

No. 776,793.

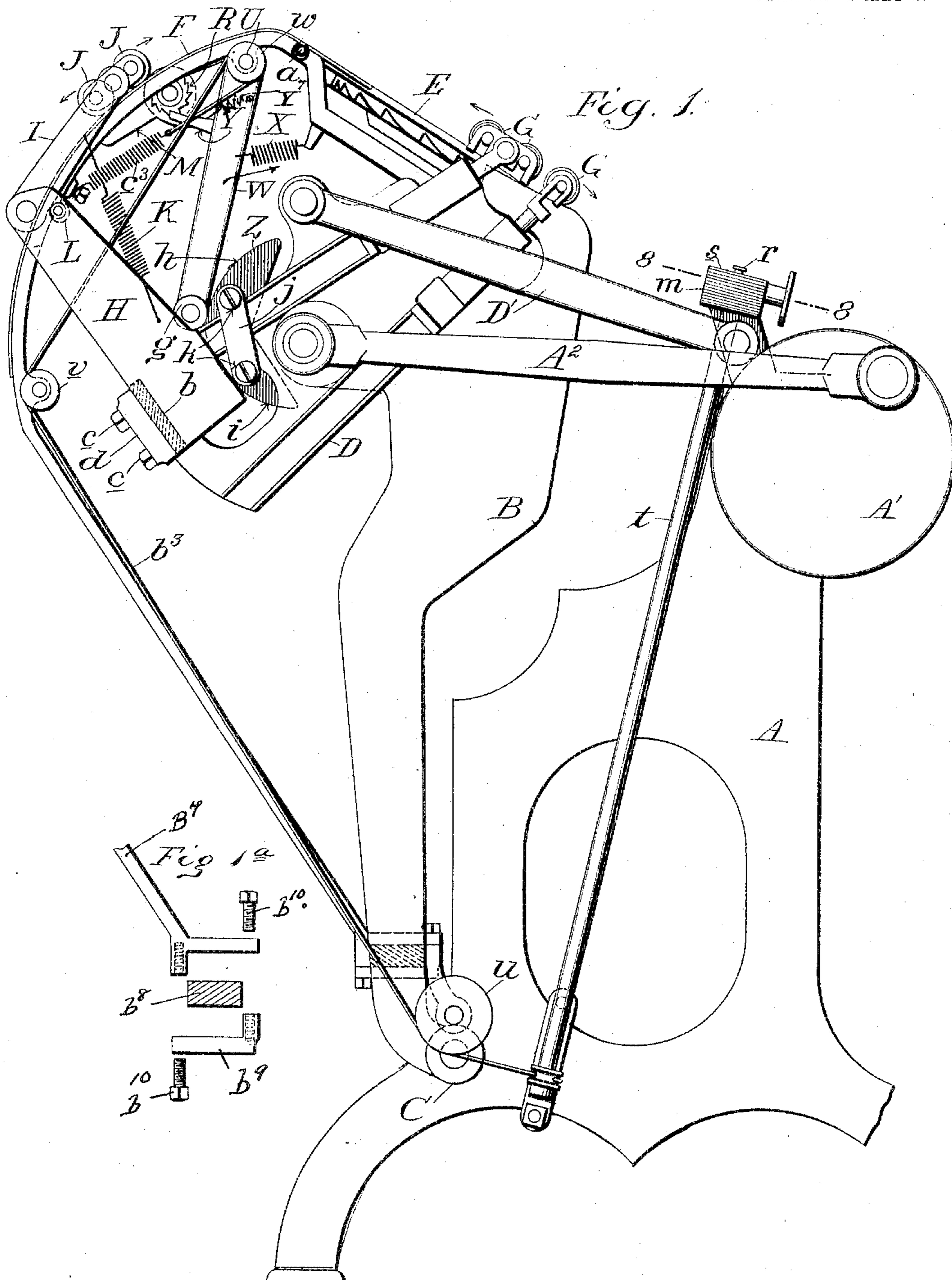
PATENTED DEC. 6, 1904.

B. MCGINTY.  
PRINTING PRESS.

APPLICATION FILED APR. 11, 1904.

NO MODEL.

4 SHEETS—SHEET 1.



Witnesses

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T. E. Turpin

Inventor

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By James Sheehy Attorney

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4 SHEETS—SHEET 2.

Fig. 2.

