

No. 724,106.

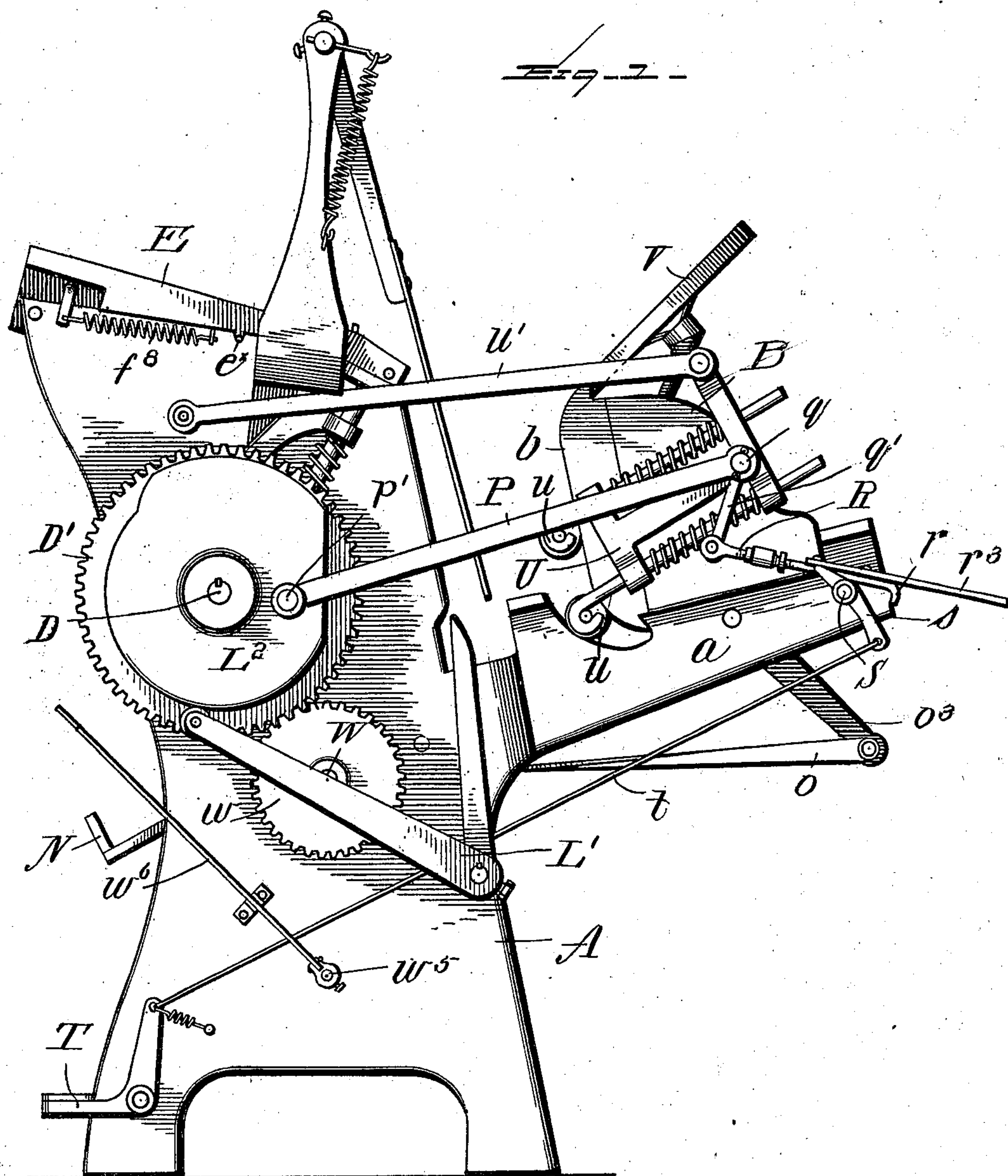
PATENTED MAR. 31, 1903.

R. E. & A. KEMPER.
PLATEN PRINTING PRESS.

APPLICATION FILED MAR. 1, 1902.

NO MODEL.

8 SHEETS—SHEET 1.



WITNESSES:

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F. H. Hubbard

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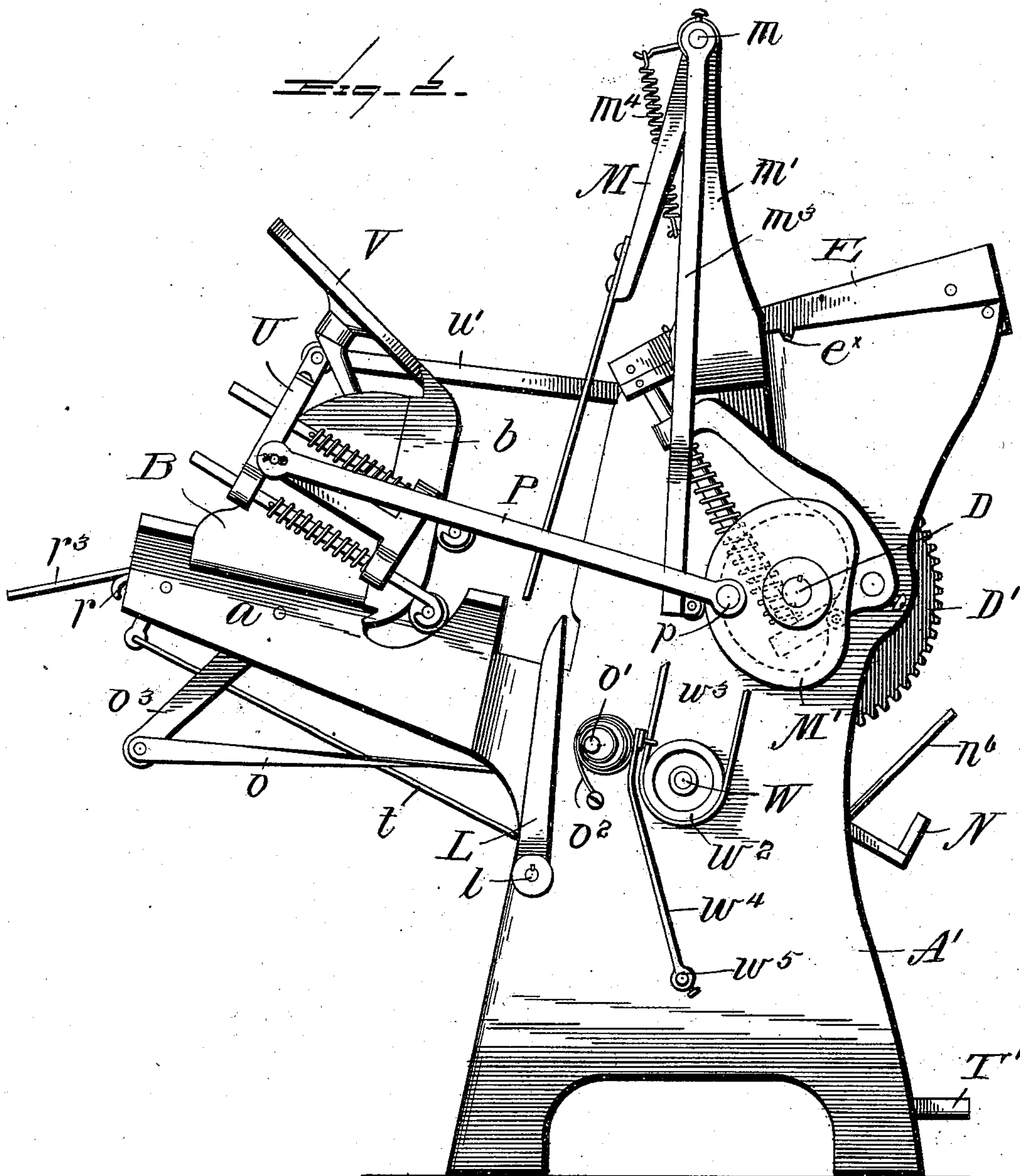
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NO MODEL.

