

E. B. CHRISTMAS.
Picture Mounting Machines.

No. 137,656.

Patented April 8, 1873.

Fig. 1.

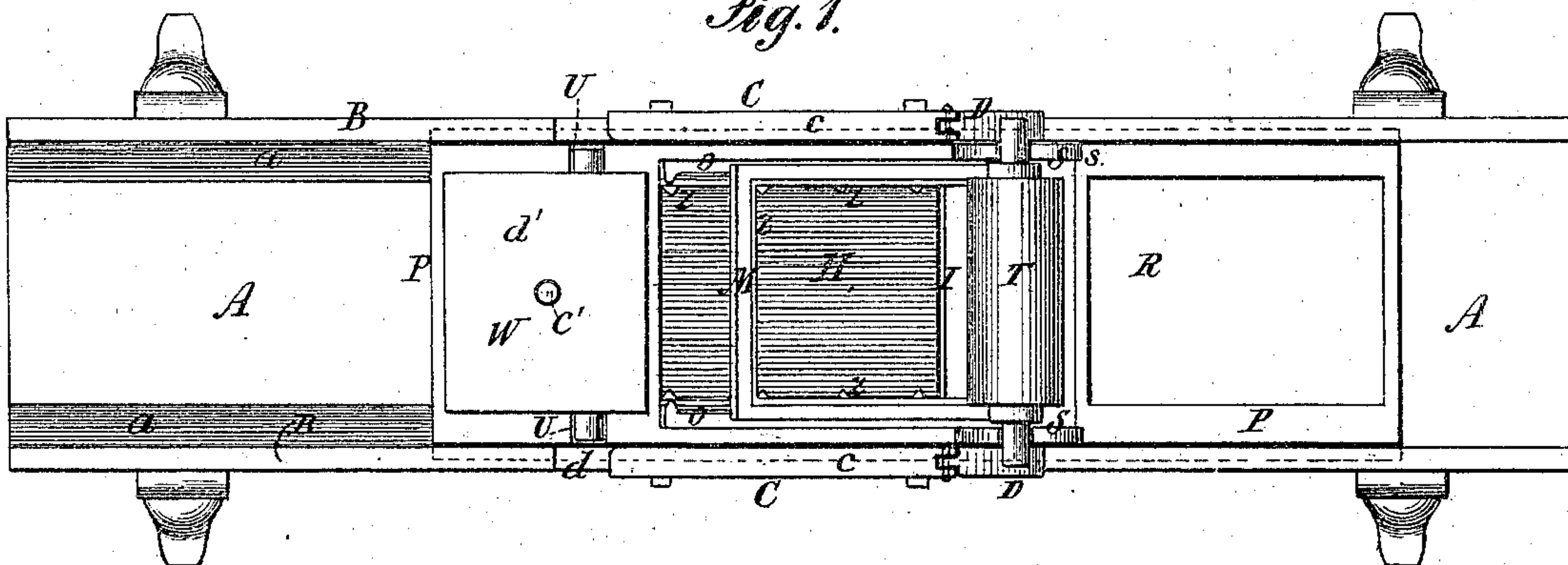


Fig. 2.

