

T. L. TAYLOR.
LAUNDRY MARKING MACHINE.
APPLICATION FILED FEB. 23, 1906.

4 SHEETS—SHEET 1.



Attorneys

2 Witnesses
E. Rader
Stewart Rice.

943,203.

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4 SHEETS—SHEET 2.

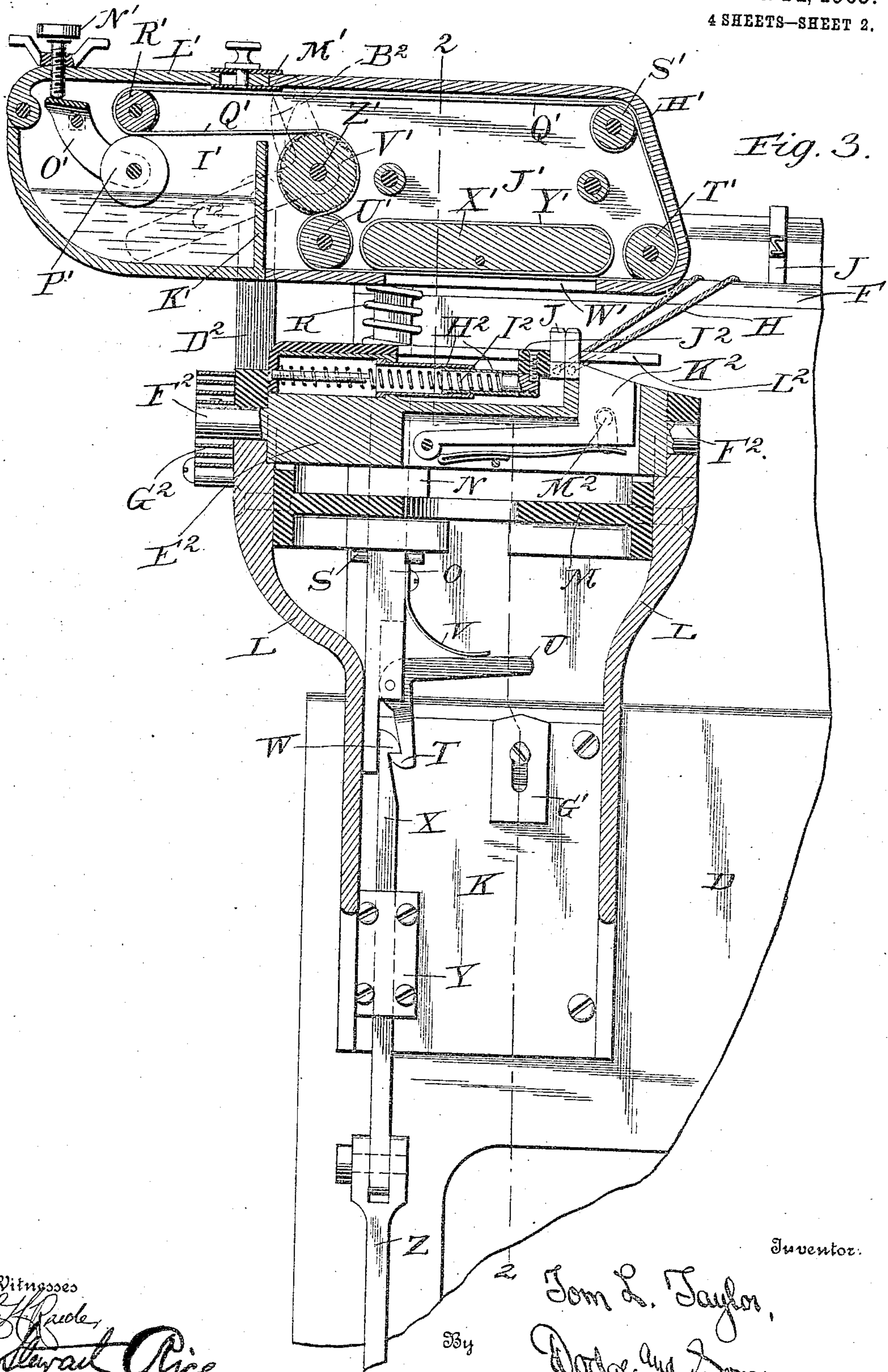


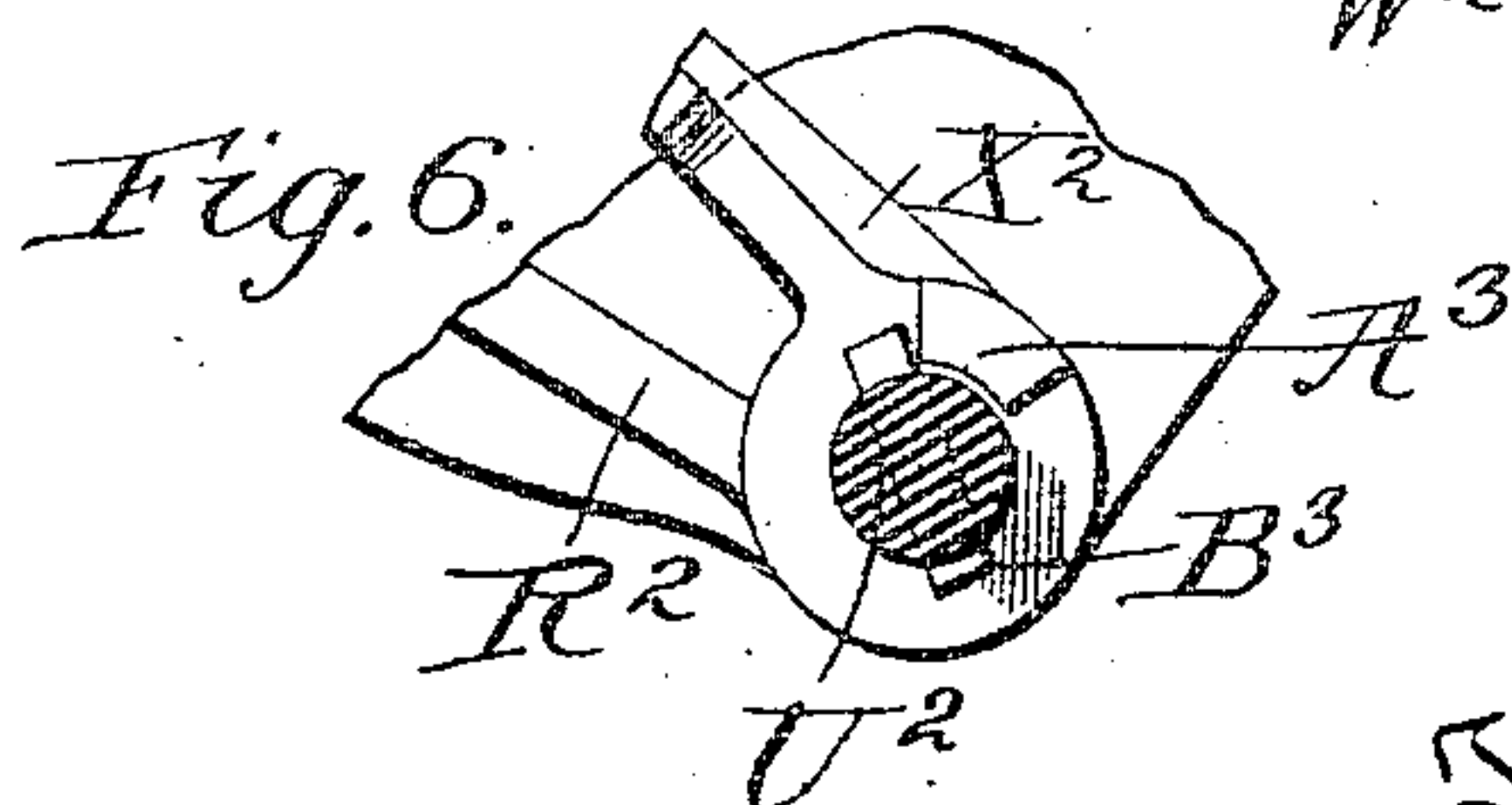
Fig. 3.

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Fig. 7.