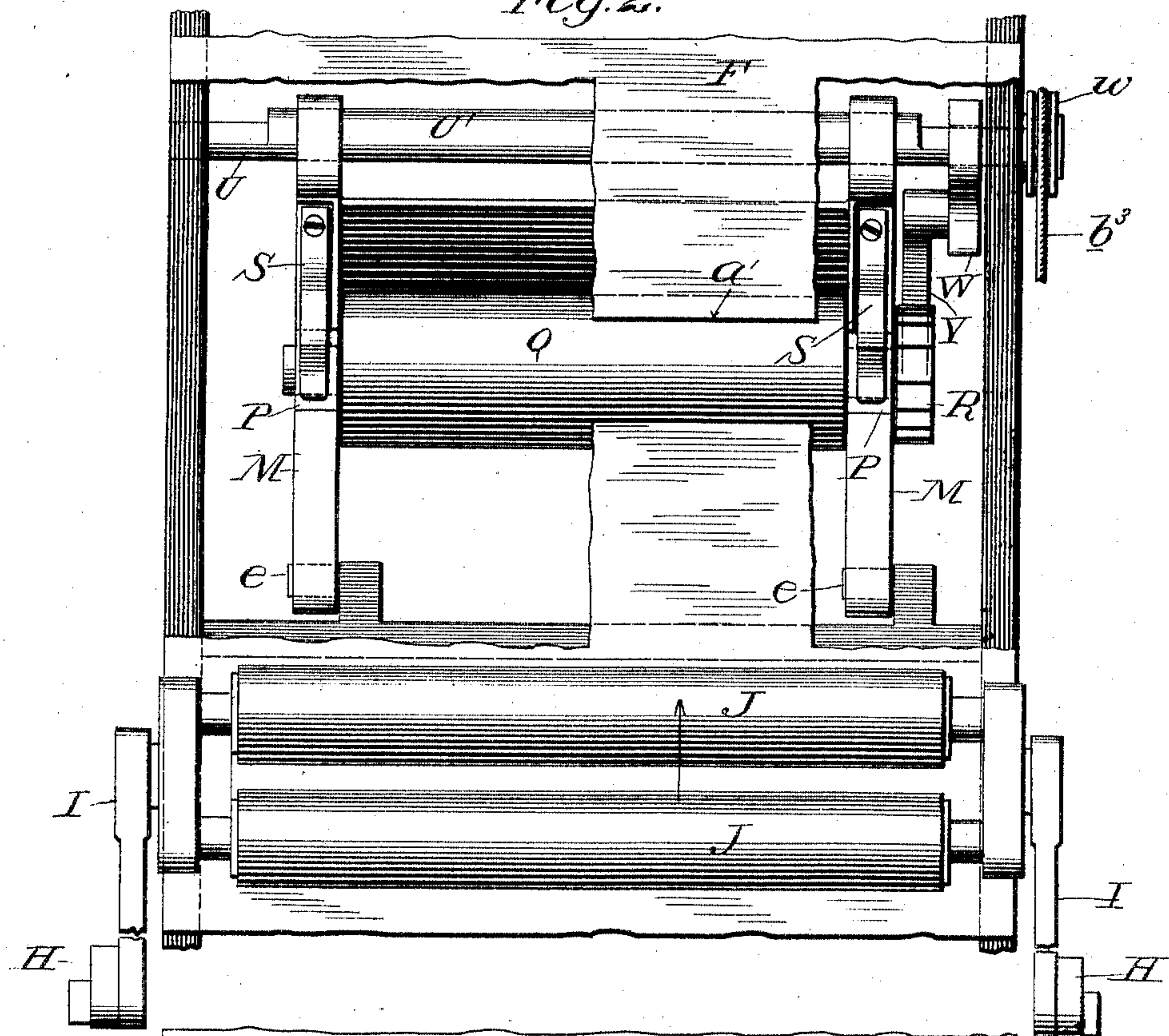
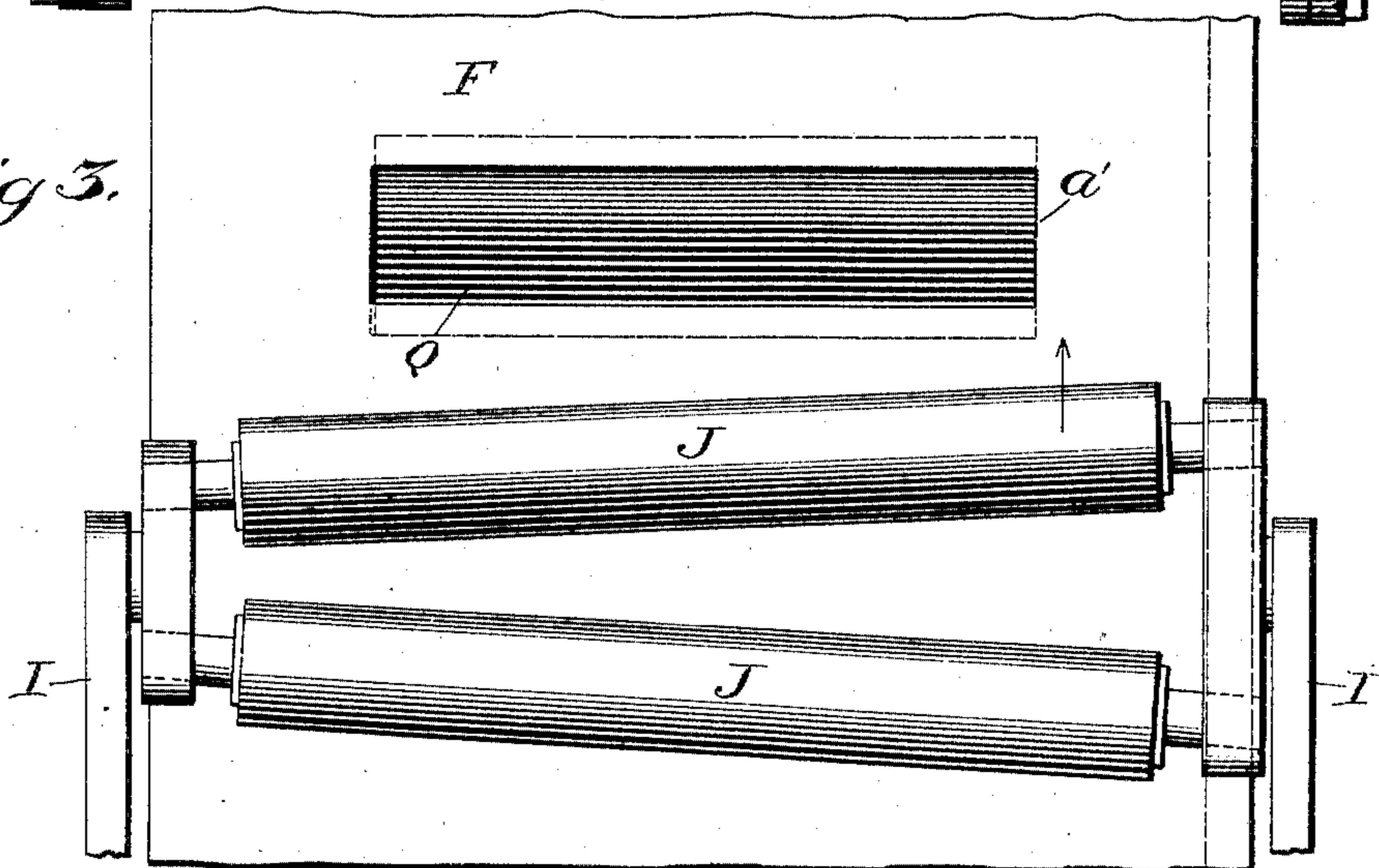


Fig. 3.



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4 SHEETS—SHEET 3.

Fig. 7.

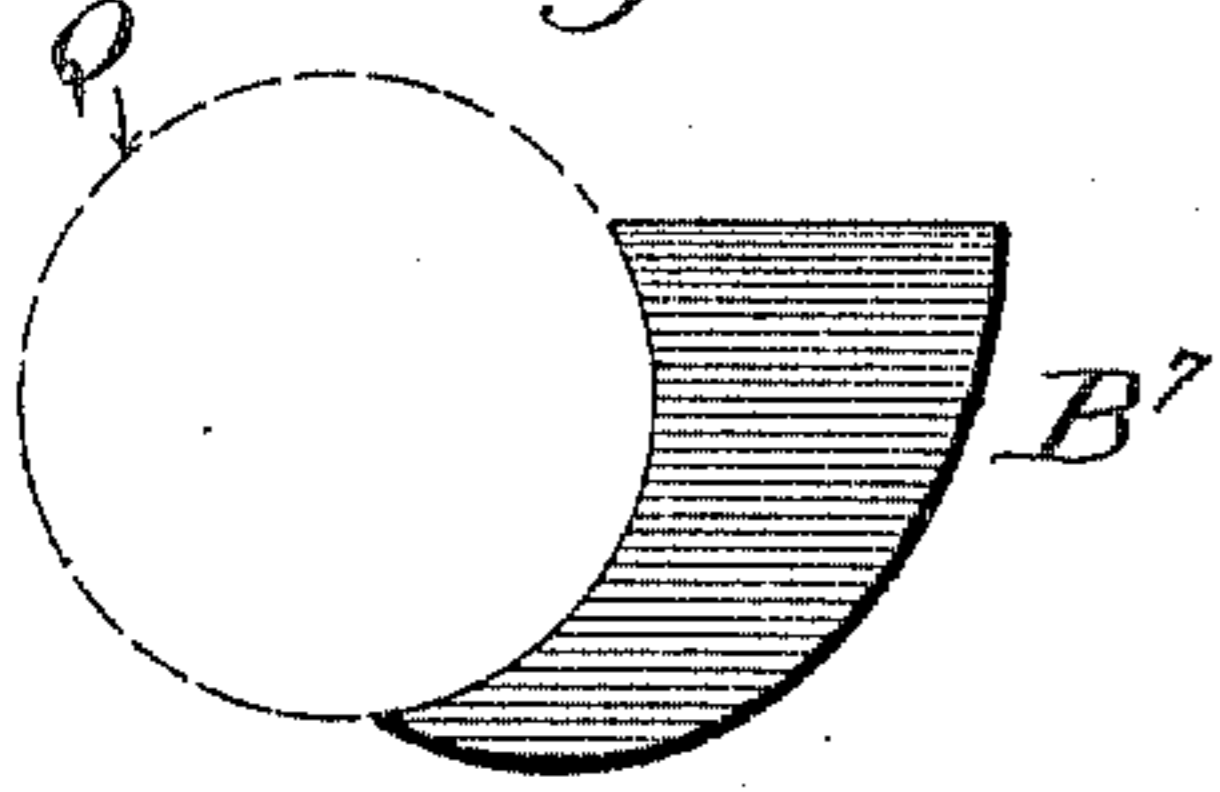


Fig. 4.