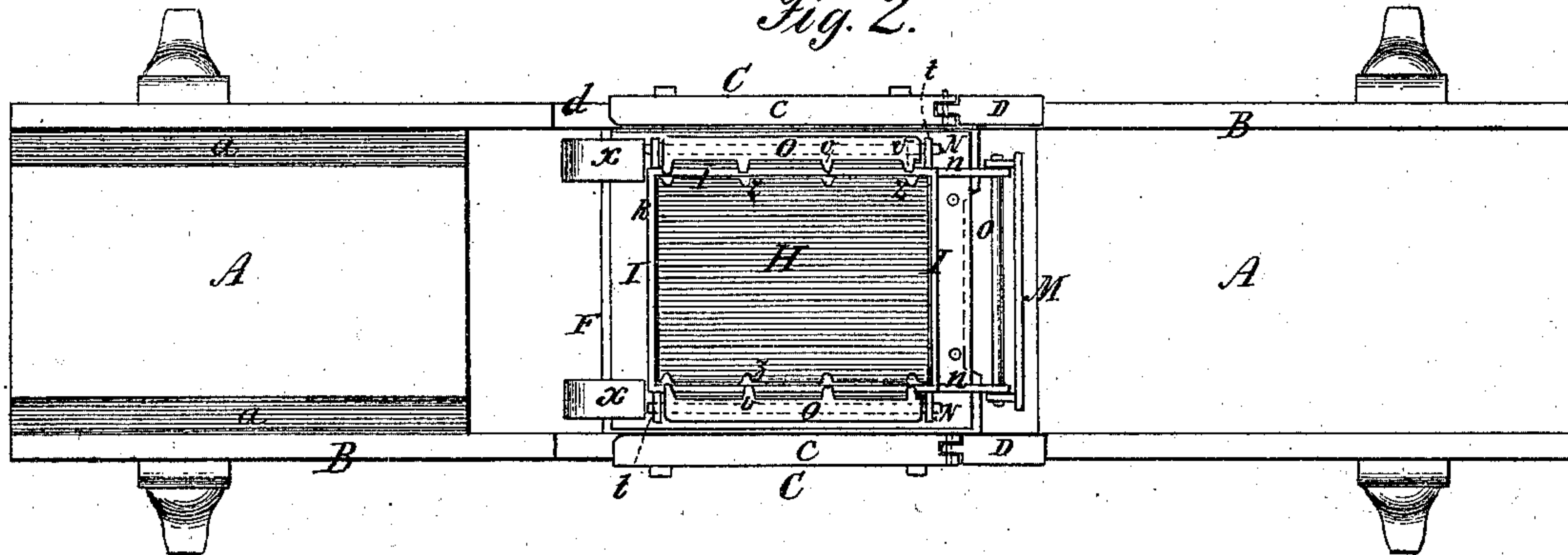
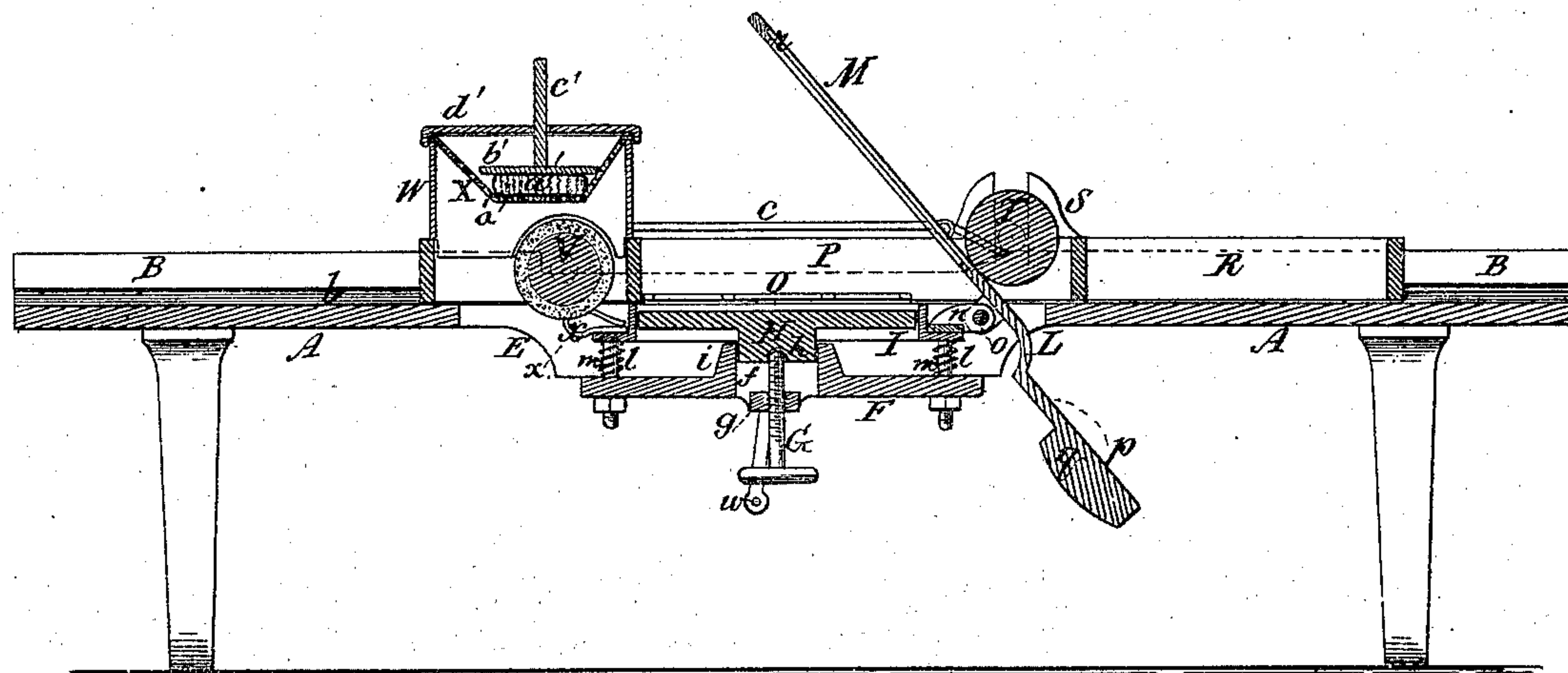