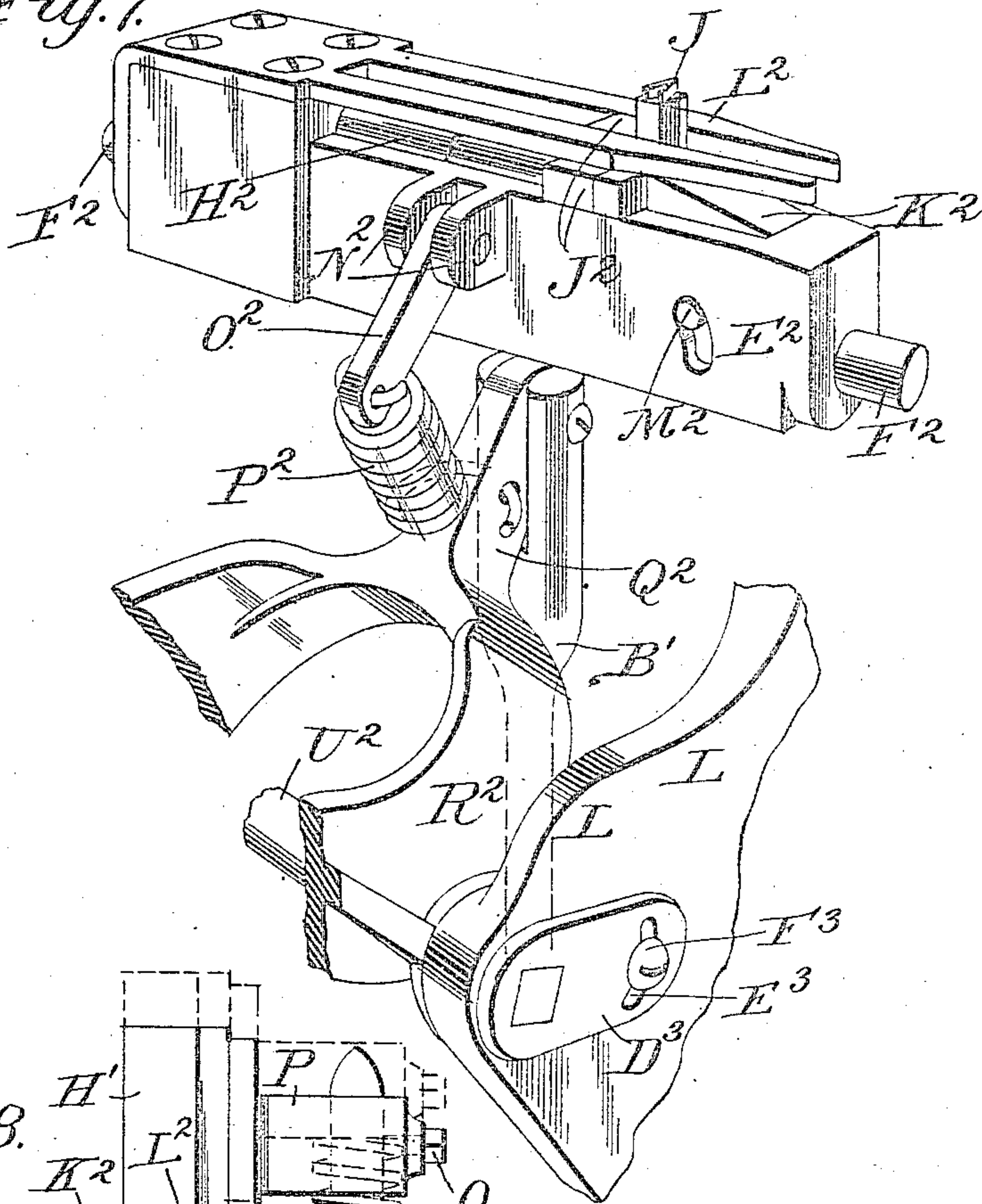


Fig. 8.

