Letters Patent No. 586,931 issued to J. E. Lee July 20, 1897 and assigned to The Challenge Machinery Company, assignees of this application, but I do not know of any throw-off mechanism in use upon platen printing presses that may be permanently locked to prevent contact or so set that contact will be renewed without the direct exertion of the operator, as desired hence the great need and desirability of the construction herein described and claimed.

The bed B has a downwardly projecting arm A' that is pivoted to the frame A directly back of the pin g'' that connects the lever H with the connecting rod G so that its oscillating motion upon its pivotal bearing will allow the bed B to reciprocate toward and from the platen C, and the platen C is pivotally secured to the frame A at c in the usual manner of connecting platens to print-presses of this class. In Fig. 3 I show the position of the bed B when at the backward limit of its motion, where material may be easily and safely placed upon the platen ready to receive the impression of the type that is carried upon the bed B.

The wheel J, mounted upon the shaft j, and the connecting rod I connecting the crank pin i on the wheel J and the shaft d on the bed B, constitute the usual mechanism employed for causing the bed to reciprocate toward and from the platen C. To carry out my invention I place an eccentric D in the bearing B', back of the bed B, so arranged that if the connecting rod G stands in the position indicated by the solid lines in Fig. 1 the connecting rod I will be adjusted to a proper length to allow the bed B to be carried forward to a proper position to allow the type to press firmly upon material that may be resting upon the face of the platen C and make the proper printing impression, but if the connecting rod is raised to the position indicated by the solid lines in Fig. 2 or the dotted lines G' in Fig. 1 the arm g, which is securely attached to the shaft d, will be carried up to the position indicated at g' and the eccentric D will be carried around to position to lengthen the distance



between the pin  $i$  and the shaft  $d$  sufficiently to hold the bed B off from the face of the platen, as indicated by the dotted lines  $b$  in Fig. 1 or the solid lines in Fig. 2 so that no impression will be made until the eccentric D is again turned to its normal position.

Coming now to the elements that enter more directly into the construction that constitutes my invention, I provide for actuating the eccentric D in two ways. First, by the use of a horizontal lever H centrally pivoted to the frame A, as at  $h$ , and having a pedal H' at one end and a short link  $h'$  connecting the pin  $g'$  on the lever H and the pin  $h''$  on the connecting rod G in such a manner that if the lever H is thrown to the position represented by its dotted lines in Fig. 1, the connecting rod will be raised with it and carry the eccentric around, as hereinbefore stated, and the distance between the points  $d$  and  $i$  will be increased, as and for the purpose hereinbefore stated.

The lever H may be actuated by pressing the foot upon the pedal H', in which case the link F will assume the position indicated by the dotted lines  $F''$ , made possible by the slot  $f'$  in its lower end, and the lever will assume its normal position as soon as the foot is removed from the pedal, or the lever may be actuated by the vertical lever E, which is pivotally secured upon the frame A at  $e$  and pivotally connected with the end of the link F at  $e'$ , the lower end of said link being connected with the lever H, as at  $f$ , so that when the lever E is thrown over to the position indicated by the dotted lines  $E'$  in Fig. 1, or the solid lines in Fig. 2, the link F will be thrown out to the position indicated by the dotted lines  $F'$ , in direct alinement with the lever E, and the lever H will be thrown to the position indicated by its dotted lines and will so remain until the lever E is thrown over to its normal position, which may be done either by hand, drawing upon the upper end of the lever, or by pressing the knee against the upper end of the link F and forcing that and the lower end of the lever E back to the position of the solid lines in Fig. 1. With this construction the lever H is so locked to position by the lever E and link F that the bed B will be held away from the platen indefinitely without the necessity of occupying either hand to hold the levers to place, thus leaving the operator free to leave the press or to use both hands for adjusting the press or the material to be printed upon.

In Fig. 3 I have shown the wheel J cut away so that the manner of connecting the connecting rod L' and the platen C with the frame A may be plainly seen. In this view L represents the frame that carries the ink rollers O O, supported upon the rods M and actuated by the springs N, in the usual manner, so that they may be made to travel over

the face of the form that may be held in the bed B and the ink distributing disk K, a feature common in all presses of this class. The roller frame L is pivotally supported upon the eccentric D and is actuated by the connecting rod L', which is connected with the frame L as at  $l$  and with the frame A as at C so that the reciprocating motion of the bed will cause the frame L to oscillate in the usual manner for inking the rollers O and distributing the ink upon the form supported in the face of the bed B, not directly shown though its position is indicated by the dotted lines K' in Fig. 3.

As it is not absolutely safe to rely upon gravity to draw the connecting rod G back to normal position when it is desired to resume printing, I have provided for assisting to carry this rod back by placing a stud  $q$  upon the outer surface of the arm A' of the bed B and a like stud  $q'$  on the inner surface of the connecting rod G and placing a spring P upon the rod Q, between these studs so that the rebound of this spring will force the connecting rod down without possible danger of failure.