8 SHEETS—SHEET 2.



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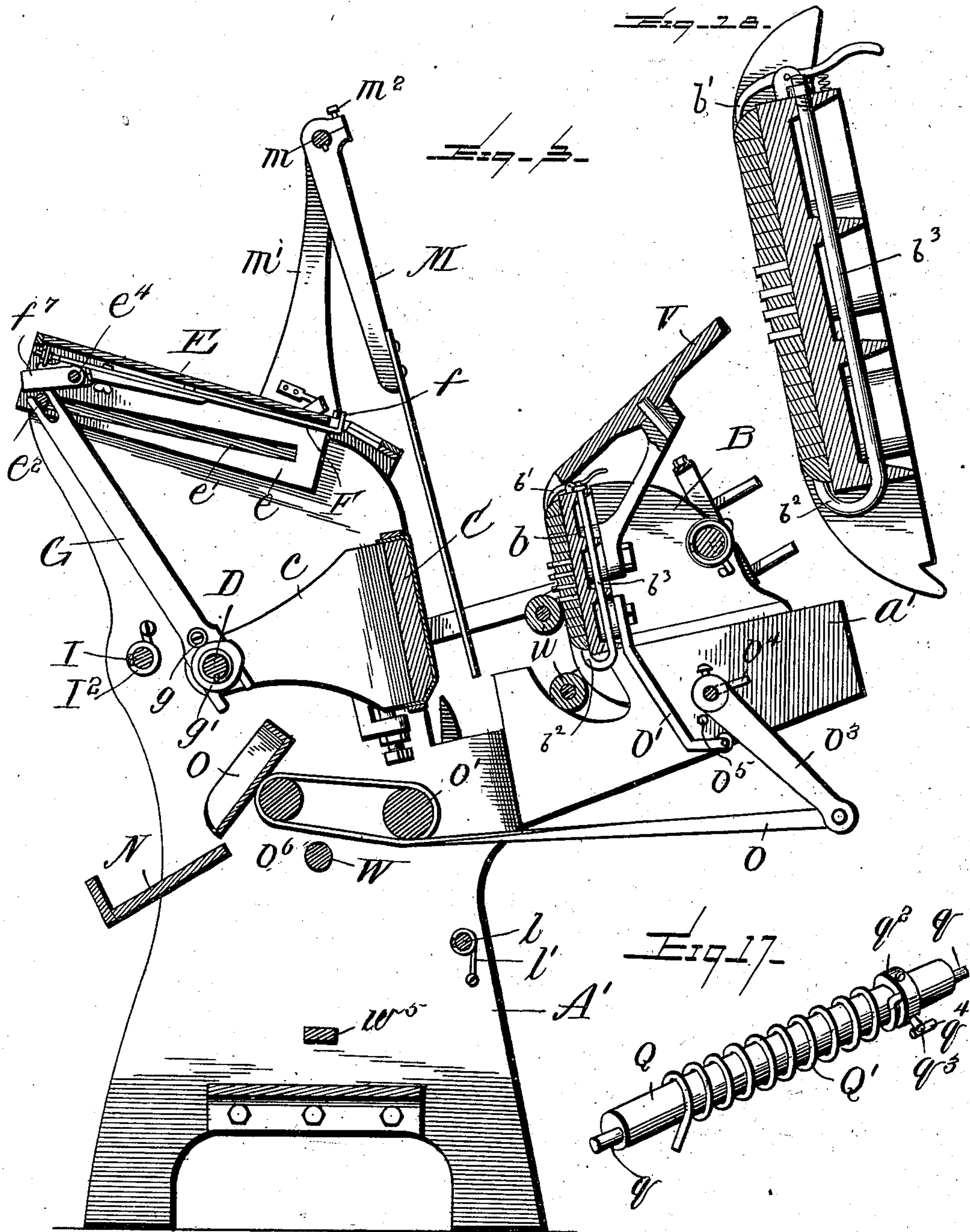
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8 SHEETS—SHEET 3.



WITNESSES:

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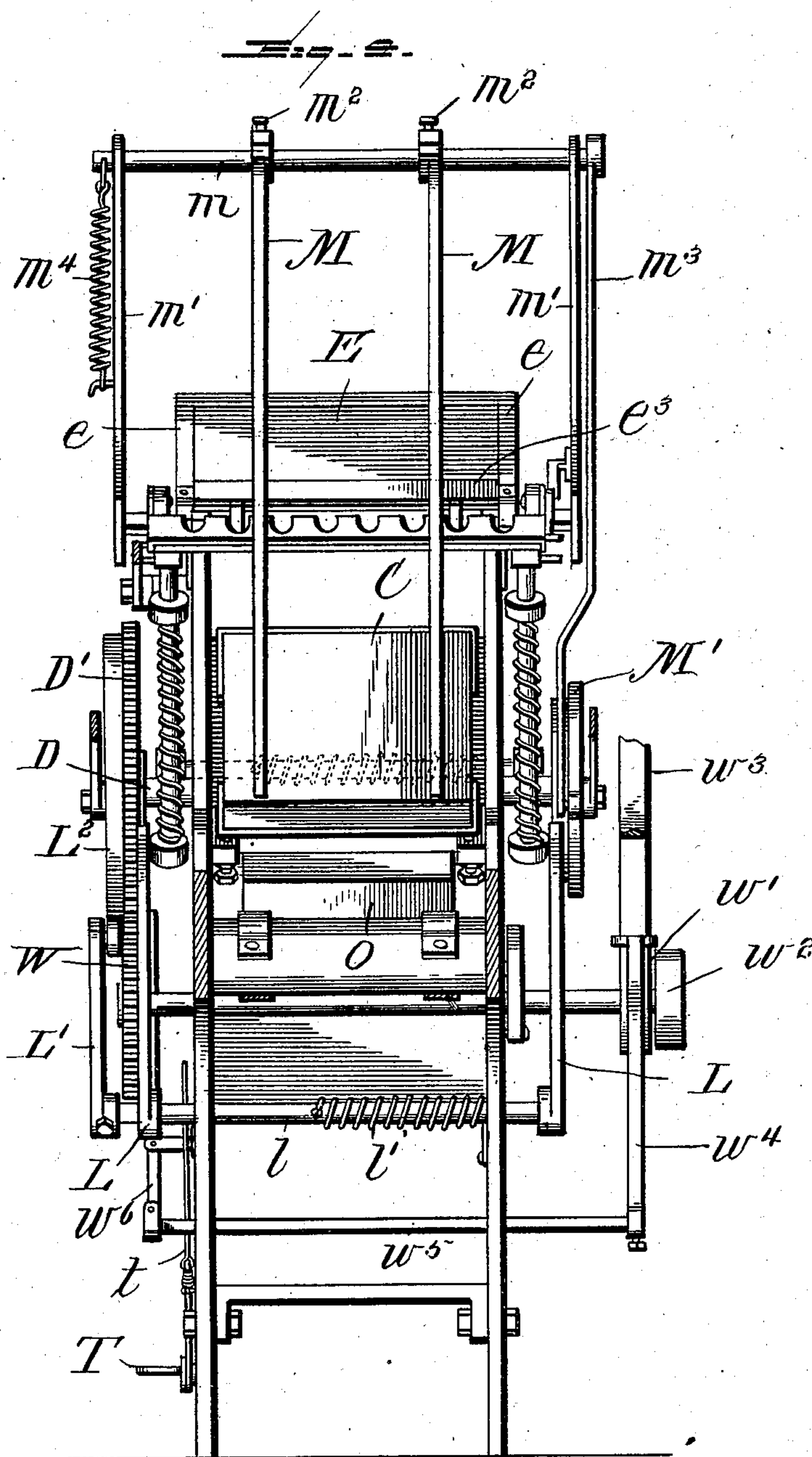
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NO MODEL.