Fig. 3.



Witnesses.

A. Ruppert.

[Signature]

Inventor.

Edmund B. Christmas

by his attorney Cox & Cox

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Fig. 4.

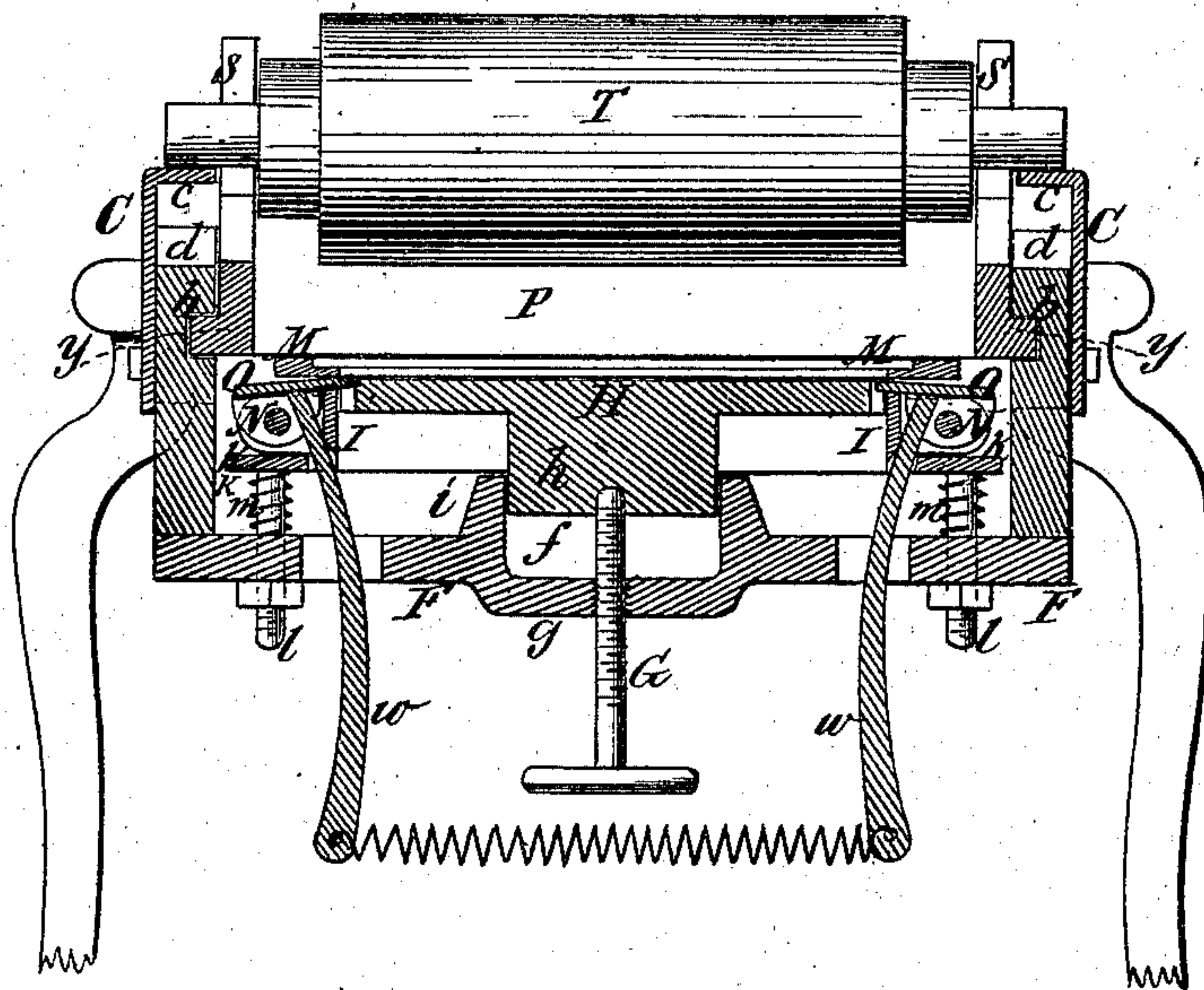


Fig. 5.

