

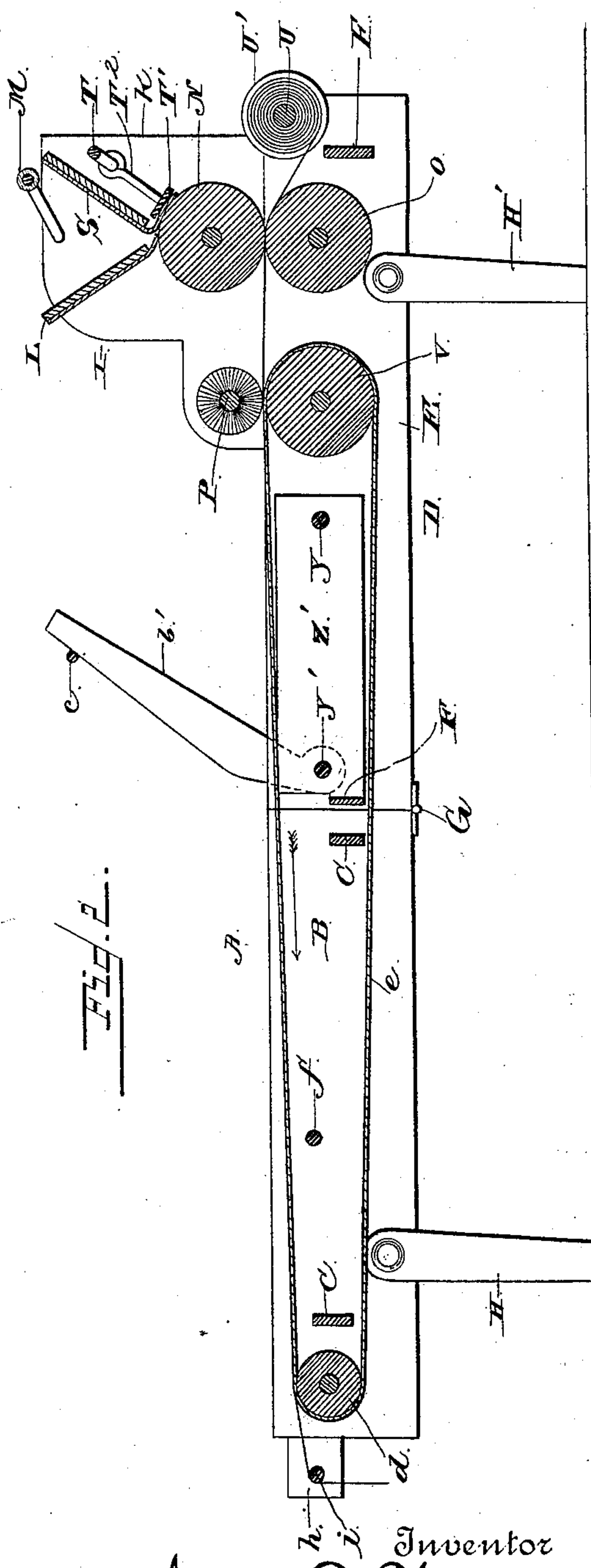
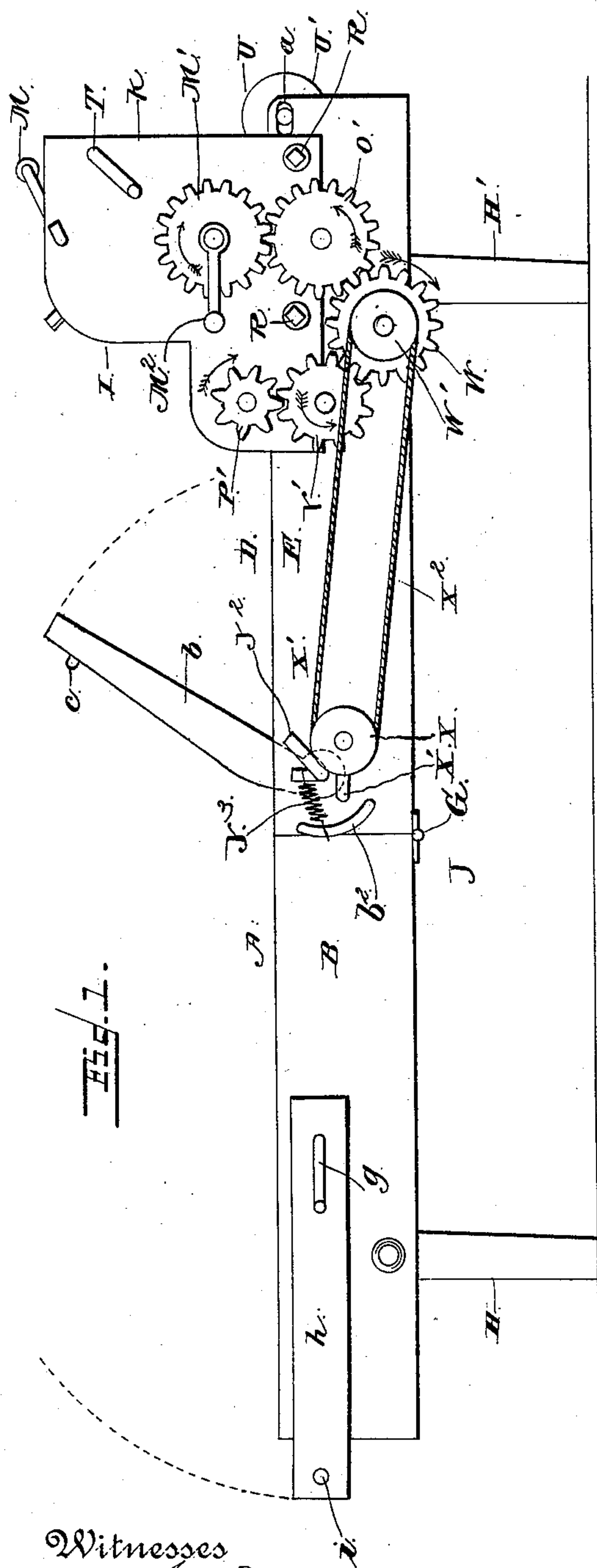
(No Model.)