8 SHEETS—SHEET 4.



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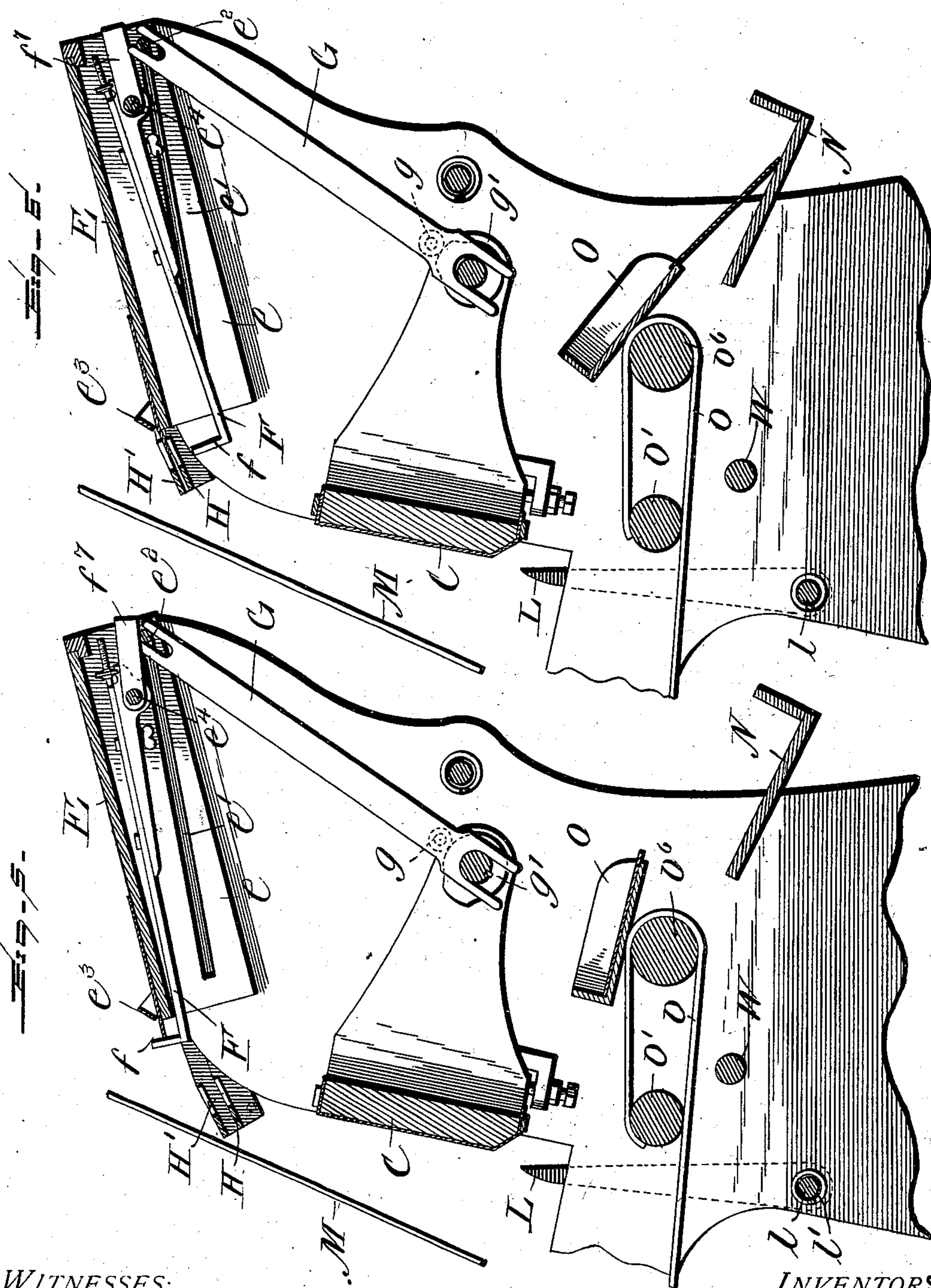
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NO MODEL.

8 SHEETS—SHEET 5.



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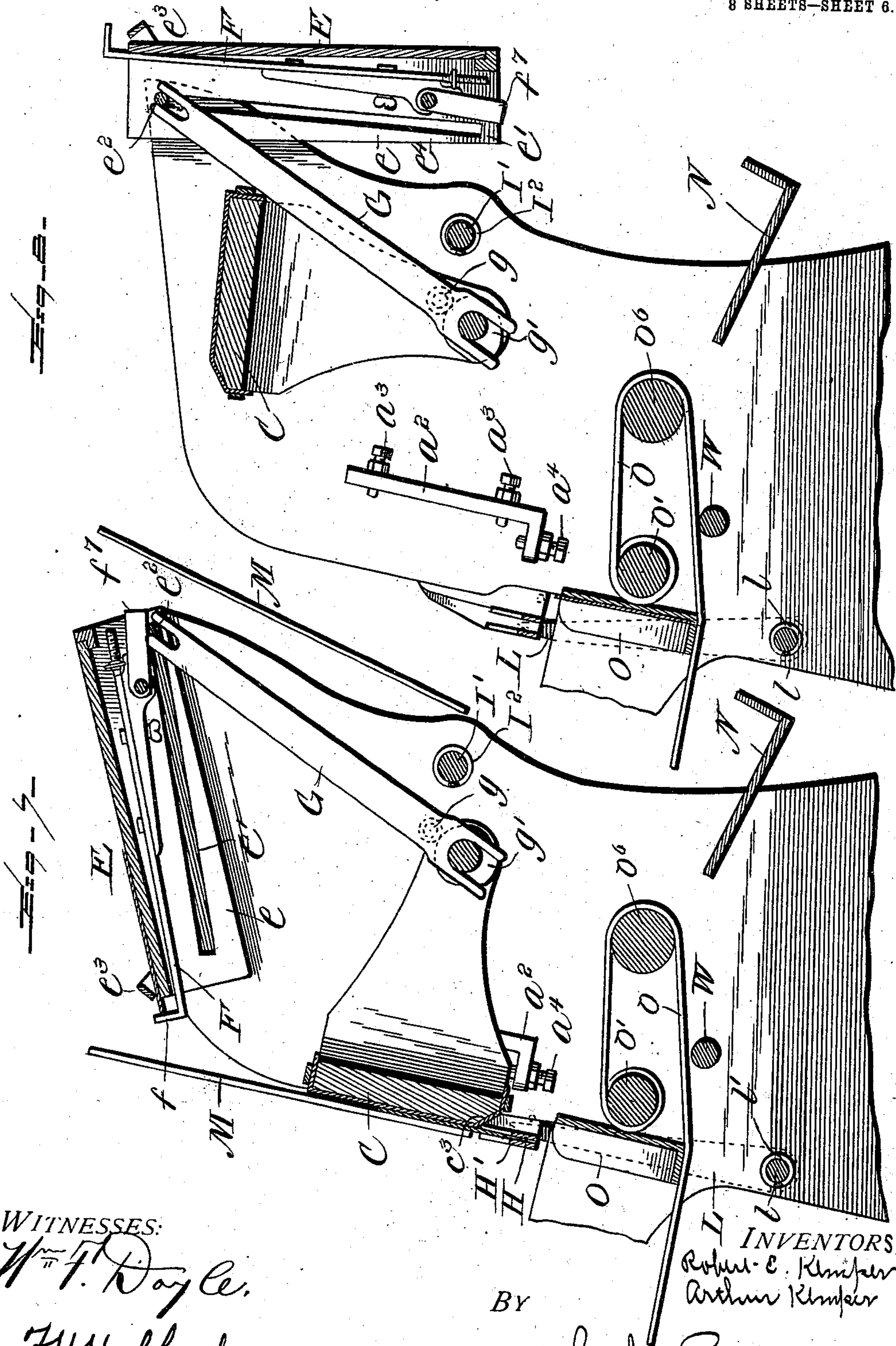
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PLATEN PRINTING PRESS.

APPLICATION FILED MAR. 1, 1902.