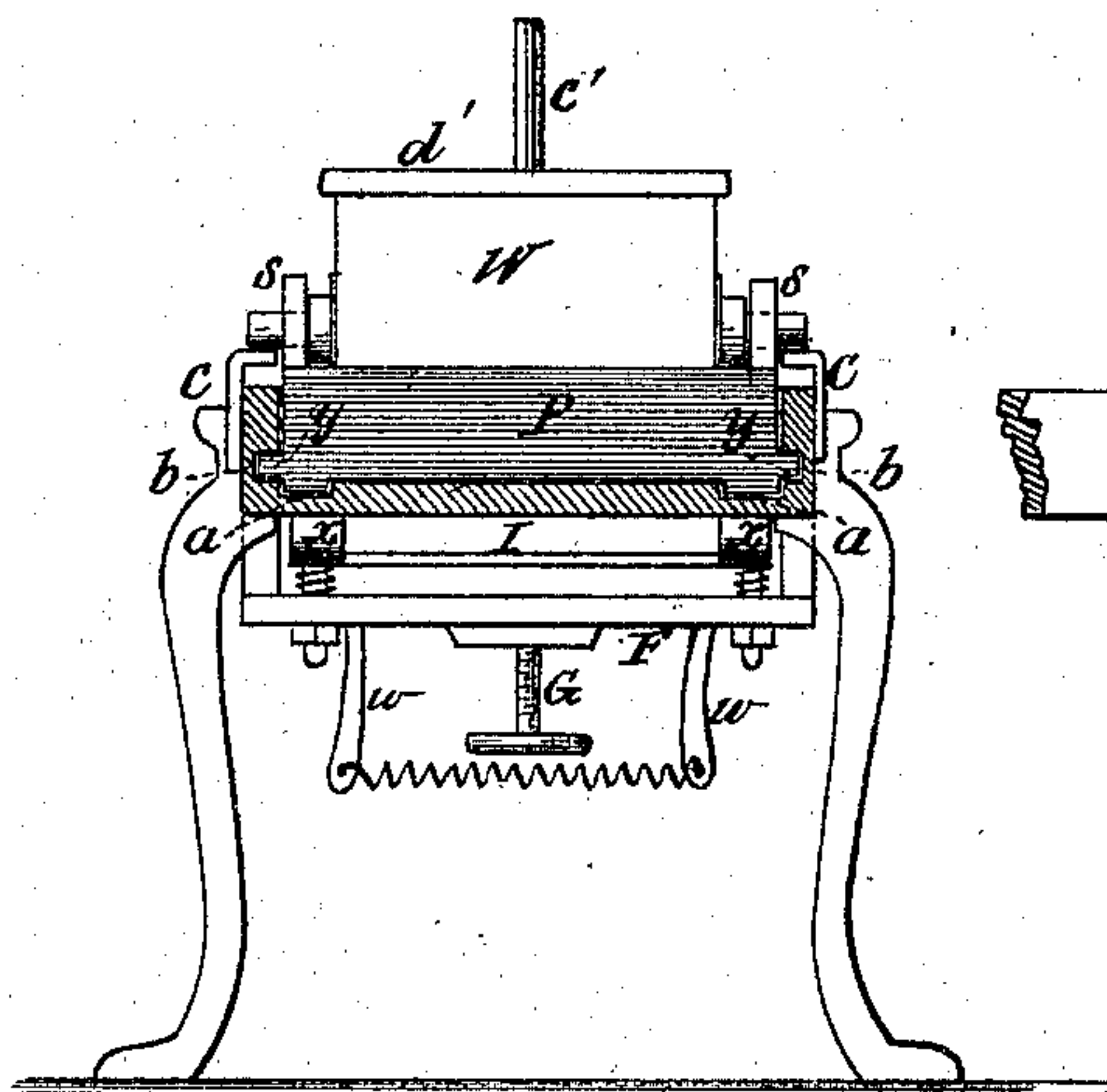
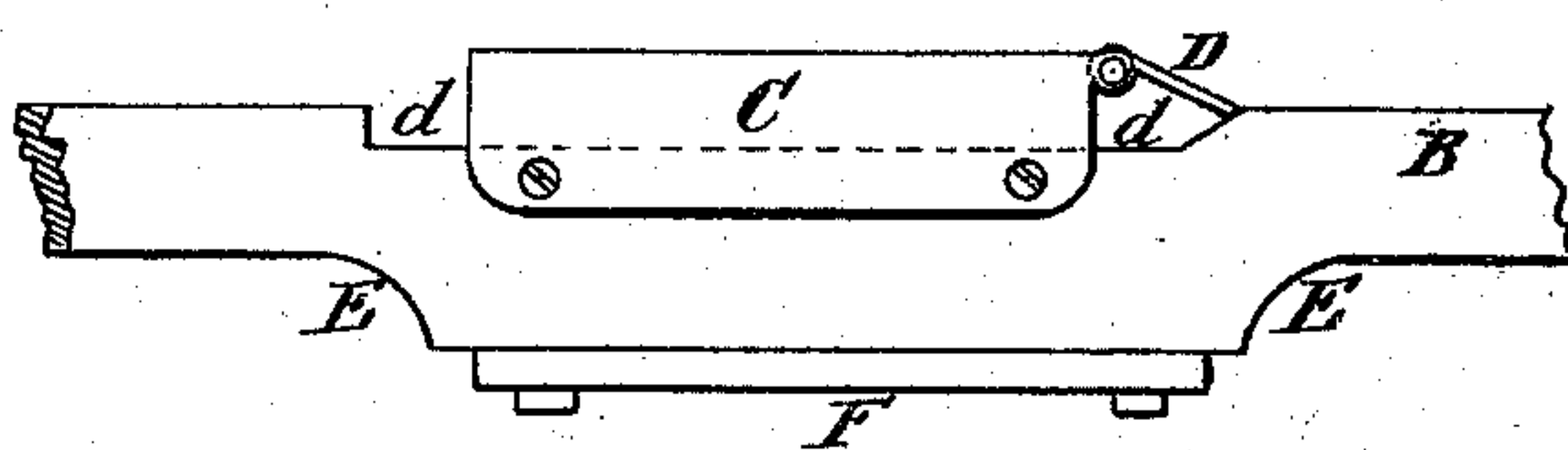