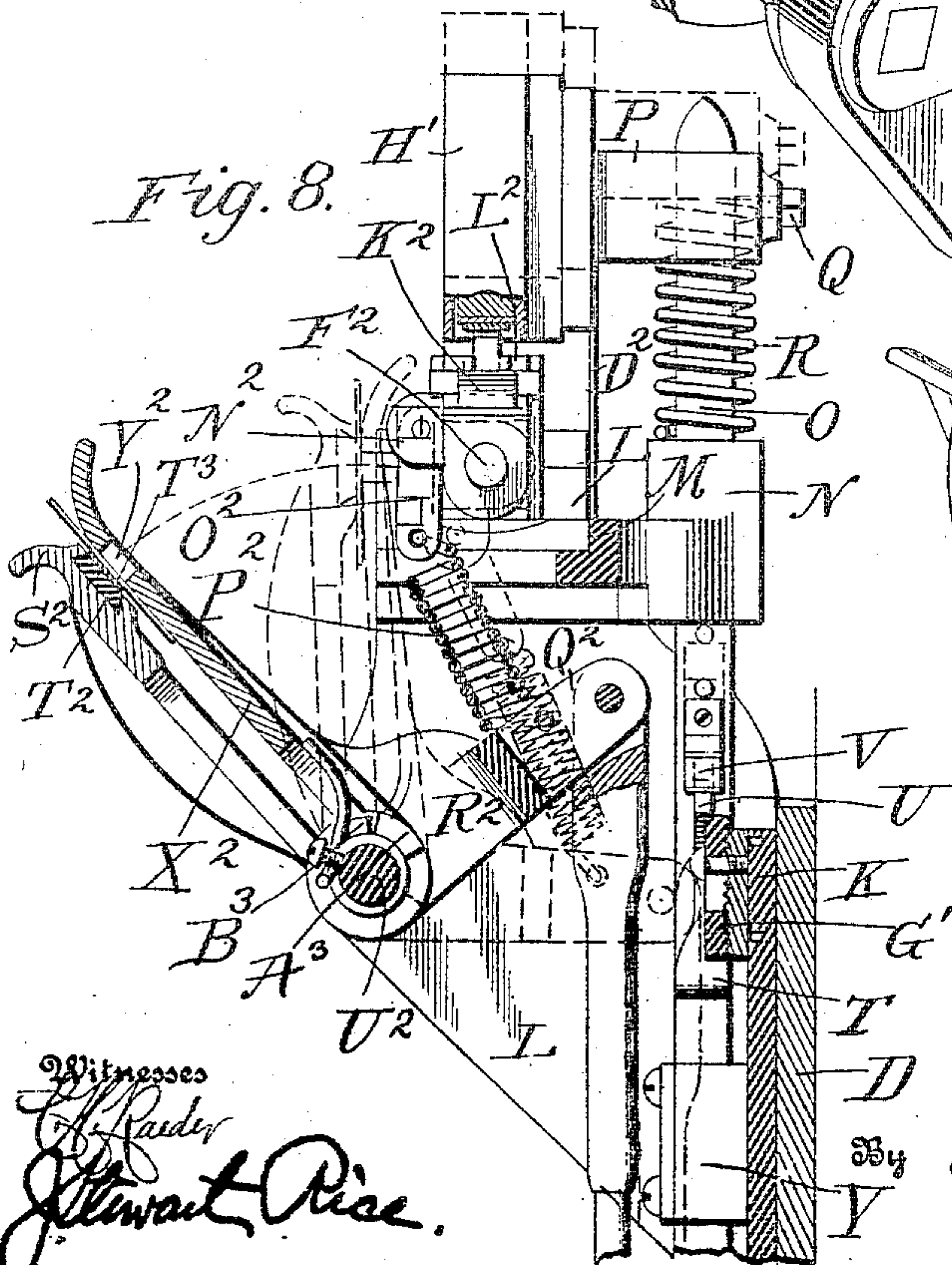
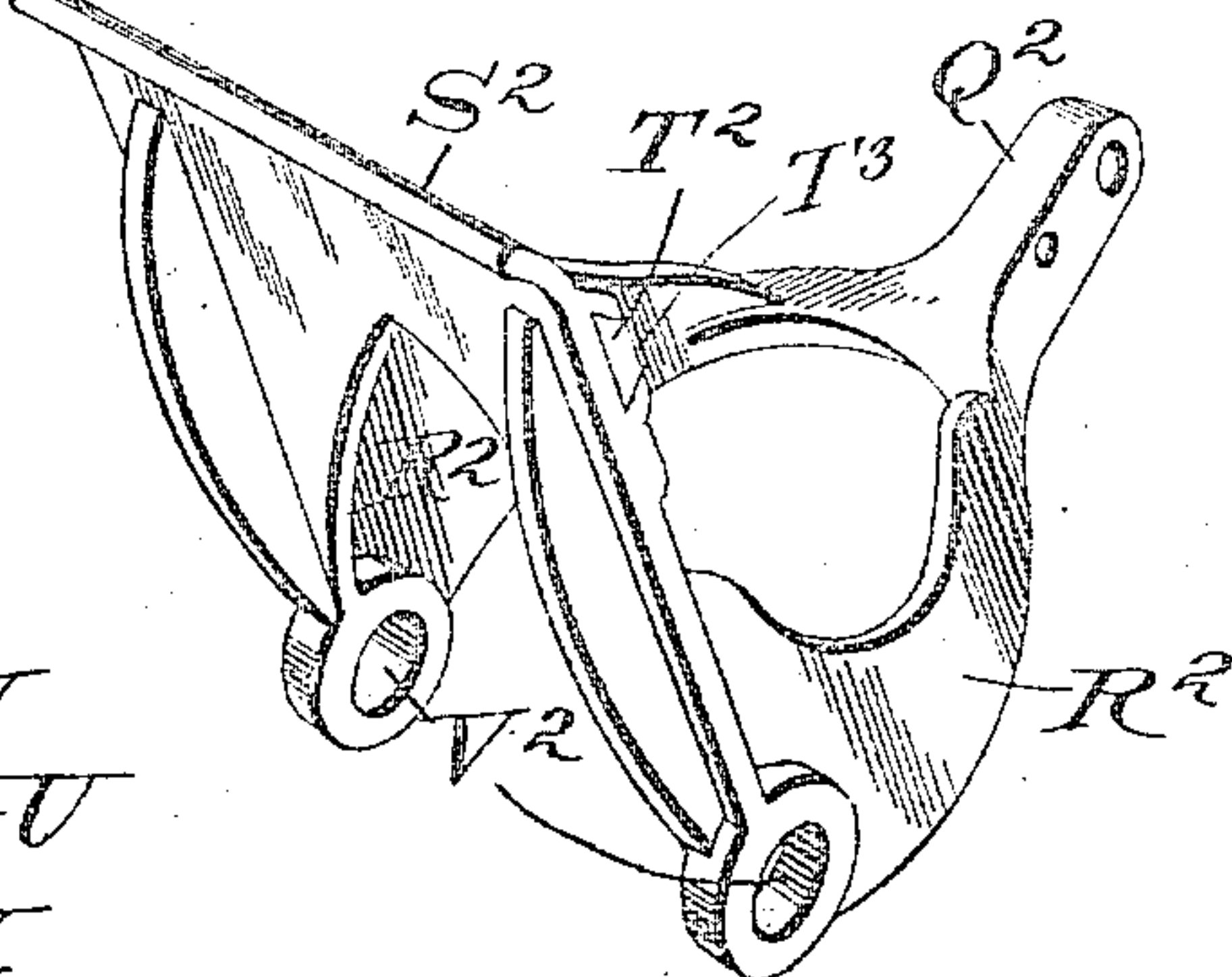


Fig. 9.



Inventor:

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UNITED STATES PATENT OFFICE.