NO MODEL

8 SHEETS—SHEET 6.



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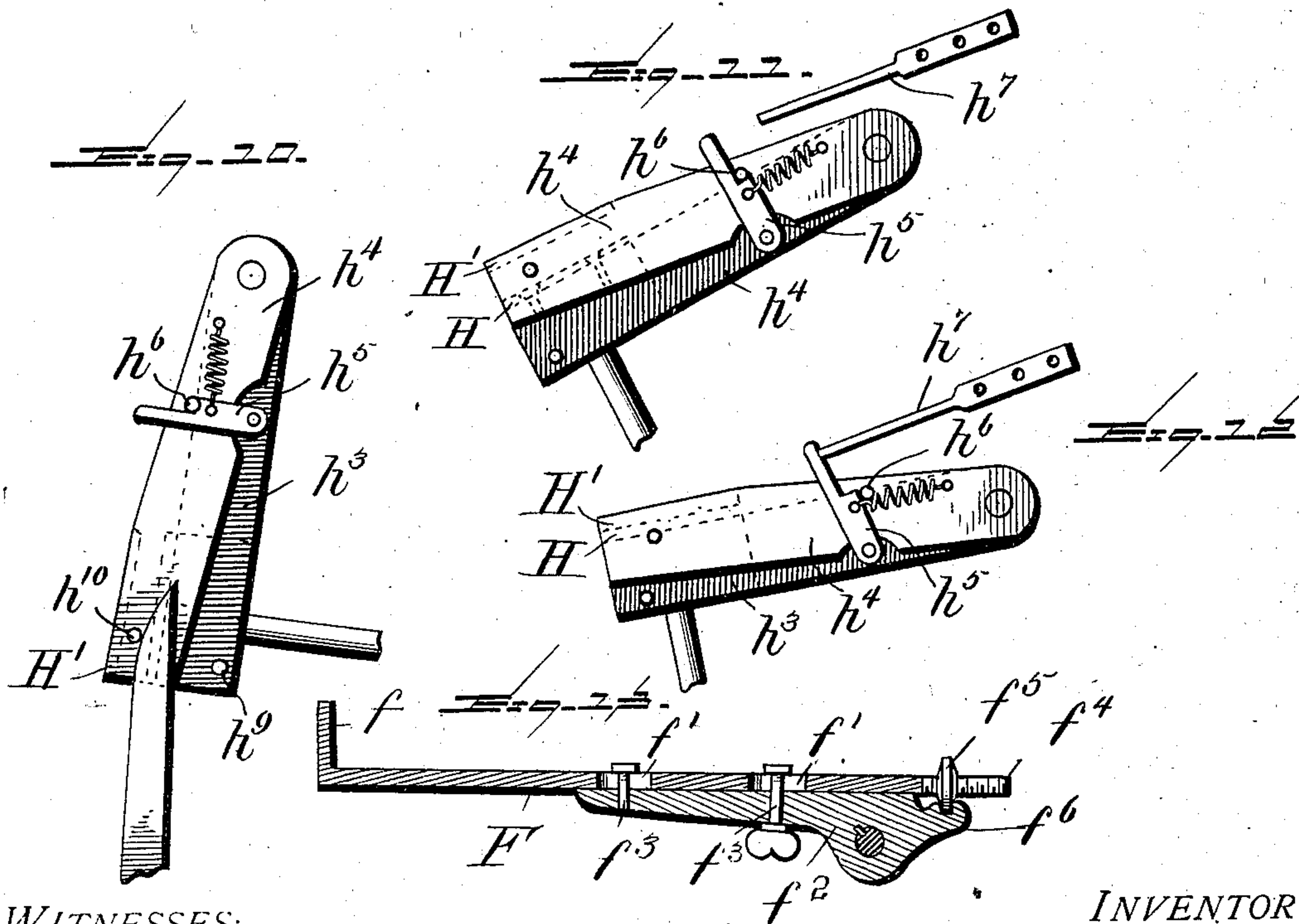
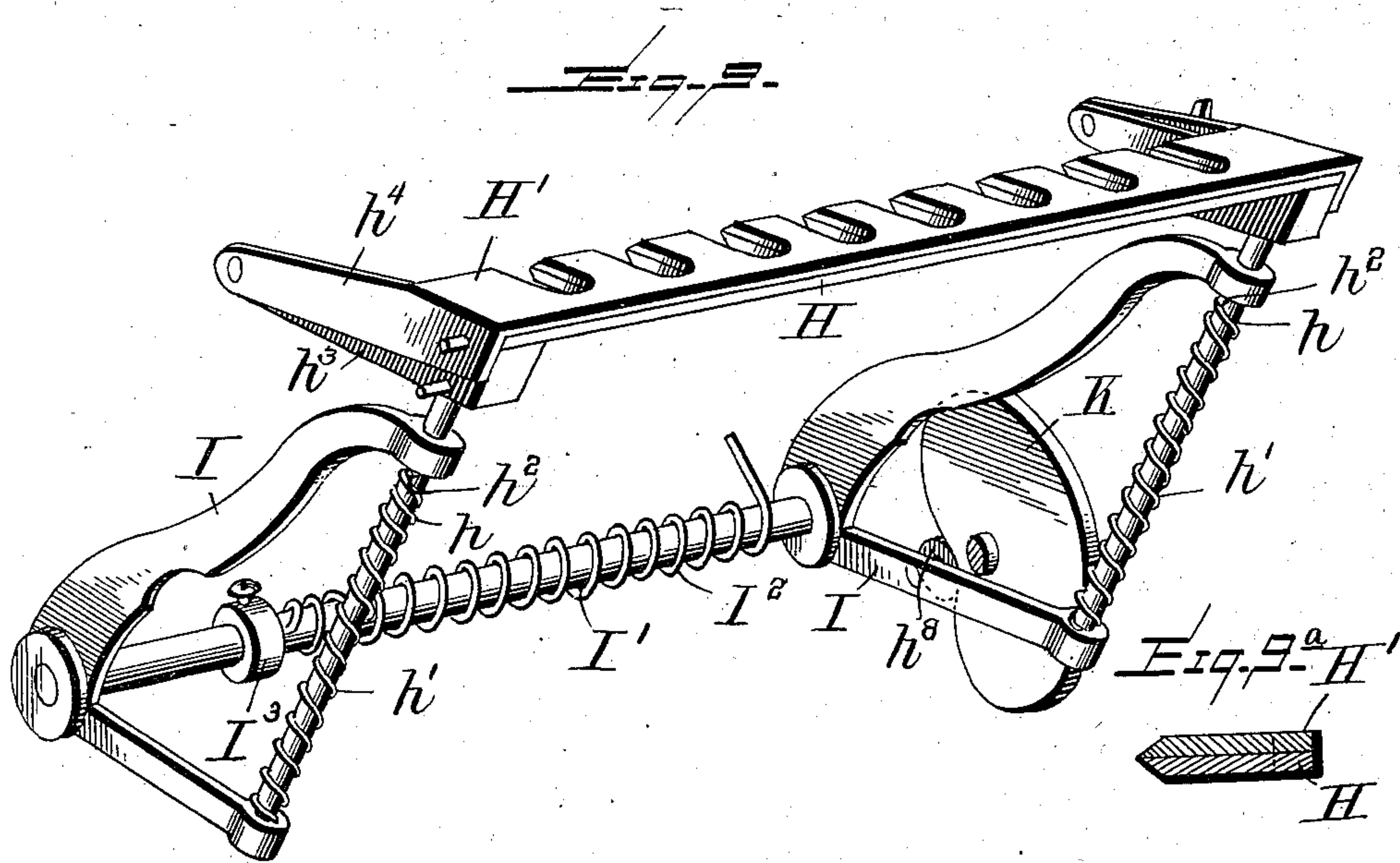
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R. E. & A. KEMPER.
PLATEN PRINTING PRESS.

APPLICATION FILED MAR. 1, 1902.

NO MODEL.