Fig. 6.



Witnesses.
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UNITED STATES PATENT OFFICE.

EDMUND B. CHRISTMAS, OF MANSFIELD, OHIO.

IMPROVEMENT IN PICTURE-MOUNTING MACHINES.

Specification forming part of Letters Patent No. 137,656, dated April 8, 1873; application filed January 15, 1873.

To all whom it may concern:

Be it known that I, E. B. CHRISTMAS, of Mansfield, in the State of Ohio, have invented certain new and useful Improvements in Machines for Mounting Pictures, of which the following is a description, reference being had to the accompanying drawing.

Nature and Objects of the Invention.

The invention relates to a table provided with an automatic beveled rack and a platform encompassed by a frame, within which the pictures are placed face downward, and are held in position by means of toothed strips, which operate to release one picture at the proper time, the rack being so placed that when in its depressed position it lies above the frame, about the platform. In conjunction with the above is provided a tray having a gummer which gums the upper picture as the tray moves forward, by which movement the automatic rack is forced into its depressed position, and the movement of the tray being continued until a card is deposited in the bevel of the rack from a receiver in the rear of the tray. The presser-roller, working in an open journal at the center of the tray, is elevated by inclines upon, and moves over, a raised guide-way on the sides of the table until the card is deposited as aforesaid, when the presser-roller falls to a proper position, and, the reverse movement of the tray being continued, passes over the card in the rack, pressing it firmly upon the gummed surface of the picture. When the presser-roller has cleared the rack the latter rises and the card with the picture attached is thrown from the bevel in the rack, sliding over its upper surface downward below the table. The object of the invention is to provide an efficient means of mounting pictures and photographs.