TOM L. TAYLOR, OF ATLANTA, GEORGIA, ASSIGNOR TO THE PEARL LAUNDRY MACHINERY COMPANY, OF ATLANTA, GEORGIA, A CORPORATION OF GEORGIA.

LAUNDRY-MARKING MACHINE.

943,203.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed February 23, 1906. Serial No. 302,476.

To all whom it may concern:

Be it known that I, TOM L. TAYLOR, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented certain new and useful Improvements in Laundry-Marking Machines, of which the following is a specification.

My present invention pertains to improvements in laundry-marking machines, the construction and advantages of which will be hereinafter set forth, reference being had to the annexed drawings, wherein:

Figure 1 is a side elevation of the machine, certain portions being broken away and shown in section; Fig. 2 a vertical sectional view taken on the line 2—2 of Fig. 3; Fig. 3 a similar view taken on the line 3—3 of Fig. 2; Fig. 4 a like view on the line 4—4 of Fig. 2; Fig. 5 a sectional elevation of the platen, the clamp and the supporting shafting; Fig. 6 a transverse sectional view, on the line 6—6 of Fig. 5, the spring being omitted; Fig. 7 a perspective view of the chase and a portion of the platen-carrying member, showing the connections between the platen and the chase; Fig. 8 a vertical sectional view similar to Fig. 2, the inker being shown as moved down upon the type carried by the chase and the platen with its clamping member brought into contact with the type, the platen and clamping member being also shown in dotted line; and Fig. 9 a perspective view of the platen and its attendant parts.

The main object of the invention is to provide a simple and efficient machine for marking laundry, though it may, of course, also be employed for printing upon other surfaces than cloth.

A further object is to provide a clamp which will firmly hold the goods and carry them up against the type which have been previously positioned in the chase and inked.

Another object of the invention is to so construct the parts that after the goods have been placed upon the platen and clamped thereto, preparatory to being moved into contact with the type, the operator may release his hold upon the goods and while the platen is being carried against the previously-inked type take hold of another piece with the view of placing it upon the platen after the piece previously positioned has

been marked and released. The construction is such that the clamp is automatically released as it recedes from the face of the type and the goods may be allowed to drop upon the floor or into a receptacle placed beneath the movable or swinging platen.

The machine is preferably provided with four legs A secured together near the feet thereof by suitable cross-braces B. The legs are surmounted by four vertically-disposed L-shaped members C, the front and rear members being preferably connected together by a cross-plate D, see Fig. 3. The members C form a receptacle or holder for the type-case E, the upper face of which is stepped and provided with a series of cross-bars F. Each of said bars is formed with a series of openings G (Fig. 2) through which extend cords H, carrying at their lower ends weights I (Fig. 1), the weights and cords moving through pockets formed in the type-case immediately below the openings G in the cross-bars.

A T-shaped type J (see Fig. 2) is connected to the upper end of each of said cords, the type-face being formed upon the outer end of the short arm. Normally the weights hold the type in the positions shown in Figs. 1 and 2, where they may be readily grasped by the operator and carried over and placed in the chase.

The type-holder herein shown, together with the type, suspending cords and weights, is claimed in my copending application Serial No. 242,018, filed on or about January 20, 1905.

Secured to the front cross-bar D is a frame K, provided with two side walls or brackets L which form the support for the inker, the chase, the platen and the clamping plate that works in conjunction with the platen.

Mounted between the brackets L at a point slightly below their upper ends and rigidly secured thereto is a supporting plate or cross-bar M, provided on its rear face (see Figs. 2 and 4) with a hollow boss or guide-way N through which extends a rod O, said rod being polygonal in cross-section and conforming to the opening in the boss. The upper end of the rod passes through a bracket P secured to the rear face of the inker, said rod being adjustable within the bracket and held in position by a set-screw

Q, a spring R encircling the rod O. The upper end of said spring bears against the lower face of the bracket P, while the lower end of the spring rests upon the upper end of the boss N, thus serving to maintain the rod in its elevated position and consequently holding the inker in the position shown in full lines in Figs. 1, 2 and 4.

A pin S is passed through rod O at a point below the boss N and serves to limit the upward movement of said rod and consequently the elevation of the inker. The rod, as will be best seen upon reference to Figs. 3 and 4, carries at its lower reduced end a hook T, the end U of said hooked member standing in a substantially horizontal position and being pressed downward by a spring V secured to the rod and movable therewith. The hook T will, consequently, be thrown inwardly toward the rod and into engagement with a complementary hook W formed upon the upper end of a rod X mounted in a box or bearing Y secured to the frame K and slidable vertically therein. The lower end of the rod X is pivotally connected to a link Z, which in turn is likewise connected to a block A'. Said block is adjustably secured upon the upper end of a rod B', which at its lower end is connected to a treadle C', as shown in Fig. 1.

The rod B' will preferably be provided with a turnbuckle D' in order that its length may be varied, and a stop-bolt or screw E' is arranged to coact with the treadle and to limit its upward movement. The treadle is normally drawn upward through the tension of a spring F', secured thereto and to a fixed portion of the machine, see Fig. 1.