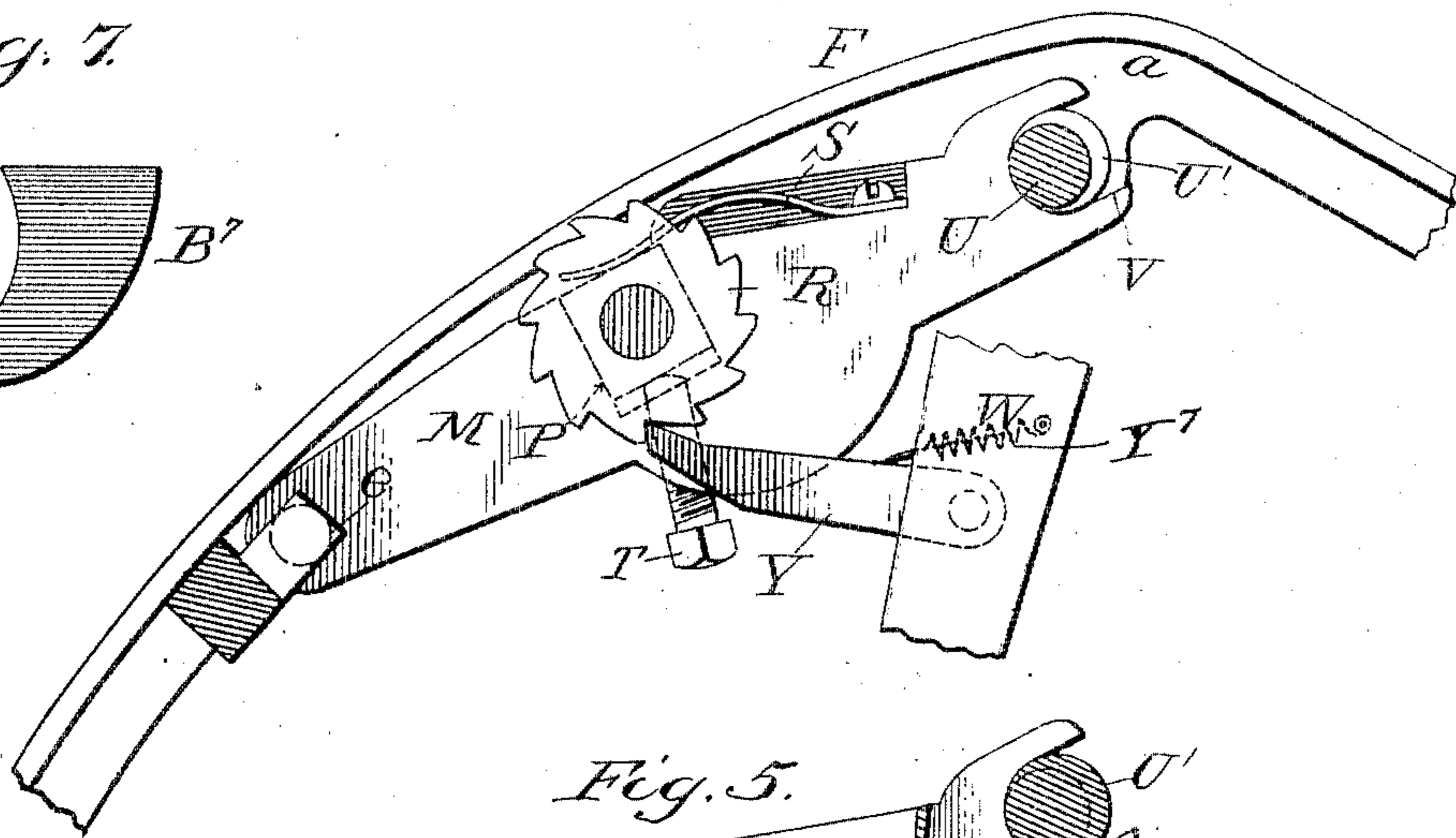


Fig. 5.