2 Sheets—Sheet 1.

J. R. WATSON.  
PASTING MACHINE.

No. 359,301.

Patented Mar. 15, 1887.



Witnesses  
*M. C. Fowler*  
*J. W. James*

Inventor  
*James R. Watson*  
By his Attorneys  
*C. A. Snow & Co.*

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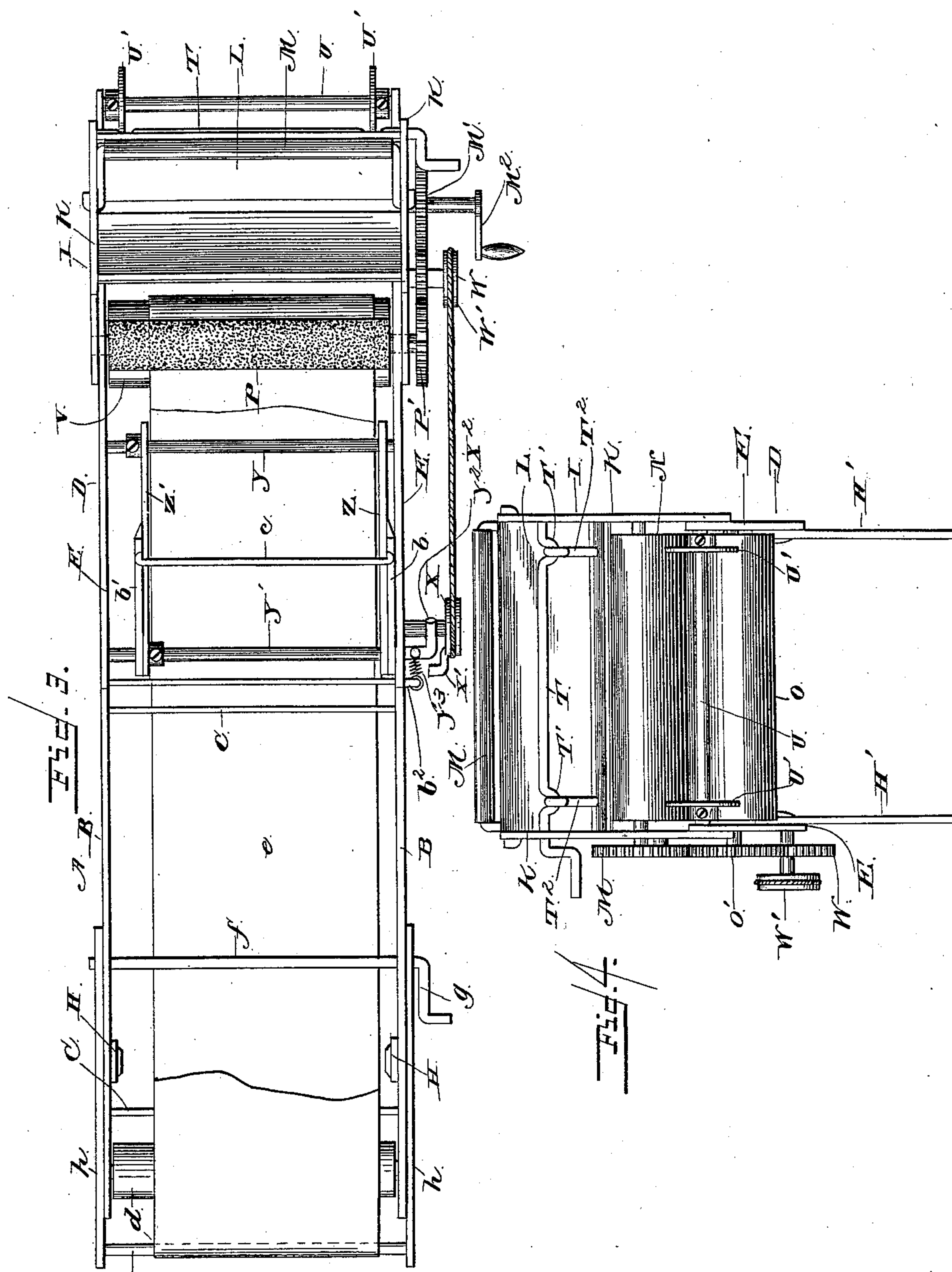
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J. R. WATSON.