Mounted upon the frame K is an adjustable trip block or member G', with which as the rod B' and consequently rod X are drawn downwardly the horizontally-disposed arm U of the hook T will come into contact, as shown in dotted lines in Fig. 4, said hook T being drawn out of engagement with the hook W. Immediately the hooks pass out of engagement with each other, spring R acts to raise the rod O and carry the inker to its elevated position. By adjusting the member G' the hooks may be drawn out of locking contact sooner or later and consequently the inker be brought down with greater or less force or pressure upon the type carried by the chase.

The inker in the form of machine shown herein comprises a hollow shell or casing H' provided with two compartments I' and J' formed by a division wall K', which terminates at a point below the upper wall of the shell, see Fig. 3. The compartment I' is designed to contain ink and is provided with a hinged cover L' normally held in a closed position by a sliding latch M'. The cover carries an adjustable screw N', which bears upon the rear end of a lever O', mounted

within the ink-containing chamber. Attached to the opposite end of the lever is a roller P' which dips into the ink and carries it up into contact with the inking ribbon Q'. Said ribbon passes about a roller R' mounted in the inking chamber, around rollers S', T' and U' mounted in the chamber J', and a somewhat larger roller V' also mounted in said chamber. The ribbon likewise passes over an opening W' formed in the lower face of the chamber J' immediately above and in line with the type carried by the chase below.

Located within the chamber J' above the opening W' is a block X' provided with a yielding surface Y' against which the ribbon Q' bears. The block and its yielding surface enable the ribbon to impart the requisite quantity of ink to the type-face without in any way injuring said face or cutting the ribbon, it being essential to a proper marking of the goods that the type-face be relatively sharp and that the ink shall pass down upon the sides of the type as well as be placed upon the outer face thereof.

The roller V' is fast to its shaft Z', said shaft having rigidly secured to its outer end in rear of the inker a ratchet-wheel A'. A pawl B², carried by an elbow-lever or pawl-carrier C² coacts with said ratchet-wheel and serves to rotate the same each time the inker is elevated after having been depressed. The pawl-carrier is secured upon an arm D², which extends upwardly from one of the brackets L. The endless ribbon is thus caused to move so that a freshly-inked portion will be brought into contact with the type each time the inker is moved downwardly by the depression of the treadle C'. By adjusting the screw N' a greater or less amount of ink may be placed upon the ribbon. Adjustment of said screw will cause the roller P' to bear upon the inking ribbon with a varying pressure. The greater the pressure the less ink the ribbon will take up.

The main body of the chase is formed of a block or casting E², provided at each end with a journal or stud-axle F² which are mounted in bearings formed at the upper ends of the brackets L. One of said journals extends outward from the bracket and a coiled spring G² is secured thereto and to the bracket, the spring being so arranged as to normally hold the chase in the position shown in full lines in the various figures of the drawings.

Mounted within a recess formed in the upper portion of the body E² is a series of telescoping tubes H², each of which is normally pressed outward or held in its extended position by a spring I². The outer tube carries a block or abutment member J², against which the first of the inserted type bears, as best illustrated in Fig. 3, in which two type are shown in position.

A spring-pressed hook or retaining member K^2 is mounted in the lower portion of the body of the chase, the nose of said retaining member projecting upward in line with the abutment member J^2 and serving, in conjunction therewith, to hold the type close together and in proper position. The upper face of said spring-pressed member K^2 is beveled, as will be seen upon reference to Figs. 3 and 7, so that the laterally-projecting arms of the type may force said spring-pressed member downwardly as they are moved inward against the abutment member J^2 and beneath a pair of guiding and retaining fingers L^2 which extend outwardly over the body of the chase at a point above the tubular members and over the laterally-extending portion of the abutment member J^2 . As the type are moved inwardly one by one between the outer ends of the fingers L^2 they depress the member K^2 and force the abutment member J^2 rearwardly, putting the springs I^2 under compression as the tubular members H^2 are telescoped.

When it is desired to change the type, it is only necessary to depress the member K^2 , which may be readily accomplished by pressing the finger M^2 downwardly, said finger being secured to the spring-pressed member K^2 and passing outward through a slot formed in the side of the block E^2 . The spring-pressed abutment member will then force the type outward from between the retaining fingers L^2 and the weights will immediately draw the type back to their proper positions in the type magazine or case.

The body of the chase is provided with two ears or lugs N^2 between which is pivotally secured a link O^2 , the outer end of which is connected to the upper end of a spring P^2 , the lower end of said spring being connected to an arm Q^2 of the platen frame. The outer end of said arm Q^2 , as will be seen upon reference to Figs. 2, 7 and 8, is connected to the upper end of rod B' , so that as said rod is depressed the chase will be rocked upon the stud-axles F^2 from the position shown in full lines in Fig. 8 to the dotted line position also shown in said figure. In other words, the chase will be moved through an arc of 90° and the type-face brought into position so that the goods carried by the platen and clamp may be brought into direct contact therewith.