The connecting rod G is connected with the arm  $g$ , that actuates the eccentric D, back of the eccentric for the reason that the upward movement of the frame L, when carrying the ink rollers O up to the ink distributing disk K tends, by friction upon the eccentric D, to throw the eccentric around so that, with the connecting rod G connected to the eccentric from in front this friction is likely to turn the eccentric and throw the bed back when not desired, but with the connecting rod connected back of the eccentric, as shown in the several figures, this rod will resist such friction and hold the eccentric firmly to position so that there will be no danger of accidentally throwing the bed from its normal position.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States, is:

1. In combination with a frame, bed, platen, actuating wheel, eccentric shaft and eccentric of a job printing press, an arm projecting from the eccentric shaft, a horizontal lever centrally pivoted to the frame, a connecting rod pivoted at one end to one end of said lever and at the other end to the arm on the eccentric shaft, a pedal at the free end of the horizontal lever, a vertical lever centrally pivoted to the frame, a link connecting the vertical lever and the horizontal lever and by such connection that the horizontal lever may be actuated by, or independently of the vertical lever, to actuate the eccentric to increase or diminish the distance between the bed and the platen.

2. In combination with the frame, bed, platen, actuating wheel, crank, connecting rod and eccentric shaft of a job printing press, an eccentric mounted on the shaft and



in bearings on the bed, a horizontal lever centrally pivoted to the frame, a connecting rod pivoted at one end to one end of the horizontal lever and at the other end to the arm on the eccentric shaft, a pedal at the free end of the lever, a vertical lever pivoted to the frame, a link pivoted at one end to the end of said lever and slidingly connected at the other end to the horizontal lever so that the horizontal lever may be actuated independent of the vertical lever or may be actuated and locked in place by the vertical lever, all arranged to actuate the eccentrics to increase or diminish the distance between the bed and the platen.

3. In combination with a bed and platen printing press, the mechanism for changing the distance between the bed and the platen consisting of a driving wheel and cranks on the press, a bed having an eccentric therein, a horizontal lever centrally pivoted to the frame, a connecting rod connecting one end of the lever with the eccentric, a vertical lever pivoted to the press frame and a link connecting it with the horizontal lever in position and by such connection that the horizontal lever may be actuated by, or independent of the vertical lever to actuate said lever and the eccentric shaft to hold and lock the bed away from the platen.

4. In combination with a bed and platen job printing press, a horizontal lever centrally pivoted to the press frame, an eccentric connected with the bed and having an actuating arm thereon, a connecting rod connecting the end of the lever with the arm on the eccentric, a standard extending down from the bed and pivoted to the press frame, a spring and rod connected at one end to the connecting rod and at the other end to the bed standard in position to force the connecting rod downward a vertical lever centrally pivoted to the frame, a link connecting the vertical lever with the horizontal lever by such connection that the horizontal lever may be actuated and locked in place thereby, or may be worked independent thereof.

5. In combination with the frame, bed, platen, eccentric shaft and arm of a bed and platen printing press, a horizontal lever centrally pivoted to the frame, a connecting rod pivotally secured to the eccentric arm back of the eccentric and extending downward be-

low the end of the horizontal lever, a link connecting one end of the horizontal lever to the lower end of the connecting rod, a spring arranged to force the connecting rod downward, and a vertical lever pivoted to the frame and arranged to lock the horizontal lever in place when the connecting rod is raised for shifting the eccentric shaft to hold the bed away from contact with the platen.

6. In combination with the frame, bed, platen and eccentric of a bed and platen job printing press, an arm projecting back from the eccentric, a horizontal lever centrally pivoted to the frame, a connecting rod pivoted at one end to the arm on the end of the eccentric rod and projecting down below the end of the horizontal lever, and a link pivoted at one end to the end of the lever and at the other end to the lower end of the connecting rod so that downward pressure on the free end of the lever will cause the connecting rod to raise and throw the eccentric around to hold the bed from contact with the platen a vertical lever centrally pivoted to the frame, a link connecting the vertical lever with the horizontal lever by such connection that the horizontal lever may be actuated and locked in place thereby, or may be worked independent thereof.

7. In combination with a bed and platen job printing press, an eccentric shaft in the bed a horizontal lever centrally pivoted to the frame, an arm connected with the eccentric, a connecting rod pivoted at one end to the arm on the eccentric shaft and projecting downward below the horizontal shaft, a link connecting one end of the horizontal lever with the lower end of the connecting rod in position to actuate the rod when the lever is actuated, a spring acting upon the connecting rod to force it downward a vertical lever centrally pivoted to the frame, a link connecting the vertical lever with the horizontal lever by such connection that the horizontal lever may be actuated and locked in place thereby, or may be worked independent thereof.

Signed at Grand Rapids Michigan March 6, 1908.

JOHN H. STONEMETZ.

In presence of—

EARL O. CILLEY,  
ITHIEL J. CILLEY.