## PASTING MACHINE.

No. 359,301.

Patented Mar. 15, 1887.



Witnesses

M. E. Fowler  
J. W. Garner

Inventor

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# UNITED STATES PATENT OFFICE.

JAMES ROBERT WATSON, OF BUENA VISTA, COLORADO.

## PASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 359,301, dated March 15, 1887.

Application filed September 10, 1886. Serial No. 213,250. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES ROBERT WATSON, a citizen of the United States, residing at Buena Vista, in the county of Chaffee and State of Colorado, have invented a new and useful Improvement in Pasting-Machines, of which the following is a specification.

My invention relates to an improvement in machines for pasting wall-paper and trimming the edges thereof; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a machine embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a top plan view. Fig. 4 is a front end elevation.

A represents a frame comprising the side bars, B, and the connecting-bars C, which are arranged at the ends of the bars B. D represents a similar frame, comprising the side bars, E, and the connecting-bars F, arranged near the front and rear ends of the bars E. The said frames A and D are hinged together by means of hinges G, which are secured on their under sides at their meeting ends. To the outer end of the frame A is pivoted a pair of supporting-legs, H, and to the opposite end of the frame D is pivoted a similar pair of supporting-legs, H'.

I represents a frame, which comprises the sides K, connected together at their upper sides by an inclined V-shaped trough or hopper, L. The sides of the said hopper converge downwardly, and between the lower edges of the said sides is formed a discharge-opening, which extends entirely across the hopper from side to side of the frame I.

M represents a bail or handle, which is pivoted to the upper edges of the sides of the frame I, and by means of which the said frame may be readily carried about.

N represents a pasting-roller, which is journaled in the sides of the frame I and is directly below the hopper. The axis of the said pasting-roller projects beyond one side of the frame I, and to it is secured a gear-wheel, M', and a crank, M<sup>2</sup>. Immediately below the pasting-roller is journaled a feed-roller, O, which

is likewise provided with a projecting spindle on one side, to which is attached a gear-wheel, O', that meshes with the wheel M'.

P represents a roller, which is journaled in the sides of the frame I, in rear of the roller N, and the face of the said roller P is provided with bristles, as shown. One end of the axis of the roller P projects beyond one side of the frame I, and to it is secured a gear-wheel, P', which is of smaller diameter than the wheels N' and O'.

R represents a series of set screws or bolts, by means of which the frame I may be attached to the front end of the frame A. A cloth, S, is secured on the inner sides of the hopper, and its lower edge extends down through the discharge-opening of the hopper and bears upon the front upper side of the roller N.

T represents a rock-shaft, which is journaled between the sides of the frame I, at the front upper corner thereof. The said rock-shaft is provided with cranks, to which is attached a presser-bar, T', by means of rods T<sup>2</sup>.