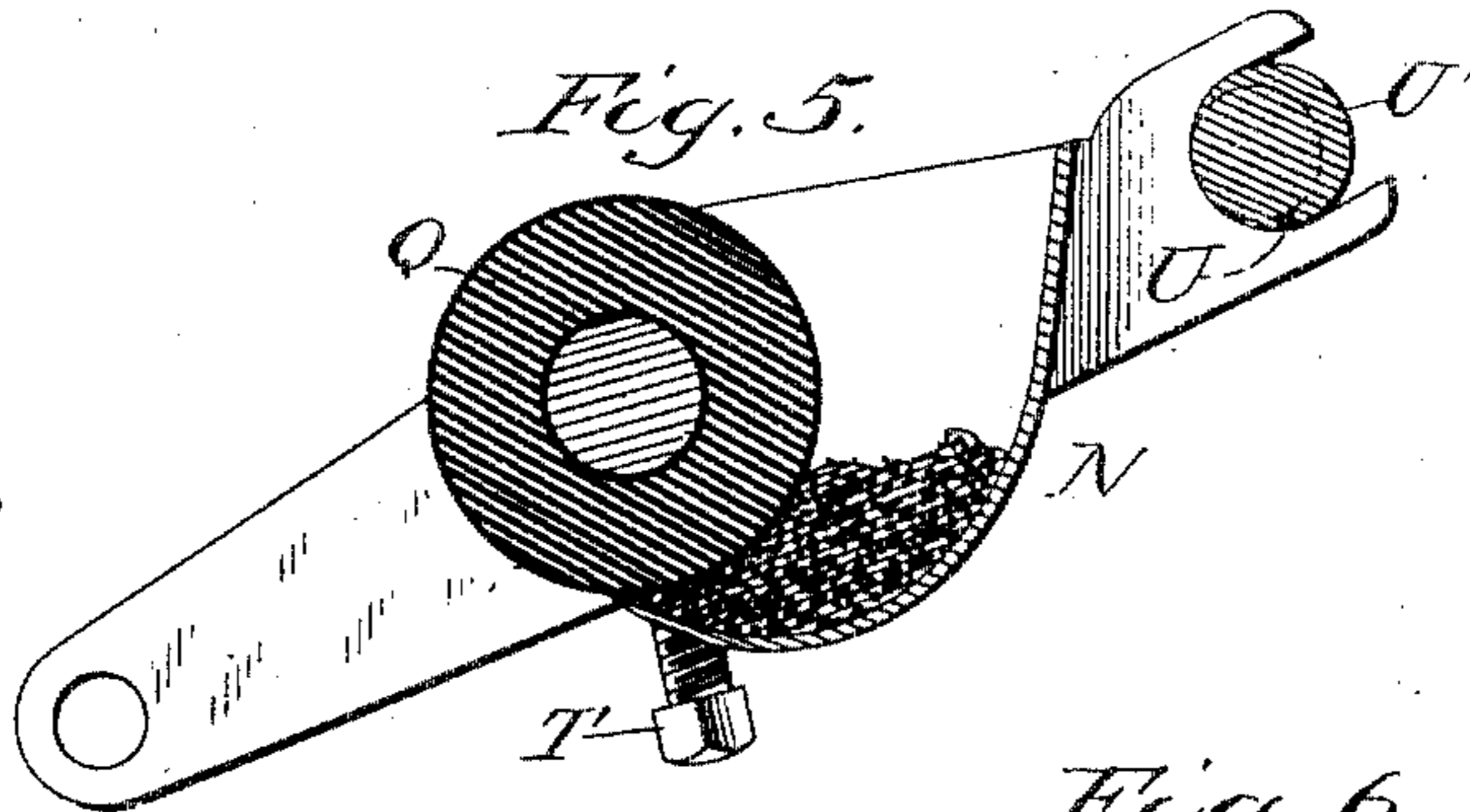


Fig. 8.

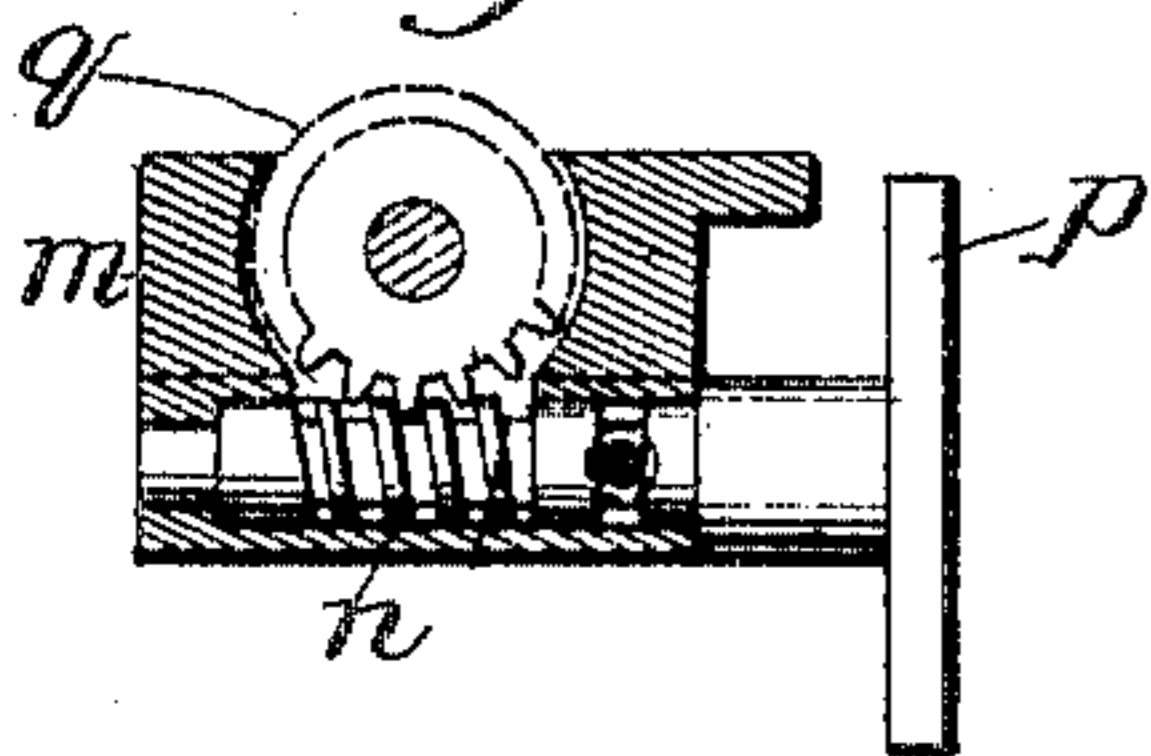
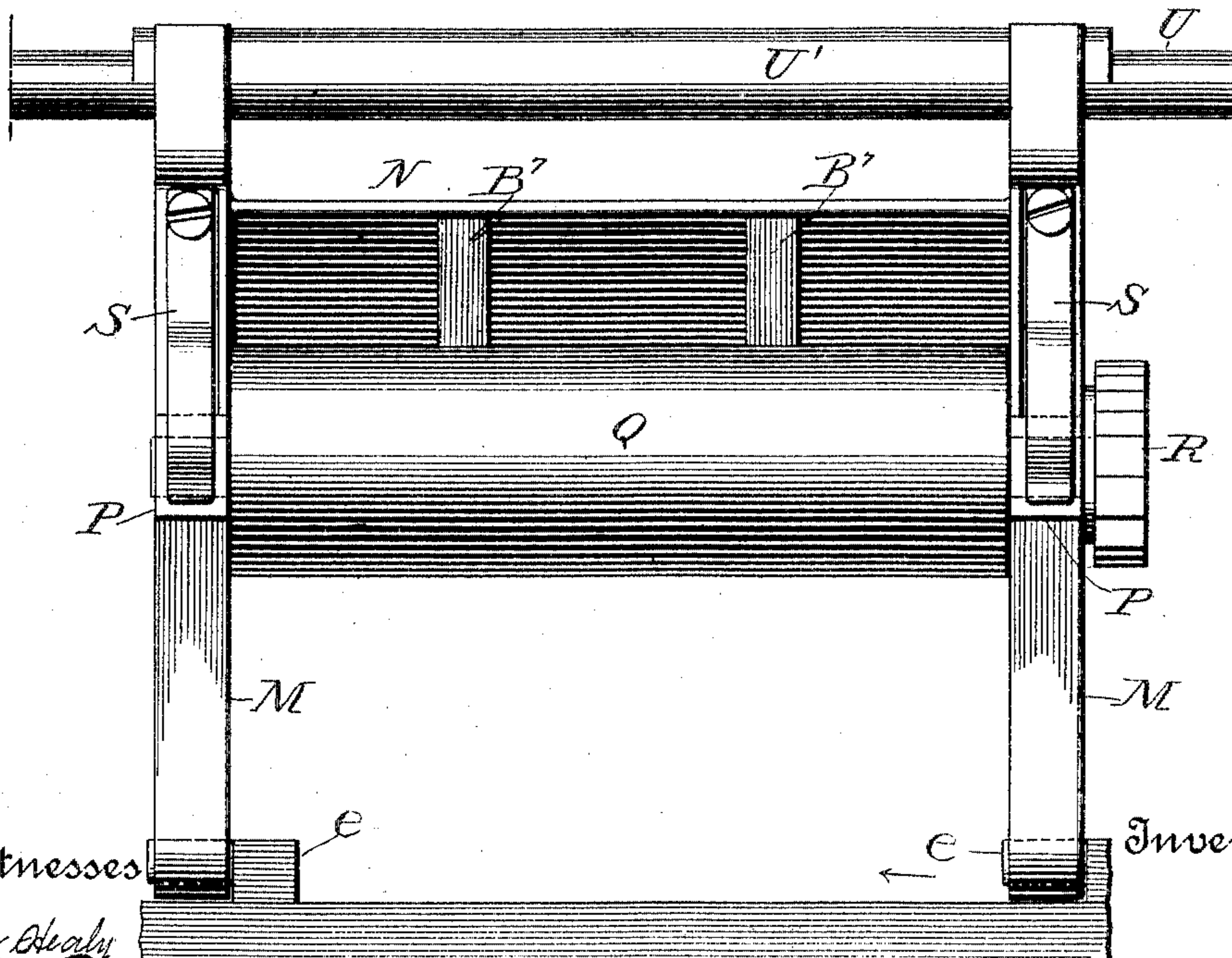


Fig. 6.