8 SHEETS—SHEET 7.



WITNESSES:

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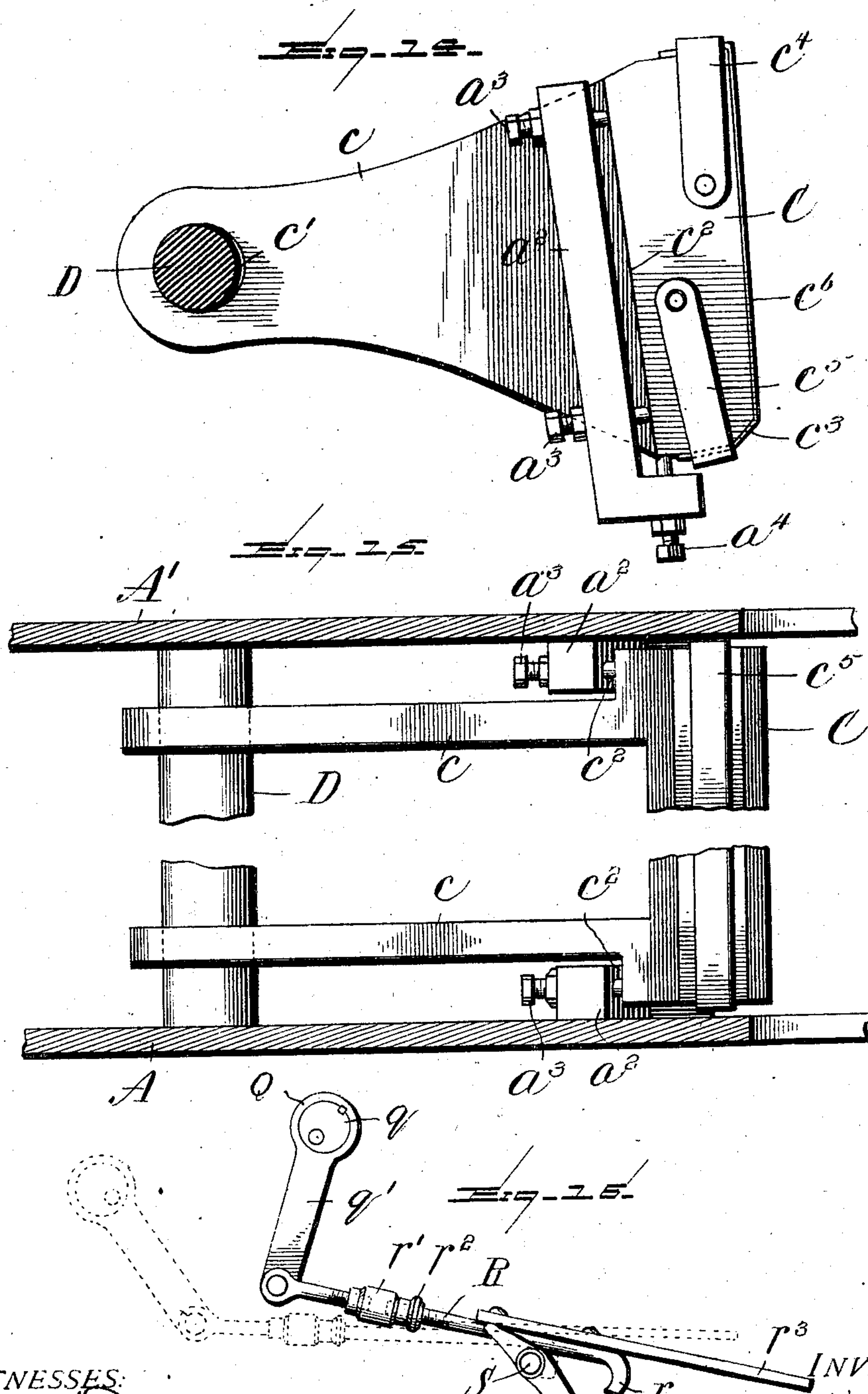
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R. E. & A. KEMPER.
PLATEN PRINTING PRESS.
APPLICATION FILED MAR. 1, 1902.

NO MODEL.

8 SHEETS—SHEET 8.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT E. KEMPER AND ARTHUR KEMPER, OF RENSSELAER, NEW YORK.

PLATEN PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 724,106, dated March 31, 1903.

Application filed March 1, 1902. Serial No. 96,210. (No model.)

To all whom it may concern:

Be it known that we, ROBERT E. KEMPER and ARTHUR KEMPER, citizens of the United States, residing at Rensselaer, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Platen Printing-Presses; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention is an improvement in bed-and-platen printing-presses; and it consists in the novel features described, reference being had to the accompanying drawings, which illustrate one form in which we have contemplated embodying our invention, and said invention is fully disclosed in the following description and claims.

Referring to the drawings, Figure 1 is a side elevation of a printing-press embodying our invention. Fig. 2 is a similar view taken from the opposite side. Fig. 3 is a longitudinal vertical sectional view of the same. Fig. 4 is a vertical transverse sectional view of the press. Figs. 5, 6, 7, and 8 are detail views illustrating the manner of feeding a sheet of paper through the machine. Fig. 9 is a detail perspective view of the gripper-frame. Fig. 9^a is a detail sectional view of the gripper-plates and grippers. Figs. 10, 11, and 12 are detail views of the grippers, showing them in different positions. Fig. 13 is a detail sectional view of one of the paper-retaining guides. Fig. 14 is a detail view of the platen and the devices for transferring the pressure from the shaft thereof to the side frames. Fig. 15 is a top plan view of the same, showing the side frames of the machine in horizontal section. Fig. 16 is a detail view of the combined impression throw-off and regulator. Fig. 17 is a detail perspective view of the shaft forming part of the impression throw-off and adjusting mechanism. Fig. 18 is a detail sectional view of the type-bed and chase-engaging devices.

The object of our invention is to furnish a platen printing-press in which the operator has only to place the sheets of paper successively upon a table, the sheets being automatically taken from said table, placed upon the platen, printed, and delivered without be-

ing again handled. This construction enables the operator to use both hands in placing the paper upon the table, as he does not have to remove the printed sheets from the press, and as he can feed another sheet immediately after one is fed from the table without waiting for a particular moment in the cycle of operation of the press the speed of the press is limited only to the speed with which the operator can place the sheets upon the table in succession. This greatly increases the capacity of our press over the ordinary hand-feed in general use in platen-presses, where the paper can only be fed during the time when the chase and platen are separated and in which the operator must remove the printed sheets with one hand while inserting the unprinted sheets with the other.

Referring to the drawings, A A' represent the side frames of a printing-press embodying our invention, which are so constructed as to support the various parts of the apparatus and are provided with the inclined tracks or guides *a a'*, upon which is a reciprocating slide B, carrying the type-bed *b*.

C represents the platen, which is provided with rearwardly-extending arms *c c*, having a pivotal engagement with a transverse shaft D. The apertures in the arms *c c*, surrounding the shaft D, are constructed larger than the shaft to allow the platen as light movement toward said shaft, as indicated at *c'*, Fig. 14. The platen is provided adjacent to each end with vertically-disposed inclined rear faces *c²*, as shown in Fig. 14. Each of the side frames is provided with a device for supporting the platen in a substantially vertical position and for transferring the rearward pressure upon the platen to said side frames, thus relieving the shaft D from such strain. In the present instance we have shown each side frame provided on its inner face with an angular flange or boss *a² a²*, formed integrally therewith or rigidly secured thereto, having its vertically-disposed portion provided, preferably, with horizontally-disposed adjusting-screws *a³ a³* to engage the inclined rear face *c²* of the platen and having its horizontally-disposed portion provided with an adjusting-screw *a⁴* for engaging the lower edge of the platen, as clearly illustrated in Figs. 14 and 15. This construction permits the platen to

be swung up into a horizontal position to "make ready," as shown in Fig. 8, and when the platen is swung down into operative position the inclined rear faces $c^2 c^2$ will engage the set-screws $a^3 a^3$ as the platen comes to rest upon the set-screws $a^4 a^4$, so that the position of the platen can be accurately adjusted, and all pressure thereon from the printing-bed will be received by the screws $a^3 a^3$, and the strain is entirely removed from the shaft. This construction avoids the possibility of the platen yielding during the impressions, which would result in imperfect work. The platen C is beveled above its front lower corner, as shown at c^3 , for a purpose hereinafter described and is provided with bails c^4 and c^5 for holding the usual paper or cardboard with which the platen is covered and which is indicated at c^6 .