Description of the Accompanying Drawing.

Figure 1 is a plan or top view of a device embodying the elements of the invention. Fig. 2 is a similar view of same with the frame M removed. Fig. 3 is a longitudinal central vertical section of same. Fig. 4 is a lateral central vertical section of same. Fig. 5 is a lateral section of same between the frame W and the end of the device. Fig. 6 is a de-

tached view of the central portion of the side B.

General Description.

A in the accompanying drawing is the bed of a table, properly elevated and provided with the horizontal groove *a* and the raised sides B, in the base of the inside of which are formed the vertical grooves *b*. At the center of the bed A is provided an aperture of proper dimensions on those parts of the sides B adjacent which are secured the raised guides C, provided with the ledges *c* projecting over the upper surfaces of the sides B, which are at this point reduced by the recess *d*, having one end vertical and the other inclined upward. The guides C at one end are separated a proper distance from the vertical faces of the recess *d*, and at the other ends are provided with the hinged inclines D, the specific gravity of which keeps their ends opposite the hinge in contact with the upper part of the inclined face of the recess, with which the ends of inclines are reduced to correspond. On the lower edges of the sides B, opposite the recess *d*, are provided the swells E, which depend a proper distance below the general plane of the bottom edges of the sides B, and are connected by the plate F, leaving a proper opening between each end of the plate and the ends of the aperture in the bed A. The center of the plate F is provided with the aperture *f* having the bridge *g*, the center of which is furnished with a threaded aperture, through which passes the screw of the set-screw G, the upper end of which acts upon the platform H, which is provided on its sides with the recesses *z*, and at the center of its under surface with the block *h*, having an aperture in its center to receive the end of the set-screw G. A coiled spring may be placed about the set-screw G, having its lower portion in contact with the bridge *g*, its upper in contact with the lower surface of the block *h* on the platform H, so as to give the latter an upward and yielding pressure. Immediately above and encompassing the aperture *f* is provided the frame *i*, into which the block *h* fits smoothly, and which operates as a guide therefor. The frame I is placed above the plate F between the inner sides of the swells E, and has in its center an aperture

into which the sides of the platform H fit smoothly. This aperture is surrounded by a vertical sill of proper dimensions, about which the frame I is flat, and provided at each corner with screw-bolts *l* passing through spiral springs *m*, the lower parts of which rest upon the upper surface of the plate F, serving to secure the plate and frame together, at the same time to give the other a springy bearing. To one end of the frame I are secured the ears *n*, in which is journaled at each end the shaft *o*, rigidly secured to the lower sill of the automatic rack L, one end of which is provided with an arm, *p*, which projects downward and backward behind the rear side of the plate F, and is provided with a weight, *q*, of such gravity as to overbalance the frame M, which forms the other portion of the rack L. The center of the frame M is provided with an aperture of the same internal dimensions as the exterior area of the platform H, the rack being so hung that when in its depressed position the planes of the interior sides of the aperture in the frame correspond with the planes of the exterior sides of the platform H, and the horizontal surface of the bevel *r* with the upper surface of the platform H. The frame M about the aperture at its center is provided with a bevel, *r*, of proper depth and dimensions to contain the card upon which the picture is to be mounted. The bars N are secured between the ears *t* on the sides of the frame I besides the sill *k*, upon which rods the toothed strips O vibrate in such manner that when forced down the teeth *v* project a proper distance over the sill, and within the recesses *z* in the platform H. The strips O are provided on their under sides with the arms *w* depending downward and toward each other through apertures in the plate F, their lower extremities being attached by a spring or other elastic attachment, so as to elevate the toothed edges of the strips O. The rear end of the platform I is provided with the arched bumper-springs *x* having an upward tension to secure the shock of the presser-roller when it descends. The tray P is an open frame provided on the lower parts of its sides with the tongues *y* fitting smoothly in the grooves *a*, and so arranged that the lower sides of the tray are in close impact with the upper surface of the bed A. The tray is provided at its extreme end with the card-receiver R, in front of which the sides of the tray are provided with the open-slotted journals S, in which the presser-roller T operates. The extreme front of the tray is occupied by another apartment having the slotted journals U cut in the sides of the tray, in which operates the gummer-roller V having a surface composed of any suitable material. Above the gummer-roller V and resting upon the front and rear sides of the apartment adjacent the gummer-roller is placed the box W provided with the perforated rack X, which is sustained at each end by a ledge fitting over the tops of the ends of the box. In this rack is placed a sponge, *a'*, or

other suitable material saturated with adhesive matter, which is expressed therefrom by the action of the presser-foot *b'*, which is provided at its center with the standard *c'* projecting vertically through an aperture in the detachable cover *d'* fitting snugly over the upper part of the box W.