It will be readily understood that by partly rotating the shaft T the presser-bar may be caused to press the free edge or flap of the cloth S against the front upper side of the roller N with any desired degree of force.

In the extreme front end of the frame A, in open slots *a*, which are made in the sides of the said frame, is journaled a drum or roller, U, comprising a shaft having circular disks or heads U', which are secured to the said shaft by means of set-screws, and are adapted to be adjusted on the shaft toward or from each other.

V represents a roller, which is journaled in the sides of the frame near the front end of the latter, and arranged under the roller P of the frame I when the said frame is attached to the front end of the frame A. The roller V has one end of its shaft or axle projecting beyond one side of the frame A, and provided with a gear-wheel, V', which meshes with the small gear-wheel P' of the roller P.

W represents a gear-wheel, which is journaled on a spindle that projects from one side of the frame A and meshes with the wheels V' and O', and formed integrally with the said gear-wheel W, or secured thereto and rotating



therewith, is a pulley,  $W'$ . Near the inner end of the frame A, on the same side with the wheel W, is journaled a pulley, X, which is provided on its inner side with a tappet-pin,  $X'$ . The said pulley X is connected to the pulley  $W'$  by an endless belt,  $X^2$ .

$Y$   $Y'$  represent a pair of transverse rods, which connect the sides of the frame A. The rod  $Y$  is arranged slightly in rear of the roller V, and the rod  $Y'$  is arranged near the inner end of the frame A.

$Z$  and  $Z'$  represent longitudinal plates which connect the rods  $Y$  and  $Y'$ . The plate  $Z$  is rigidly secured to the said rods, parallel with and in close proximity to one side of the frame A, and the plate  $Z'$  is adapted to slide on the said rods toward or from the opposite side of the frame A, and is provided with set-screws by means of which it may be secured to the rods at any desired lateral adjustment. The upper edges of the plates  $Z$  and  $Z'$  are beveled outwardly and sharpened.

$b$  represents a cutting-blade, which is journaled on the shaft  $Y'$ , between the plate  $Z$  and the adjacent side of the frame A.  $b'$  represents a similar cutting-blade, which is secured to the shaft  $Y'$ , on the outer side of the plate  $Z'$ , and is adapted to be adjusted laterally with the said plate, and is provided with a set-screw by means of which it may be clamped to the rod  $Y'$ . A rod,  $c$ , connects the free ends of the blades  $b$  and  $b'$  together. The rod  $Y'$  forms a shaft, which is journaled in the sides of the frame A and is adapted to rock, and one end of the said shaft is provided with a tappet-arm,  $Y^2$ , which is adapted to be engaged by the tappet-pin  $X'$  of the pulley X. A spring,  $Y^3$ , is attached to the rock-shaft  $Y'$ , and the outer end of the said spring is attached to a circular rack-bar,  $b^2$ , that is secured to the inner end of the frame A. The front lower edges of the knives  $b$  and  $b'$  are beveled and sharpened.

From the foregoing description it will be readily understood that the spring  $Y^3$  acts upon the rock-shaft  $Y'$  in such a manner as to cause the cutting-knives to normally open from the cutting-edges of the plates  $Z$  and  $Z'$ , and that when the pulley X is rotated the tappet-pin thereon strikes against the tappet-arm of the rock-shaft, thus causing the latter to close the cutting-blades, and as soon as the tappet-pin passes beyond the tappet-arms the spring returns the cutting-blades to their initial position.

At the outer end of the frame A is journaled a roller,  $d$ , which is connected to the roller V by an endless carrier-apron,  $e$ .

$f$  represents a rock-shaft, which is journaled in the sides of the frame D, near the center thereof, and one end of the said rock-shaft is provided with a crank,  $g$ .  $h$  represents rocking arms, which bear against the outer sides of the frame D and are attached to the rock-shaft  $f$ , and the outer ends of the said rocking arms are connected together by means of a transverse rod,  $i$ . The rocking arms  $h$  are sufficient in length to enable the rod  $i$  to clear

the outer end of the frame D, and thus the rocking arms  $h$  are free to be swung through nearly half a circle.