Witnesses

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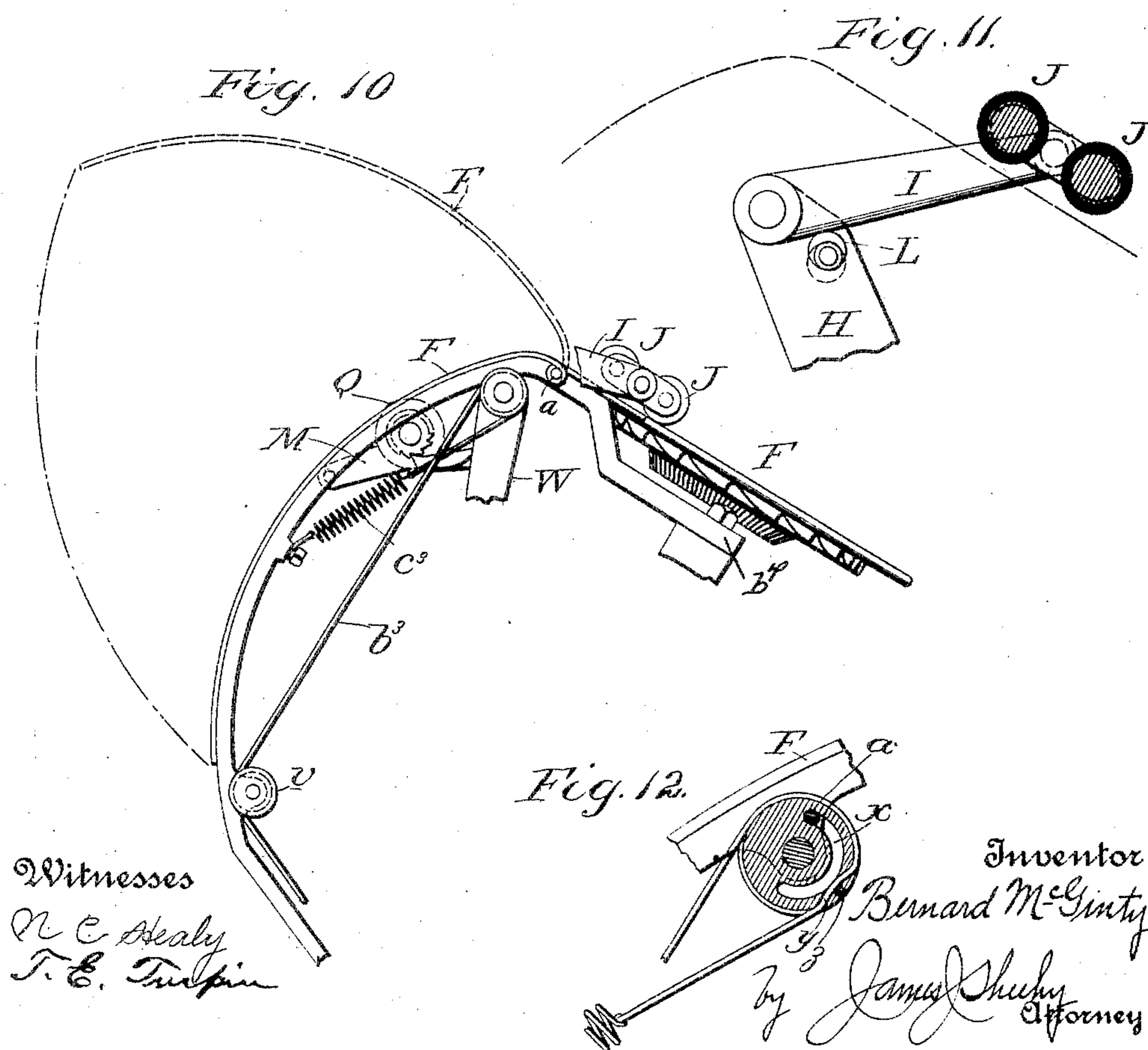
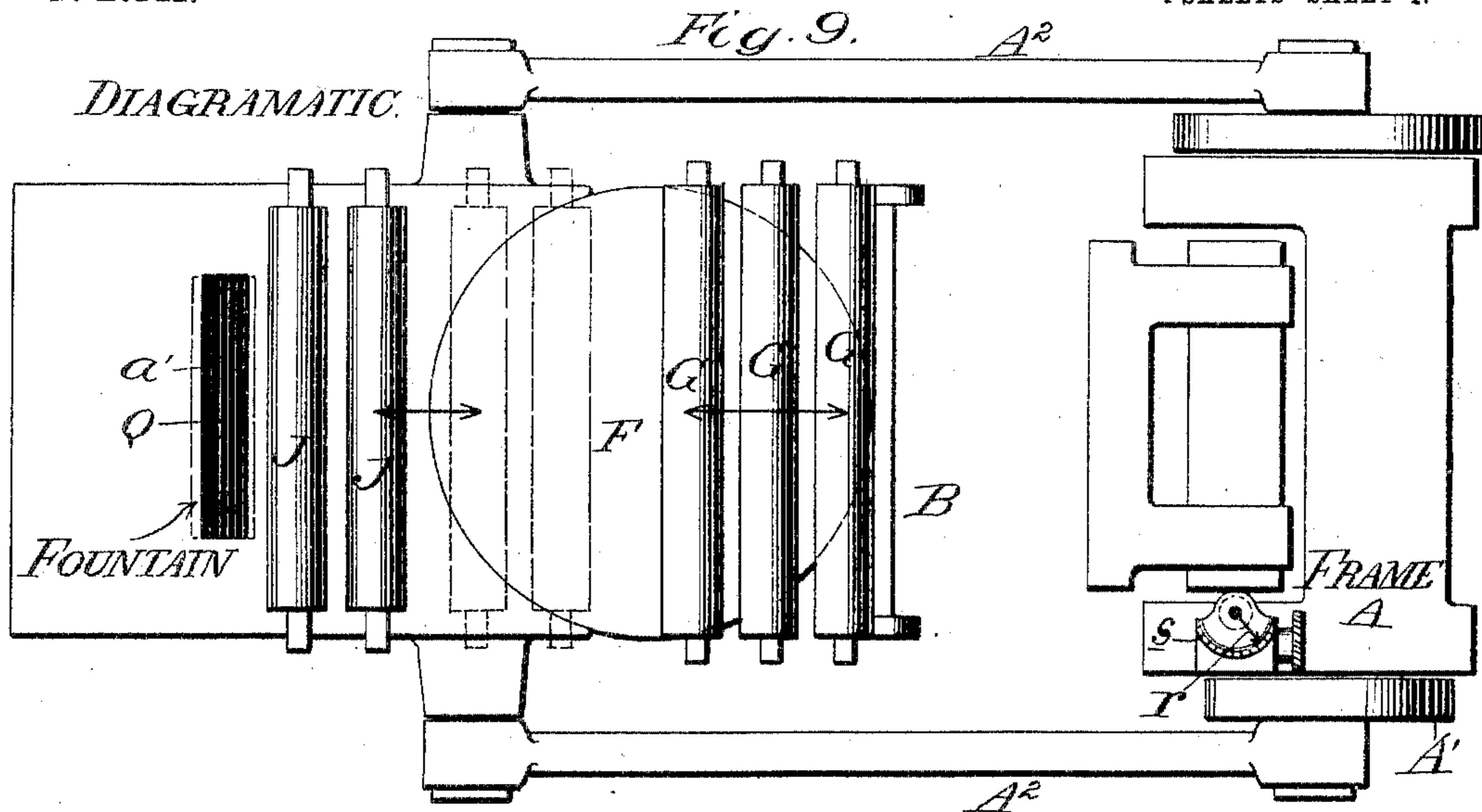
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APPLICATION FILED APR. 11, 1904.