The feeding-table is formed, preferably, with a glass top, so that the operator may see through it and observe the operation of the parts beneath. The table consists of a rectangular frame the side pieces $e e$ of which are preferably slotted nearly their entire length, as indicated at e' , the slots being engaged by a supporting cross-bar e^2 , which supports the rear end of the frame, the front end having a portion resting on top of the side frames A A', and E represents the glass top, which is suitably secured to the frame. By sliding the frame rearwardly the length of the slots $e' e'$ and allowing the rear end to hang down the table is out of the way, and the platen can be raised into a horizontal position to make ready, as shown in Fig. 8. The end of the table nearer the platen is provided with a horizontal guide, beneath which the paper is fed, and this guide is conveniently formed of a narrow strip of metal e^3 , having one edge slightly above the glass top, the strip inclining upwardly and backwardly to guide the paper as it is inserted. The side pieces $e e$ are preferably provided each with a pin or stud e^x , which engages a slot in the side frame A to determine the proper position of the table when in operation and also to hold it from being pushed out of place by the thrust of the bar G.

e^4 represents a rock-shaft mounted in the side bars $e e$ of the table and preferably provided with a keyway extending substantially throughout its length. Upon this shaft are mounted two (or more) laterally and longitudinally adjustable retaining-fingers for retaining the sheets placed on the table in the proper position to be seized by the grippers, as hereinafter described. One of these fingers is shown in section in Fig. 13, and a description of one will answer for both. The finger proper consists of a thin strip of metal F, having an upturned end f and provided with longitudinally-disposed slots f' .

f^2 represents an arm provided with an aperture engaging rock-shaft e^4 and provided with a key fitting the keyway in said shaft. The finger F is secured to the arm f^2 by

screws or bolts $f^3 f^3$, one of which is conveniently provided with a wing-nut to facilitate the longitudinal adjustment of the finger with respect to the shaft e^4 . In order to enable the finger to be adjusted with great nicety, we prefer to provide the rear end thereof with a threaded stem f^4 , on which is a circular nut f^5 , the edge of which engages a recess f^6 in a part of the arm f^2 , as shown in Fig. 13.

It will be seen that the fingers F can be moved laterally along the rock-shaft e^4 to the desired positions, and said fingers can also be adjusted longitudinally as desired to regulate the bottom margin of the paper in printing. The rock-shaft e^4 is provided with an operating-arm to effect the depression of the ends $f f$ below the level of the table-top to release the paper, and for convenience we employ a weighted arm f^7 for the purpose of returning the fingers to their normal positions, although a spring could be used, if desired.

G represents a bar having its ends bifurcated and embracing the shaft e^2 at its upper end and the shaft D at its lower end to guide the bar in its longitudinal movements. This bar G is so arranged that its upper end lies beneath the arm f^7 , and said bar is provided with a stud or friction-roll g , engaged by a cam g' on the shaft D to raise the bar G and arm f^7 at the proper time, and thereby depress the fingers F F.

The gripper for removing the paper from the table E consists of a pair of jaws, each composed of a transversely-disposed plate provided along one edge with a series of fingers between which are recesses of sufficient width to admit the fingers F F. For convenience of reference we shall refer to the under plate of the gripper as the "fixed" jaw and the upper or outer plate as the "movable" jaw.

H represents the fixed jaw, which is provided at each end with a guide-rod h , mounted in guiding-apertures in the side pieces I of the gripper-carrying frame. These side pieces are rigidly secured to a rock-shaft I', which is mounted in bearings in the side frames A A' of the machine. The fixed jaw H of the gripper is therefore permitted a movement toward and from the side pieces I I, and said jaw is held in its outermost position by springs $h' h'$, surrounding the guide-rods $h h$, the outward movement of said rods and jaw being limited by suitable stop-pins or other devices. In this instance we have shown stop-pins h^2 passing through the guide-rods h and serving to limit the outward movement of the rods and also to engage the upper ends of the springs h' . The fixed jaw H is provided with lateral plates or arms h^3 , to which are pivoted similar lateral plates or arms h^4 , secured to (or formed integrally with) the movable jaw II'. The movable jaw is constructed exactly like the fixed jaw and is provided with fingers to register with those of the fixed jaw. We find it desirable to bevel the upper sides of the ends of the fingers of the upper or movable

jaw and to bevel the lower sides of the ends of the fingers of the lower or fixed jaw, so that the ends of the fingers will not interfere with the platen and type-bed while an impression is being made. This construction is best seen in Fig. 9^a. On one side of the gripper-frame the side plate h^3 of the fixed jaw is provided with a spring-pawl h^5 , pivoted thereto and provided with a shoulder for engaging a pin h^6 on the arm h^4 of the movable jaw when the latter is in open position, so as to hold the movable jaw in its open position until said pawl is released. The pawl h^5 has a portion extending above the shoulder which is adapted to be struck by a fixed arm h^7 , secured to a part of the machine in the proper position to release the pawl and permit the movable jaw to drop upon the fixed jaw by gravity to grip the edge of the paper when the gripper has moved into the proper position. It is obvious that the movable jaw might be caused to close by a suitable spring or springs, if desired.

Upon the gripper-frame is a friction-roll h^8 , mounted in this instance on one of the side pieces I, which engages a depressing-cam K, fast on the shaft D of the machine, the said cam acting to depress the gripper by rocking the gripper-frame on its shaft I'. The shaft I' is provided with a torsional spring I² or other desired form of spring, which tends to raise the gripper-frame and holds the friction-roll h^8 always in engagement with the cam K, so that the oscillation of the gripper-frame is controlled by said cam. The spring I² is preferably secured at one end to a collar I³, adjustably attached to the shaft I' by means of a set-screw, and the other end of the spring is secured to the framework of the machine in any desired way.

When the gripper is in its lowest position, it lies just below the upper edge of the beveled portion c^3 of the platen, as shown in Fig. 7, and when in this position it is necessary to move the gripper toward the platen to lay the paper upon the platen, and after the impression has been made the gripper again moves outwardly under the force of its springs h' , and the movable jaw is raised to release the printed sheet. For the purpose of effecting these movements we provide a vertically-disposed arm L, (preferably one on each side of the machine,) said arms being secured to a rock-shaft l , mounted in the side frames. The side plates h^3 of the fixed jaw are each provided with a laterally-extending lug or pin h^9 , and the side plates h^4 of the movable jaw are each provided with a similar lug or pin h^{10} . The upper end of each of the arms L lies between the pins or lugs h^9 and h^{10} when the gripper is in its lowest position, and it will be seen that the rearward movement of said arms L will cause them to engage the pins h^9 and press the gripper bodily toward the platen, and the forward movement of the arms L will cause them to engage the pins h^{10} and carry the movable jaw away

from the fixed jaw, so that the pawl h^5 can drop under the pin h^6 and hold the gripper open, as previously described. The desired movements are imparted to the arms L L by means of a lever L', secured to the rock-shaft l and provided with a friction-roller which engages a cam L² on the shaft D and is held in engagement therewith by a spring l' , which in this instance is a torsional spring applied to the rock-shaft.

We also provide frisket-fingers supported above the platen and extending over the face thereof to hold the paper upon the platen while the impression is being made.

m represents a rock-shaft supported by two standards m' m' , extending upward from the side plates of the machine, said shaft being preferably provided with a keyway running the entire length thereof.

M M represent the frisket-fingers and having their upper ends perforated to fit the shaft m and provided with a key fitting the keyway thereof. The upper end of each finger is also split and provided with a clamping-screw m^2 , so that these fingers can be adjusted along the rock-shaft m and secured in their adjusted positions. The desired movements of the frisket-fingers are controlled by a cam M' on the shaft D, which engages a friction-roll on an arm m^3 , secured to the rock-shaft m , (see Fig. 2,) and the said friction-roll is held continuously in engagement with the shaft by a suitable spring m^4 . The cam M' is so constructed and timed that when the gripper has brought a sheet of paper into position to be printed and the gripper has been forced rearwardly toward the platen, as previously described, the frisket-fingers will be caused to engage the paper and clamp it upon the platen until the impression is made.

A movable receptacle is also provided for the purpose of receiving the printed sheets from the gripper and carrying them rearward and delivering them upon a suitable rack in view of the operator.

N represents the stationary rack for receiving the printed sheets, which is supported in any desired manner from the framework of the machine.

O represents a movable rack, box, or tray, which is secured to one or more flexible straps or bands o between the ends thereof. One end of said band is secured to a drum or shaft o' , mounted in the side plates of the machine and provided with a spring or weight tending to rotate said shaft in one direction, a helical spring o^2 , having one end secured to the shaft and the other end to one of the side plates. The strap o is passed around an idle roller o^6 , and the other end of the strap or band o is secured to an arm o^3 , pivoted to the frame between the tracks or guides a a , said arm being provided with a stop lug or pin o^4 , adapted to engage a pin o^5 , secured to one of the tracks or guides to limit the movement of said arm under the influence of the spring o^2 .