The platen-carrying frame is of the form best shown in Fig. 9. The arm Q^2 is formed by the junction of two said members R^2 from which extends at substantially right angles thereto the platen member S^2 , the platen proper being formed by a yielding block T^2 of rubber or the like, secured in the forward face of said member S^2 .

As will be seen upon reference to Fig. 8, the block T^2 may be provided with a surface of canvas or the like, indicated by T^3 . In

stamping thin goods the sharp faces of the type would penetrate the material if a rubber surface alone were employed. The canvas face gives a certain stability to the yielding platen which prevents the type from cutting the material being marked.

A shaft U^2 passes through the brackets L , and through openings or bearings V^2 formed in the platen frame, said frame being of such width as to bear against hubs or bosses W^2 formed upon the inner faces of the brackets L , so that sidewise movement of the platen frame is prevented.

Mounted upon the shaft U^2 , between the bearings of the platen, is a clamping plate or member X^2 , said member being provided with an opening Y^2 which, when the clamp is brought into operative relation with the platen, stands in line with the platen face T^2 . The upper end of the clamp and the platen will, preferably, be curved away from each other, as best shown in Fig. 8, in order that the goods may be readily inserted between them preparatory to the platen being brought against the clamping member.

One of the hubs Z^2 of the clamping member is provided with a lug A^3 which coacts with a through-pin B^3 secured in the shaft U^2 . A reversely-coiled spring C^3 is secured at its midlength to said shaft, the free ends of the spring bearing against the inner faces of the clamping plate or member X^2 and serving normally to throw said plate over toward the platen. The pin B^3 and lug A^3 limit the movement of the clamping plate toward the platen when the parts are in their normal positions, the plate being held away from the platen, as shown in Fig. 2, through the action of said pin and lug. In the position shown in Fig. 8 the rod B' has been slightly depressed, and the platen advanced toward the clamping member to such an extent that the piece of goods to be marked will be held between said parts.

In order to regulate the space between the platen and the clamping plate when the parts are in their normal positions, the outer end of the shaft U^2 is squared and an arm D^3 is secured thereto, said arm being provided with a slot E^3 through which is passed a screw F^3 . By loosening the screw and moving the arm the position of the pin B^3 with relation to the lug A^3 may be varied and the space between the platen and the clamping plate changed as desired.

The operation of the machine is as follows: With the parts in the positions shown in Fig. 2, and assuming that the proper type have been placed in the chase and the screw N' so adjusted as to cause roller P' to impart the requisite quantity of ink to the ribbon, the operator places a piece of goods upon the platen and then depresses the treadle C' . The first portion of the downward movement of said treadle causes rod

B' to rock the platen frame and carry the goods resting upon the platen against the adjacent face of the clamping plate. At the same time the inker will begin its descent and upon the continued downward movement of rod B' the inking ribbon will be brought against the face of the type which stand immediately below the same. In the meantime the platen and clamping plate are being swung upward. As the rod B' continues its downward movement the member U of the latch or hook T will come into contact with the upper portion of the trip block or member G' and release hook T from engagement with the hook W. The spring R will then cause an upward movement of the rod O, carrying the inker away from the face of the type. While this is taking place spring P² and link O² will have been drawn down to a position in which they will act to overcome the tension of the spring G² and thus move the chase from the position shown in full lines in Fig. 8 to the dotted-line position in said figure. The chase is brought to this position just prior to the completion of the movement of the platen and the clamping plate, so that the type which have been inked stand in alinement with the opening Y² and come into contact with the goods held between the clamping plate and the platen frame. Upon releasing the treadle C' and allowing it to move upwardly, the rod B' will, of course, be carried up and the parts return to the positions shown in Figs. 1, 2 and 3, the hooks T and W again coming into engagement, so that the inker may be moved downwardly, the chase being oscillated or returned by the spring G² to its normal position beneath the inker, and the platen frame carried outwardly and separated from the clamping plate, the movement of which is arrested by the lug A³ coming in contact with the pin B³.

By adjusting the block G' the hooks may be released at an earlier or later period of the downward movement of the rod O and consequently the inker may be drawn down upon the type with greater or less pressure. The greater the pressure the greater the amount of ink that will be placed upon the type, as the type faces will embed themselves to a greater or less extent in the ribbon.

It is evident that so far as the generic features of this machine are concerned it may be varied in detail without departing from the spirit of the invention.

Having thus described my invention, what I claim is:

1. In a machine of the character specified, the combination of an oscillating chase; an inker arranged above the chase and movable toward and from the same in a right line; a platen; a clamping member for holding the goods upon the platen; and means for first moving the inker into contact with the

type carried by the chase and the platen into operative relation with the clamping member, and thereafter oscillating the chase through an arc of approximately 90°, so as to bring said type into line with the platen, and moving the platen and the clamping member into printing relation with the type.

2. In a machine of the character specified, the combination of an oscillating chase; means for normally holding said chase in one position; an inker movable toward and from the chase in a right line while it is held in its normal inking position; a platen; a spring-pressed clamp cooperating and movable with said platen; and means for moving the platen toward the type carried by the chase after said type have been inked and the chase oscillated through an arc of approximately 90° to bring the type into alinement with the platen.