NO MODEL.

4 SHEETS—SHEET 4.



# UNITED STATES PATENT OFFICE.

BERNARD MCGINTY, OF DOYLESTOWN, PENNSYLVANIA.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 776,793, dated December 6, 1904.

Application filed April 11, 1904. Serial No. 202,545. (No model.)

*To all whom it may concern:*

Be it known that I, BERNARD MCGINTY, a citizen of the United States, residing at Doylestown, in the county of Bucks and State of Pennsylvania, have invented new and useful Improvements in Printing-Presses, of which the following is a specification.

My invention pertains to printing-presses, and has for its general object the provision of a printing-press embodying improved and highly-efficient means for supplying ink to the form with a view of assuring an excellent quantity of printing.

A secondary object of the invention is to provide means whereby the printer standing in a position to feed the press is enabled to quickly and easily increase or diminish the amount of ink supplied to the form, as necessity demands.

Other advantageous features of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation, partly broken away, of the printing-press constituting the preferred embodiment of my invention. Fig. 1<sup>a</sup> is a detail view illustrative of the manner in which the lower ends of the frame-bars of my improvements are connected to the bed of the press without entailing boring of the said bed. Fig. 2 is a detail plan view, on an enlarged scale, illustrating the curvilinear plate of the bed partly broken away to illustrate the ink-supplying means below the said plate. Fig. 3 is an enlarged detail plan view illustrating modified ink-distributing rollers hereinafter referred to. Fig. 4 is an enlarged detail view illustrative of the ink-supplying means. Fig. 5 is an enlarged detail section illustrating the fountain and the inking-roller comprised in the ink-supplying means. Fig. 6 is a plan view of the said ink-supplying means. Fig. 7 is a detail view illustrating one of the blocks which I prefer to employ in the ink-fountain when it is desired to confine the ink within certain limits with a view of economizing in the use of the same. Fig. 8 is an enlarged detail section taken in the

plane indicated by the line 8 8 of Fig. 1 and illustrating the gearing comprised in the means for enabling the printer to increase or diminish the quantity of ink supplied to the form. Fig. 9 is a diagrammatic view illustrative of the relative arrangement of the curvilinear plate of the bed, the inking-disk on the bed, the ink-distributing rollers, and the inking-rollers. Fig. 10 is a view illustrating by dotted lines the manner in which the curvilinear plate on the bed may be raised to afford access to the ink-supplying means. Fig. 11 is a detail view illustrating the manner in which the ink-distributing rollers are supported above the bed when the press is idle with a view of preventing flattening of said rollers; and Fig. 12 is a detail section, on an enlarged scale, illustrating the means for limiting axial movement of the eccentric-shaft comprised in the means for enabling the printer standing in position to feed the press to increase or diminish the quantity of ink supplied to the form as necessary.

Referring by letter to the said drawings, A is the main frame of a platen printing-press, on which is mounted the usual crank-wheels A', having the usual pitman A<sup>2</sup> connected thereto. It will be noticed, however, that I have illustrated but one crank-wheel and pitman.

B is an ordinary bed, pivoted at C on the frame A in the ordinary well-known manner. To the bed B are connected the frame-bars B' of my improvements, only one of which is shown. Each of the said bars is connected at its upper end to the bed, as indicated by b' in Fig. 10, and at its lower end to a cross-bar b<sup>8</sup> of the bed through the medium of a clip b<sup>9</sup> and bolts b<sup>10</sup>, as best shown in Fig. 1<sup>a</sup>. This latter connection obviates boring the bar b<sup>8</sup> and is advantageous for such reason.

D is an oscillating frame carried by the bed and designed to be actuated in the usual manner through the medium of links D', connected to the main frame and the oscillating frame.

E is a rotatable inking-disk mounted on the bed and adapted to be turned by the ordinary or any other suitable means.

F is a curvilinear plate which is connected

at *a* to the bed, preferably in a pivoted manner, Fig. 10, and is provided with an opening *a'*, Figs. 2, 3, and 9.

G G are inking or form rollers connected and movable with the frame D in the ordinary well-known manner and having for their purpose to transfer ink from the inking-disk E to the form.

H H are arms fixed to the oscillating frame D, Figs. 1 and 2.

I I are arms pivoted to the outer ends of the arms H.

J J are ink-distributing rollers carried by the said arms I and held under pressure against the bed by coiled springs K, but one of which is shown, and L is a cam mounted on the arm H and arranged to engage the inner edge of the arm I complementary to said arm H, Fig. 1. One of the said cams is employed on each arm H, and they are designed when swung outwardly to move and hold the rollers J away from any part of the press, this with a view of preventing flattening of the rollers when the press is idle.

In virtue of the construction thus far described it will be observed that during the inward movement of the bed B the distributing-rollers J will be caused to move from the inking-disk E over the curvilinear plate F and the form-rollers G will be caused to move up on the said inking-disk, while during the outward movement of the bed the distributing-rollers will be caused to move over the plate F to and on the disk E and the form-rollers from the disk E to and over the form, also that the form-rollers will be moved off the disk E precedent to the distributing-rollers being moved on said disk, and vice versa.

The arms H are preferably provided with inwardly-directed lateral portions *b* (see dotted lines in Fig. 1) in order to adapt said arms to be connected to the oscillating frame D through the medium of the bolts *c*, employed to connect the usual cross-piece *d* of the oscillating frame. This is advantageous, for the reason that the arms H may be connected to an ordinary oscillating frame D without involving any change in the construction of said oscillating frame.