O' represents an operating-arm secured to

the reciprocating type-bed and provided with a friction-roll engaging the arm o^3 for moving it in a direction opposite that in which it is moved by the spring o^2 .

5 The reciprocation of the type-bed is effected by means of links P P, connected thereto and to crank-pins p on the cam-disk M and p' on the cam-disk L². A shaft Q extends transversely of the type-bed and is journaled
10 in bearings in the latter, said shaft being provided with eccentric-studs $q q$ at its ends, (see Fig. 17,) which are engaged by the links P P, which are prevented from slipping off by cotters or other suitable devices. It will
15 therefore be obvious that by rotating the shaft Q the eccentricity of the pins $q q$ will enable the distance which the type-bed moves toward the platen to be adjusted. The impression-adjusting devices and throw-off are
20 therefore connected to this shaft Q, said devices being illustrated in detail in Fig. 16. The shaft Q is provided with an operating-arm q' , to which is secured an adjustable bar R, terminating in a hook r , which is adapted
25 to normally engage a shaft S when the type-bed moves toward the platen. The bar R is preferably made in two parts, which are oppositely threaded and connected by an adjusting-sleeve r' , having its ends oppositely
30 threaded to engage the portions of the bar, so that by revolving the sleeve the bar R can be lengthened or shortened to adjust the pressure of the type upon the platen. A set-nut r^2 is also provided to lock the sleeve r' in its
35 adjusted position. The bar R is also provided with a plate r^3 , extending beyond the hook r and also extending laterally of the bar, and the shaft S is provided with a lifting-pawl s , pivotally mounted thereon and lying
40 beneath the plate r^3 . This pawl s is connected by a link t to a foot-lever T, adjacent to the feeding end of the press, so that the operator by placing his foot on the lever T will cause the pawl s to lift the plate r^3 and bar
45 R to such a height that the hook r will not catch on the shaft S, but will pass over it. The shaft Q is normally held in such a position that the type-bed will not be brought into contact with the paper on the platen
50 by means of a torsional spring Q', (see Fig. 17,) said spring being connected at one end to one of the guides a , and at the other to a collar q^2 , secured to the shaft Q adjustably by means of a set-screw. Said collar is also
55 provided with a stop-pin q^3 , adapted to engage a stop-pin q^4 , secured to one of the guides a , to limit the rotation of the shaft under the influence of the spring Q'. When the press is in operation, the hook r will catch
60 on shaft S as the type-bed moves toward the platen, thus causing shaft Q to turn in its bearings, so as to move the eccentric-pins $q q$ to such a position as to insure a proper impression of the type upon the paper. If,
65 however, the throw-off lever T is operated, the shaft Q will not be so rotated and no impression will be made.

U represents the frame carrying the inking-rollers, which is pivotally mounted on the shaft Q and provided with rollers $u u$, secured
70 to the frame in the ordinary manner. The frame U is oscillated by means of links u' , secured thereto and to the side plates of the machine, the oscillating being effected by the reciprocation of the type-bed.

V represents the inking-plate, which is supported from the type-bed in any desired way and may be provided with the usual devices for rotating, if desired.

W represents the driving-shaft of the machine, on which is mounted a gear-wheel w , engaging a gear-wheel D' on the shaft D. Shaft W is also preferably provided with fast and loose pulleys $w' w^2$, adapted to be driven
80 by a belt w^3 from a suitable source of power, and we also prefer to provide a belt-shifter w^4 , which in this instance is secured to a slide-bar w^5 , adapted to be operated by a hand-lever w^6 within reach of the operator.

It will be observed that by altering the
90 length of the guiding-fingers F the horizontal margin of the printed sheets can be adjusted to a certain extent, as the fingers F determine the position of the lower edge of the paper within the gripper.

We also provide the type-bed with means for adjusting the chase vertically to facilitate and increase the range of this marginal adjustment. (See Figs. 3 and 18.) To this end
100 the type-bed is provided at its upper end with a spring-catch b' of the usual construction, and at its lower edge the type-bed is provided with one or more vertically-adjustable catch and chase supports b^2 . In this instance each
105 of the adjustable supports b^2 is secured to or formed integrally with a vertically-disposed adjusting-bar b^3 , which is arranged to slide vertically in guiding-apertures formed conveniently in the webs on the rear face of the
110 type-bed, as shown, or in suitable guides provided thereon. The upper end of the adjusting-bar b^3 is provided with an adjusting-nut b^4 , so that by turning this nut the chase may be raised or lowered in the type-bed without altering any other part of the press. The
115 spring-catch b' will allow a sufficient range of adjustment without interfering with its proper engagement with the upper edge of the chase.

The operation of the machine is clearly
120 illustrated in Figs. 5, 6, 7, and 8 and is as follows: The operator feeds the sheets of paper singly upon the table, placing them in engagement with the retaining-fingers F F. As the gripper rises its movable jaw is raised
125 and held open by the pawl h^5 , as previously described, and the gripper moves upwardly until the jaws are on opposite sides of the edge of the paper, the retaining-fingers F F passing between the fingers of the gripper-
130 jaws. The pawl h^6 is then released by the arm h^7 , and the upper jaw falls upon the paper, clamping it between the upper and lower jaws. The retaining-fingers F F are then de-

pressed, as shown in Fig. 6, and the gripper is swung downward by its cam until the paper is brought opposite the platen. The arms L L are then operated to force the gripper toward the platen, thus carrying the paper against the platen, and at the same instant the frisket-fingers clamp the paper thereon, as shown in Fig. 7. The impression is then made. As the type-bed recedes after the impression the frisket-fingers hold the paper firmly on the platen until the type clears the paper, after which the cam M' permits the fingers to recede slightly. The cam L² then allows the gripper to move outward again under the force of the springs h', thus drawing the paper away from the platen sufficiently to allow air to pass between the platen and the paper, and the arms L L are then moved in the direction to separate the movable jaw from the fixed jaw far enough to allow the pawl h⁵ to engage it and hold it open and simultaneously allowing the paper to drop through the gripper into the movable tray O, which has been brought directly under the gripper to receive it. As the gripper rises to take another sheet from the table the tray O is carried rearwardly by the band o and delivers the printed paper to the stationary rack N, as shown in Fig. 6.

The mechanism for holding the chase upon the type-bed herein shown and described is not claimed herein, as this matter forms the subject-matter of a divisional application, filed by us on the 25th day of April, 1902, and given Serial No. 104,703.

What we claim, and desire to secure by Letters Patent, is—

1. In a platen printing-press, the combination with the feeding-table, of movable guiding and retaining fingers, the platen and the type-bed, a gripper adapted to take the sheets to be printed from the table and carry them between the platen and the type-bed, said gripper being provided with recesses, to receive the said fingers, means for causing the gripper to seize a sheet while it is in engagement with the said fingers, and devices for disengaging said fingers from the sheet after it has been seized by the gripper, substantially as described.

2. In a platen printing-press, the combination with the feeding-table, of movable guiding and retaining fingers, adjustable laterally with respect to the table, the platen and the type-bed, a gripper adapted to take the sheets to be printed from the table and carry them between the platen and the type-bed, said gripper being provided with recesses at intervals to receive said fingers, means for causing said gripper to seize a sheet while it is in engagement with the said fingers, and devices for disengaging said fingers from the sheet after it has been seized by the gripper, substantially as described.

3. In a platen printing-press, the combination with the feeding-table, of guiding and retaining fingers, adjustable longitudinally and

also adjustable laterally with respect to said table, the platen and the type-bed, a gripper adapted to take the sheets to be printed from the table and carry them between the platen and type-bed, said gripper being provided with a plurality of recesses, to receive the fingers while they are in engagement with a sheet, means for causing the gripper to seize a sheet, and devices for disengaging said fingers from the sheet, after it has been seized by the gripper, substantially as described.

4. In a platen printing-press, the combination with the platen and the type-bed, one of said parts being movable toward and from the other, of a feeding-table provided with a transparent top, a feeding device independent of the platen adapted to receive the sheets to be printed from the table and carry them across the platen between the platen and the type-bed, whereby the operation of the feeding mechanism is visible through the table, substantially as described.