Operation.

The platform H is set at the proper height, according to the number of pictures to be mounted, which are placed upon the platform face downward, and with their edges under the teeth on the strips O. The card-receiver R being supplied with the requisite number of cards, and a proper amount of the adhesive material forced through the perforated rack X by pressure upon the standard *c'*, the tray P is now drawn to position, as shown in Fig. 1. Thus the gummer-roller V passes over the back of the upper picture on the platform H, and distributes the paste thereon. The tray is now forced from rear to front. The front portion of the card-receiver R now comes in contact with the rack L, forcing it into a horizontal position, and at the same time crowding down the frame I, strips O, and bumper-springs *x*, whereby the upper surface of the platform is brought on a level with the horizontal surfaces of the bevel *r*. This position continues until the card-receiver R comes immediately above the bevel, when the lowest card thereon is dropped into the bevel and held therein by the paste upon the upper picture, the teeth of the strips O holding the picture down on the platform. Contemporaneously the presser-roller T rides up the inclines D and over the guides C, rising in its slotted journals S, and thus passes above and clear of the rack L and card. This continues until the roller T reaches the end of the guides C, when it falls upon the bumper-springs *x* and comes in contact with the vertical sides of the recess *d*, which prevents further movement of the tray P in the above manner. The movement of the tray is now reversed. The axles of the presser-roller T now move upon the horizontal surface of the recess *d*, whereby the face of roller T comes in contact with the upper surface of the card in the bevel *r* of the rack L, pressing that portion of the card above the aperture in the rack firmly down upon the upper picture on the platform H, and keeping the rack and the toothed strips O in a horizontal position. As the presser-roller T passes over the rack the weight *q* at its other end, which has been elevated by the action of the tray P and the weight of the presser-roller T, now begins to operate, causing the rack to rise, when, as the roller clears it, riding up the inclined edge of the recess and throwing up the inclines D, it is suddenly elevated with a jar, whereby the card in the bevel *r* with the picture attached is dislodged, and, slipping over the rack, descends below the bed A; for, as the rack L rises, the toothed strips O are elevated by the action of

the elastic cord or spring connecting the extremities of the arms *w*, thus allowing the picture adhering to the card to be removed with it as the rack rises.

Claims.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The tray P provided with the card-receiver R, presser-roller T, and gummer-roller V, substantially as shown and described.
2. The guides C provided with the hinged inclines D, in combination with the presser-roller T, substantially as shown and described.
3. The recess *d*, having one end vertical and the other inclined, in combination with the guides C provided with the inclines D, substantially as shown and described.
4. The box W provided with the perforated rack X, presser-foot *b'*, standard *c'*, and gummer-roller V, substantially as shown and described.
5. The toothed strips O provided with the arms *w*, connected by an elastic cord or spring, substantially as shown and described.
6. The platform H, in combination with the strips O, substantially as shown and described.
7. The platform H, in combination with the sill *k* and strips O, substantially as shown and described.
8. The platform H, in combination with the rack L, substantially as shown and described.

9. The combination of the card-receiver R and rack L, substantially as shown and described.

10. The combination of the tray P with the rack L, substantially as shown and described.

11. The guides C provided with the inclines D, in combination with the recess *d* and presser-roller T, substantially as shown and described.

12. The guides C provided with the inclines D, in combination with the rack L and presser-roller T, substantially as shown and described.

13. The frame I provided with the screw-bolts *l* and springs *m*, strips O, bumper-springs *x*, substantially as shown and described.

14. The frame I, in combination with the rack L and tray P, substantially as shown and described.

15. The frame I, in combination with the rack L, tray P, and gummer-roller V, substantially as shown and described.

In testimony that I claim the foregoing improvement in machines for mounting pictures, as above described, I have hereunto set my hand and seal this 27th day of December, 1872.

EDMUND B. CHRISTMAS. [L. S.]

Witnesses:

J. R. BRISTO,
T. E. BARRON.