M M are swinging bars pivoted at *e e* to the bed B and movable in the direction indicated by arrow in Fig. 6 out of engagement with the bed. N is an ink-fountain interposed between and fixedly connected to the said bars M; P P, journal-boxes disposed in notches in the upper edges of the bars M; Q, an ink-supplying roller having trunnions at its ends journaled in the boxes P and also having a ratchet R on one of said trunnions; S S, springs connected to the upper edges of the bars M and exerting downward pressure on the journal-boxes P, so as to hold the roller Q in proper relation to the ink-fountain N; T T, screws bearing in the bars M and against the lower sides of the journal-

boxes P and designed to adjust and adjustably fix the roller Q with respect to the ink-fountain; U, a shaft journaled at its ends in the bed and having an eccentric portion U' disposed in notches V in the ends of the bars M remote from the pivoted ends of said bars; W, a link loosely hung from the shaft U and having an antifriction-roller *g*, Fig. 1; X, a spring interposed between and connected to the said link W and the bed B and having for its purpose to move the link in the direction indicated by arrow in Fig. 1; Y, a dog carried by the link W and held by a spring Y' in engagement with the ratchet-wheel R of the ink-supplying roller Q, and Z a cam fixed on the oscillating frame D at one side thereof and arranged to engage the antifriction-roller *g* of the link W. The said cam Z comprises an upper portion *h*, concentric to the center of movement of the oscillating frame D, and a lower portion *i*, eccentric to said center of movement, and it is preferably connected to the side of the said oscillating frame through the medium of a strap *j* and bolts *k*, the cam being disposed at the inner side of a bar of the frame side and the link at the outer side of said bar. Being concentric to the center of movement of the frame D, the cam portion *h* will have no effect on the link W, and it is simply employed to adapt the working cam portion *i* to be connected to the side of the frame D in the manner shown and described, such mode of connection being materially advantageous, since it permits of the cam being connected to the side of the frame D without involving any change in the construction of said frame. While I prefer to connect the cam to the side of the frame D in the manner described, I desire it distinctly understood that the cam portion *i* may be connected to the frame side in any suitable manner or formed integral with said frame side without involving a departure from the scope of my invention.

In virtue of the construction and the relative arrangement of the parts just described it will be observed that on the downward travel of the distributing-rollers J and while the bed B is at the commencement of its inward movement the cam portion *i* will act against the antifriction-roller *g*, and thereby move the link W and the dog Y in the direction opposite to that indicated by arrow in Fig. 1 and through the medium of the dog and the ratchet-wheel R turn the ink-supplying roller Q so as to present a fresh surface of the ink-supplying roller to the distributing-rollers as the latter pass downwardly over the former. On the upward movement of the distributing-rollers and while the bed B is moving outwardly the ink-supplying roller Q will remain idle, and hence when the distributing-rollers pass the second time over the fountain-roller they will touch the fountain-roller, but only at the point of the first contact. This is

advantageous, since it lessens the liability of an excessive quantity of ink being transferred from the roller Q to the rollers J. Incident to the outward movement of the bed the spring X will operate to move the link W in the direction indicated by arrow in Fig. 1 and hold the antifriction-roller *g* of the link against the cam Z.

Through the medium of the screws T, which engage the journal-boxes P of the ink-supplying roller Q, as best shown in Fig. 4, the said roller Q may be quickly and easily adjusted and adjustably fixed with respect to the fountain N—i. e., the perimeter of the roller may be positioned relative to the edge of the fountain N so as to assure the best results.

It will be noticed that the curvilinear plate F covers the ink-fountain, so as to lessen the liability of dust or dirt getting therein, and yet said plate may be raised, as shown by dotted lines in Fig. 10, when it is desired to gain access to the ink-supplying means for any purpose—such, for instance, as removing said means from the bed. To remove the ink-supplying means from the bed B, it is simply necessary when the plate F is lifted to move the bars M in the direction indicated by arrow in Fig. 6 out of engagement with the pivot-lugs *e* and lift the said bars out of engagement with the shaft U, while to replace the ink-supplying means it is simply necessary to reverse the operation just described.

The ink-distributing rollers J may be disposed parallel to each other, as shown in Figs. 1, 2, 9, and 10 of the drawings, or may diverge toward one side of the bed B, as shown in Fig. 3, without involving a departure from the scope of my invention. The diverging rollers (illustrated in Fig. 3) are advantageous, inasmuch as they serve to take ink in what may be termed a “drawn” manner from the curvilinear plate F and the ink-supplying roller Q—i. e., operate like a knife disposed to make a drawn cut—and hence contribute materially to the proper distribution of the ink.

B<sup>7</sup> B<sup>7</sup> are blocks removably placed in the ink-fountain *n* after the manner shown in Fig. 6 and for the purpose of confining the ink within certain limits with a view of economizing in the use of the same.

In order to enable a printer standing in a position to feed the press to conveniently and quickly increase or diminish the quantity of ink supplied to the form, I provide the mechanism best shown in Figs. 1, 4, 8, and 12 of the drawings. This mechanism comprises a box *m*, mounted on the main frame A; a worm-screw *n*, journaled in said box and having a head or handle *p*; a worm-wheel *q*, also journaled in the box and intermeshed with the worm-screw; a pointer *r*, fixed with respect to the worm-wheel and movable over a dial *s* on the box, Fig. 9, and having for its purpose to enable the printer to determine the extent to

which he has moved the ink-supplying roller Q outwardly or inwardly; a shaft *t*, fixed to and depending from the worm-wheel and having its lower end journaled in a suitable bearing on the frame A; a sheave *u*, connected to the lower portion of the bed B and arranged off the center of movement of said bed, this to prevent drag of the cable presently described; a sheave *v*, mounted on the bed B above the sheave *u*; a sheave *w*, fixed on one end of the shaft U and having a transverse circular slot *x*, Fig. 12, and also having a passage *y* and a set-screw *z*, which extends from its perimeter to said passage; a stud *a*<sup>3</sup>, connected to the bed B and disposed in said slot *x*, so as to limit the axial movement of the sheave *w* and the shaft U; a cable *b*<sup>3</sup>, connected to and designed to be wound on the lower portion of the shaft *t* and passed around the sheaves *u*, *v*, and *w*, and a coiled spring *c*<sup>3</sup>, interposed between and connecting the upper end of the said cable and the upper portion of the bed B. In virtue of this construction it will be observed that when the worm-screw *n* is turned in one direction the cable will be wound on the shaft *t*, the sheave *w*, to which the cable is connected by the set-screw *z*, will be rotated, as will also the shaft U, and the spring *c*<sup>3</sup> will be placed under tension. When the shaft U is rotated, as stated, its eccentric portion U', acting against the notched ends of the bars M, will obviously force or move the roller Q outwardly through the opening *a'* to a greater or less extent, according to the extent to which the worm-screw *n* is turned. It will also be observed that when the worm-screw *n* is turned in the opposite direction to that mentioned the cable will be let off the shaft *t* and slack of the cable will be taken up by the spring *c*<sup>3</sup>, with the result that the shaft U will be rocked in the direction opposite to that first mentioned and the ink-supplying roller Q moved inwardly. It will be appreciated that by noting the extent to which he has turned the worm-screw *n* and the resulting quantity of ink supplied to the form the printer will be enabled with a little experience to keep the form properly supplied with ink at all times, and this without stopping the press and without interfering with the feeding of the press. It will also be appreciated that like the other parts of my improvements the ink-supply-regulating means may be readily placed on an ordinary platen-press without involving material changes in the construction thereof.