5. In a platen printing-press, the combination with a feeding-table, the platen and movable type-bed, of a gripper independent of the platen adapted to receive the sheets to be printed from said table and carry them between the platen and type-bed, means for moving said gripper across the platen and means for moving said gripper toward the platen, to lay the paper thereon, substantially as described.

6. In a platen printing-press, the combination with a feeding-table, the platen and movable type-bed, of a gripper capable of moving toward and from the platen, said gripper independent of the platen being adapted to receive the sheets to be printed from the said table and to carry them across the platen between the platen and type-bed, mechanism for moving the gripper toward the platen, when the paper is in printing position and mechanism for opening the gripper to release the printed sheets, substantially as described.

7. In a platen printing-press, the combination with the feeding-table, the platen having one edge cut away and the type-bed, of a gripper independent of the platen capable of movement toward and from the platen, and adapted to take the sheets to be printed from the table and carry them across the platen between the platen and the type-bed, said gripper having its edge adjacent to the platen cut away and means for moving the gripper toward the cut-away portion of the platen to lay the sheet evenly upon the platen, substantially as described.

8. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a movable gripper-frame independent of the platen, a gripper carried by said frame and capable of movement with respect to said frame toward and from the platen, said gripper being adapted to take the sheets to be printed from said table and carry them across the platen between the platen and the type-bed, devices for operat-

ing the gripper-frame, and devices for moving said gripper toward the platen to lay the sheet carried by it evenly upon the platen, substantially as described.

5 9. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a movable gripper independent of the platen adapted to take the sheets to be printed from the table and carry them
10 across the platen between the platen and the type-bed, said gripper having a fixed and a movable jaw, devices for separating the said jaws, a detent for holding said jaws separated and a device in the path of the gripper adjacent to said table for releasing said detent,
15 substantially as described.

10. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a movable gripper-frame, a
20 gripper carried thereby and capable of movement with respect to said frame, toward and from the platen, said gripper comprising two jaws, movable devices in the path of said gripper adjacent to the platen, adapted to
25 move said gripper bodily toward the platen, when moved in one direction, and to separate the jaws of the gripper when moved in the opposite direction, a detent for holding said jaws separated, and a device adjacent to the
30 table for releasing said detent, substantially as described.

11. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a pivotally-mounted gripper-
35 frame independent of the platen, a gripper carried thereby and provided with devices movably supported in said frame, springs for holding the gripper in a definite position with respect to said frame to carry it across the
40 platen between the platen and the type-bed, mechanism for oscillating the gripper-frame, and devices for engaging the gripper and moving it toward the platen, to lay the sheet to be printed evenly thereon, substantially
45 as described.

12. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of an oscillating frame, a fixed
50 gripper-jaw provided with guides movably mounted in said frame, springs engaging said guides, a movable jaw pivoted to said fixed jaw, devices engaging said fixed jaw, to move said jaws bodily toward the platen to lay the sheet to be printed evenly thereon, devices
55 for engaging said movable jaw to open the gripper, a detent for holding the movable jaw in open position, and a device adjacent to the table to release said detent, substantially as described.

60 13. In a platen printing-press, the combination with the main frame, of a platen pivotally mounted therein and supporting devices secured to the main frame extending substantially from the top to the bottom of
65 said platen and provided with devices in different horizontal planes for engaging said platen when in printing position and sustain-

ing the entire pressure of the impressions, substantially as described.

14. In a platen printing-press, the combination with the main frame, of a platen pivotally mounted therein, and adjustable supporting devices located in different horizontal planes for engaging the back of the platen adjacent to the upper and lower portions
75 thereof and sustaining the entire pressure of the impressions, substantially as described.

15. In a platen printing-press, the combination with the main frame, of a platen pivotally mounted therein and capable of movement toward and from its pivotal connections, supporting devices secured to the main frame, in rear of said platen, and adjusting-screws extending through said supporting devices in different horizontal planes and engaging said
85 platen adjacent to the upper and lower edges thereof, substantially as described.

16. In a platen printing-press, the combination with the main frame, of a platen pivotally mounted therein, and provided with an
90 inclined rear face, supporting devices secured to said main frame, adjusting devices connected therewith and engaging the inclined rear face of the platen, and a support for the platen below the same, substantially as described.
95

17. In a platen printing-press, the combination with the main frame, of a feeding-table movably supported thereon, and a movable platen adapted to be turned up beneath
100 the table, said table being capable of being moved out of the way to expose the platen, substantially as described.

18. In a platen printing-press, the combination with the main frame, of a feeding-table having slotted portions, a part connected with the main frame, engaging the slotted portions of the table, and a movable platen adapted to be turned up beneath the table to
105 "get ready," whereby said table may be moved out of the way to expose the platen and will be supported by said slot-engaging parts when not in use, substantially as described.
110

19. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a gripper independent of the platen adapted to take the sheets to be printed from the table and carry them across the platen between the platen and type-bed,
120 guiding-fingers adjacent to the table to engage the edge of a sheet, and a paper-guide extending transversely of and above the table and having its lower face inclined upwardly and rearwardly to facilitate feeding
125 the paper, substantially as described.

20. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a gripper independent of the platen provided with a pair of separable jaws,
130 adapted to take the sheets to be printed from the table and carry them across the platen between the platen and type-bed, devices for opening the gripper, and a movable delivery-

tray adapted to receive the sheets from the gripper and convey them to a desired point, substantially as described.

21. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a gripper independent of the platen provided with a pair of separable jaws, adapted to take the sheets to be printed from the table and carry them across the platen between the platen and type-bed, devices for opening the gripper to allow the sheet to fall through between the jaws thereof, a stationary receiving-rack and a movable tray adapted to receive the sheet from the gripper and deliver it to the stationary rack, substantially as described.

22. In a platen printing-press, the combination with the feeding-table, the platen and the type-bed, of a gripper provided with a pair of separable jaws, adapted to take the sheets to be printed from the table and carry them between the platen and type-bed, devices for opening the gripper to allow the sheet to fall through the gripper, a stationary receiving-rack, a movable tray adapted to receive the sheet from the gripper, a band connected to said tray, a spring-drum secured to one end of said band, and actuating devices connected to the other end of said band, substantially as described.

23. In a platen printing-press, the combination with the main frame, provided with stationary guiding-tracks, of a platen connected with the main frame, a sliding type-bed mounted upon said tracks, and vertically-movable inking-roller, said tracks being cut away to accommodate said rolls, substantially as described.

24. In a platen printing-press, the combination with the main frame, provided with stationary guiding-tracks, of a platen connected with the main frame, a sliding type-bed mounted upon said tracks, a reciprocating frame mounted on said sliding bed and provided with inking-rollers, said tracks being cut away to accommodate said rolls, a shaft provided with cranks, links connecting said cranks with said sliding bed, and

links connecting said oscillating frame to a stationary part of the frame, substantially as described.

25. In a platen printing-press, the combination with the main frame, provided with stationary guiding-tracks, of a platen connected with the main frame, a sliding type-bed mounted upon said tracks, an impression-regulating shaft mounted in said sliding bed and provided with eccentric portions, a shaft mounted in the main frame and provided with cranks, links connecting said cranks to said eccentric portions of the impression-regulating shaft, an arm connected to said impression-regulating shaft, a link connected to said arm and provided with a hook, a stationary part adapted to be engaged by said hook when the sliding bed moves toward the platen, to turn said impression-regulating shaft, and a throw-off mechanism for said hook, substantially as described.

26. In a platen printing-press, the combination with the main frame, provided with stationary guiding-tracks, of a platen connected with the main frame, a sliding type-bed mounted upon said tracks, an impression-regulating shaft mounted in said sliding bed and provided with eccentric portions, a shaft mounted in the main frame and provided with cranks, links connecting said cranks to said eccentric portions of the impression-regulating shaft, an arm connected to said impression-regulating shaft, a link connected to said arm and provided with a hook, a stationary part, adapted to be engaged by said hook when the sliding bed moves toward the platen, to turn said impression-regulating shaft, a throw-off mechanism for said hook and devices for adjusting the length of said link to adjust the impressions, substantially as described.

In testimony whereof we affix our signatures in the presence of two witnesses.

ROBERT E. KEMPER.

ARTHUR KEMPER.

Witnesses:

PETER KEMPER,

GEORGE G. KEMPER.