The operation of my invention is as follows: The roll of wall-paper to be pasted is placed on the drum U, and the heads or disks of the said drum are adjusted so as to bear against the ends of the roll of paper. The free end of the paper is first passed between the rollers N and O and from thence between the rollers V and P, the free end of the roll of paper being thus placed on the upper side of the conveying-apron at the front end thereof. A quantity of suitable paste is placed in the hopper L and the cloth S soon becomes saturated with the paste, and the paste is fed through the discharge-opening in the hopper onto the roller N as it passes under the hopper. By rotating the crank  $M^2$  in the direction indicated by the arrow in Fig. 1, the various rollers hereinbefore described, being geared together, are rotated, so as to cause the endless carrier-apron to travel toward the outer end of the frame D, as indicated by the arrow in Fig. 2, and thus unroll the paper from the drum U. As the face of the roller N passes the discharge end of the hopper, paste is applied thereto by the cloth S and the presser-bar hereinbefore described, the function of the latter being to regulate the quantity of paste that is applied to the roller N, and the latter transfers the paste to one side of the paper. As the wheel  $B'$  is smaller than the wheel  $V'$ , with which it gears, it will be noted that the roller P is rotated at a higher rate of speed than the other rollers, and as the said roller P has its surface provided with bristles the same serve to spread the paste evenly over the surface of the roll of paper as it passes under the said roller, thus causing every portion of the paper to be covered with a thin film of paste. The plates  $Z$  and  $Z'$  and the rocking cutting-knives  $b$  and  $b'$  are adjusted to the correct distance apart, and the edges of the roll of paper are caused to pass between the cutting-edges of the said knives and plates. As the cutting-knives alternately open and close against the cutting-edges of the plates, it will be readily understood that the edges of the roll of paper are trimmed simultaneously with the operation of pasting the same, and the paper is thus placed in condition to be applied to the wall.

If it is not desired to trim the edges of the paper, the plate  $Z'$  and the knife  $b'$  are adjusted laterally out of the path of the roll of paper. As the paper is conveyed toward the outer end of the frame D by the conveying-apron, it passes over the cross-bar  $i$  at the outer ends of the rocking arms  $h$ . When a sufficient length of paper has passed beyond the said bar  $i$ , the rocking arms are moved through half a circle by means of the crank  $g$ , thereby causing the bar  $i$  to double the free end of the paper over upon that portion of the paper on the carrier-apron, thus folding the paper with its pasted sides in contact with each other, and



preventing the paste from drying on the paper before it is applied to the wall.

By pivoting the supporting-legs to the frames A and D they may be folded upwardly against the sides of the said frames out of the way, and by hinging the said frames together they may be folded one under the other, thus enabling the machine to be packed in a very small space and rendering it easily transportable.

Having thus described my invention, I claim—

1. In a machine for pasting wall-paper, the combination of the hopper having the feeding-cloth and the presser-bar, for the purpose set forth, the roller against which the feeding-cloth bears and to convey paste to the paper, and the rotating spreading-roller P to operate on the pasted side of the paper, substantially as described.

2. In a machine for pasting wall-paper, the combination of the fountain for the paste, the roller N on which the paste is delivered, the roller O, bearing against roller N and geared thereto, the endless conveyer geared to the rollers N and O, and the rotating spreading-roller P, bearing against the conveyer, for the purpose set forth, substantially as described.

3. In a machine for pasting wall-paper, the combination of the rotating pasting-roller N, the fountain or hopper for the paste and having the feeding-cloth S, and the presser-bar T', adapted to bear against the said feeding-cloth, for the purpose set forth, substantially as described.

4. The combination, in a machine for pasting wall-paper, of the fountain or hopper for the paste, having the feeding-cloth, the rotating roller N, against which the said feeding-cloth bears, and the rock-shaft having the crank-arms, and the pressure-bar T', connected to the said crank-arms and bearing on the free end of the feeding-cloth, for the purpose set forth, substantially as described.

5. The combination of the plates Z and Z', and the rock-shaft having the cutting-knives b and b' bearing against the sides of the plates and adjustable therewith, and means for rocking the rock-shaft, substantially as described.

6. The combination, in a machine for pasting wall-paper, of the plates Z and Z', the rock-shaft having the cutting-knives adapted to bear against the sides of the said plates, the said rock-shafts being provided with the tappet-arms and the spring to normally open the cutting-knives from the plates, and the wheel X, having the tappet-pin X', adapted to strike the tappet-arm of the rock-shaft as it revolves, so as to close the cutting-knives against the plates, against the tension of the spring, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES ROBERT WATSON.

Witnesses:

D. F. ARNOLD,  
GEORGE HUGHES.