Notwithstanding the material advantages which I have ascribed to my improvements the same are simple and inexpensive and do not render unduly complicated or cumbersome the press to which they are applied.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order

to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement  
 5 of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

It is obvious from the foregoing that through the ink-supply-regulating means described the amount of surface that the roller  
 10 Q presents to the distributing-rollers J can be regulated with such nicety that any surface from a small part of an inch to a full inch of the roller Q can be exposed to the contact  
 15 of the rollers J.

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

1. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame carried by the bed, an ink-supplying roller carried by the bed and provided with a ratchet-wheel, a link pivoted to the bed and provided with a dog engaging  
 20 the ratchet-wheel of the roller, and a cam on the oscillating frame, arranged to engage said link.

2. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame mounted on the bed, one or more inking-rollers and one or more distributing-rollers carried by the oscillating frame, an ink-supply roller, a link pivoted to the bed, coacting means on the link and ink-supply  
 30 roller for turning the latter by the former, and a cam on the oscillating frame arranged to engage and move the link.

3. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame carried by the bed, and having upwardly-extending arms on its rear portion, arms pivoted to the first-mentioned arms and carrying one or more distributing-rollers, coiled springs connecting the second-mentioned arms and the first-mentioned arms, an  
 40 ink-supply roller mounted in the bed and arranged to engage the distributing roller or rollers, a link or arm pivoted to the bed, coacting means on the ink-supply roller and said link or arm for turning the former by the latter, and a tappet on the oscillating frame for moving the link or arm.

4. In a platen printing-press, the combination of a main frame, a swinging bed, an inking-disk on the bed, a curvilinear plate arranged on the bed, in rear of the disk, and having an opening, an oscillating frame carried by the bed, and having upwardly-extending arms on its rear portion, arms pivoted to the first-mentioned arms and carrying one or more  
 50 distributing-rollers, one or more inking-rollers carried by the forward portion of the oscillating frame, an ink-supply roller mounted in the bed and arranged to extend through the opening in the curvilinear plate and en-

gage the distributing roller or rollers, a ratchet-wheel on said supply-roller, a link or arm pivoted to the bed, a dog carried by said link or arm and engaging the ratchet-wheel, and means on the oscillating frame for moving the link or arm. 70

5. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame carried by the bed, an inking-disk arranged on the bed, a curved plate arranged on the bed, in rear of the disk, and having an opening, an ink-supply roller mounted in the bed and extending through the opening in the curved plate, and one or more distributing-rollers and one or more inking-rollers  
 75 carried by the oscillating frame.

6. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame carried by the bed, an inking-disk also carried by the bed, a curved plate hinged to the bed, in rear of the disk, and having an opening, an ink-supply roller mounted in the bed and extending through the opening in the curved plate, and one or more inking-rollers and one or more distributing-rollers  
 80 carried by the oscillating frame.

7. In a platen printing-press, the combination of a bed, an ink-supplying means mounted therein and comprising a roller, and a curved plate hinged to the bed whereby it may be  
 85 swung outwardly to expose the ink-supplying means, and having an opening to receive the roller of said means.

8. In a platen printing-press, the combination of a main frame, a swinging bed, an oscillating frame carried by the bed, one or more inking-rollers carried by the oscillating frame, arms connected to and extending upwardly from the rear portions of the sides of the oscillating frame, distributing-rollers connected  
 100 with said arms, an ink-supply roller mounted in the bed, and provided with a ratchet-wheel, a link or arm pivoted to the bed, a dog carried by said link or arm and arranged to engage the ratchet-wheel, a cam arranged at one  
 105 side of one side portion of the oscillating frame, and having a portion concentric to the center of movement of the oscillating frame and a portion eccentric to said center, and a strap arranged at the opposite side of the side portion of the oscillating frame, with reference  
 110 to the cam, and connected to the cam.

9. In a printing-press, the combination of a plate having an opening, a frame pivoted at one side of the plate, an ink-supply roller mounted in the frame and adapted to extend through the opening in the plate, a finger-piece, and a connection intermediate of the finger-piece and the pivoted frame for moving the latter  
 115 by the former.

10. In a printing-press, the combination of a plate having an opening, an ink-supply roller movable through the opening, a finger-piece, and a connection between the finger-piece and the roller for moving the latter by the former. 125 130

11. In a platen printing-press, the combination of a main frame, a swinging bed having a plate provided with an opening, a roller mounted in a movable support in the bed, and movable through the opening in the plate, a finger-piece on the main frame, and a connection between the finger-piece and the roller for moving the latter by the former.

12. In a platen printing-press, the combination of a main frame, a swinging bed having a plate provided with an opening, a frame pivoted at one end to the bed below the opening in the plate and having a notch in its opposite end, a roller carried by said frame, a hand device or finger-piece mounted on the main frame, a shaft journaled in the bed and having an eccentric portion disposed in the notch of the pivoted frame, and a connection between the hand device or finger-piece and the frame carrying the roller for moving the latter by the former.

13. In a platen printing-press, the combination of a main frame, a hand device or finger-piece mounted on the main frame, a shaft journaled in suitable bearings on the main frame and connected with the hand device or finger-piece, a swinging bed having a plate provided with an opening, a roller mounted in the bed and movable with respect to the plate, and a connection between the shaft on the main frame and the roller for moving the latter by the former.

14. In a platen printing-press, the combination of a main frame, a finger-piece or hand device mounted on the main frame, a shaft journaled on the main frame and connected with said hand device or finger-piece, a swinging bed, a frame pivoted to the bed and having a notch in its free end, an ink-fountain and an ink-supply roller carried by said frame, a plate carried by the bed and having an opening to receive the ink-supply roller, a shaft journaled in the bed and having an eccentric

portion disposed in the notch of the pivoted frame, a cable passed around sheaves on the bed and connected to the eccentric shaft, and also connected at one end to the shaft on the main frame, and a spring connecting the opposite end of the cable and the bed.

15. In a printing-press, the combination of a support, a plate thereon having an opening, a frame pivoted at one end to the support, and having a notch, an ink-fountain and an ink-supply roller carried by said frame, a shaft journaled in the bed and having an eccentric portion disposed in the notch in the frame, and means for turning said eccentric shaft.

16. In a printing-press, the combination of a support, a plate thereon having an opening, a frame having apertures at one end of its side bars receiving pivot-lugs on the support and notches in the opposite ends of said bars, an ink-fountain and an ink-supply roller interposed between and connected to the bars, and a shaft journaled in the support, and having an eccentric portion disposed in the notches of the frame-bars.

17. In a printing-press, the combination of a support, a plate arranged on the support and having an opening, a frame mounted in the support, adjustable journal-boxes mounted in the frame, an ink-fountain carried by the frame, an ink-supply roller journaled in the journal-boxes, screws mounted in the frame and bearing against one side of the journal-boxes, and springs connected to the frame and bearing against the other side of the journal-boxes.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

BERNARD MCGINTY.

Witnesses:

J. JOHNSON BEANS,  
ASHER K. ANDERS.