3. In a machine of the character specified, the combination of an oscillating chase; means for normally holding said chase in one position; an inker; means for moving said inker in a right line into and out of operative relation with the type carried by the chase previous to the movement thereof; means for oscillating said chase through an arc of approximately 90°; a platen; a clamp cooperating and movable with said platen to clamp the material being printed; and means for moving said platen and clamp into operative relation with the type.

4. In a machine of the character specified, the combination of an oscillating chase; means for moving the same about its axis through an arc of approximately 90°; an inker movable in a right line and arranged to act upon the type carried by the chase previous to its oscillation; a platen; a clamp cooperating and movable with said platen to hold the goods thereon; and means for moving said platen into operative relation with the type carried by the chase.

5. In a machine of the character specified, the combination of an oscillating chase movable through an arc of approximately 90°; an inker arranged above the same and movable in a right line toward and from the chase; a swinging platen; a spring-pressed clamp cooperating therewith; a treadle; and operative connections between said treadle, the inker, chase and platen for first causing the inker to be depressed and then released, and to thereafter oscillate the chase and swing the platen and clamp into operative relation with the type carried by the chase.

6. In a machine of the character specified, the combination of an oscillating chase; a platen working in conjunction therewith; an inker; means for normally holding said inker in an elevated position above the plate; and means for drawing the inker down upon the type carried by the chase automatically releasing the inker when it

has moved downwardly to the desired extent, and then rotating the chase to bring it into operative relation with the platen.

7. In a machine of the character specified, the combination of an oscillating chase; a platen working in conjunction therewith; an inker arranged above the chase; a reciprocating rod for supporting said inker; a spring serving normally to hold said rod and the inker in an elevated position; means for rocking the chase; and a yielding connection between said means and the rod for drawing said rod downwardly and bringing the inker into contact with the type carried by the chase.

8. In a machine of the character specified, the combination of a chase; a platen working in conjunction therewith; an inker arranged above the chase; a rod supporting said inker; a spring serving normally to project said rod upwardly; a treadle; means connected to the treadle for actuating the chase and an adjustable yielding connection between said means and rod whereby the inker may be moved down to a predetermined point and then automatically released.

9. In a machine of the character specified, the combination of a chase; a platen working in conjunction therewith; an inker; a rod carrying said inker at its upper end; a spring serving normally to elevate said rod and inker; a pivoted hook carried by said rod; a second hook arranged to engage the first hook; means for raising and lowering said second hook and likewise actuating the chase; and an adjustable trip block cooperating with said first-named hook, for releasing the same when the inker has been moved down to a predetermined extent.

10. In a machine of the character specified, the combination of an oscillating chase; an inker arranged above the same; means connected to said inker for drawing it downwardly to a predetermined distance and then automatically releasing the same; means for normally holding said inker in an elevated position; a swinging platen; a spring-pressed clamping member coacting with said platen; and connections for oscillating the chase and swinging the platen toward the chase.

11. In a machine of the character specified, the combination of an oscillating chase; an inker arranged above the same; means for normally holding said inker in an elevated position; means for drawing said inker downwardly and releasing the same when it has reached a predetermined point; a platen-carrying frame; a shaft supporting said frame; a clamping plate mounted upon said shaft; a spring serving normally to force

said plate against the platen; connections intermediate said frame and the chase; and means for swinging the frame about the shaft.

12. In a machine of the character specified, the combination of an oscillating chase; an inker arranged above the same; means serving normally to hold said inker in an elevated position; means for depressing said inker to a predetermined extent and then automatically releasing the same; a platen-carrying frame; a platen carried thereby; a shaft upon which said frame is pivotally mounted; a spring-pressed clamping plate coacting with the platen; a link connected to the chase; a spring connection intermediate said link and the platen-carrying frame; and means for swinging said frame about the shaft.

13. In a machine of the character specified, the combination of a chase; means for inking the type held therein; a platen-carrying frame; a platen carried thereby; a shaft upon which said platen-carrying frame is pivoted; a clamping plate also pivotally mounted upon said shaft; a lug extending outwardly from said plate; a pin carried by the shaft, and normally standing in the path of travel of the lug; a spring serving to move said plate into contact with the platen; and means for swinging the frame toward the chase.

14. In a machine of the character specified, the combination of a chase; means for inking the type carried thereby; a platen-carrying frame; a platen mounted thereon; a shaft upon which said frame is pivoted; a clamping plate also pivoted upon said shaft; a spring serving normally to throw said plate into contact with the platen; and an adjustable stop device for normally holding said plate out of contact with the platen.

15. In a machine of the character specified; the combination of a chase; means for applying ink to the type carried thereby; a platen-carrying frame; a platen mounted upon said frame; a shaft upon which said frame is pivoted; a spring-pressed clamping plate also mounted upon said shaft; coacting stop members carried respectively by said shaft and plate; and means for axially adjusting said shaft.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

TOM L. TAYLOR.

Witnesses:

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CHAS. H. RAEDER.