

(No Model.)

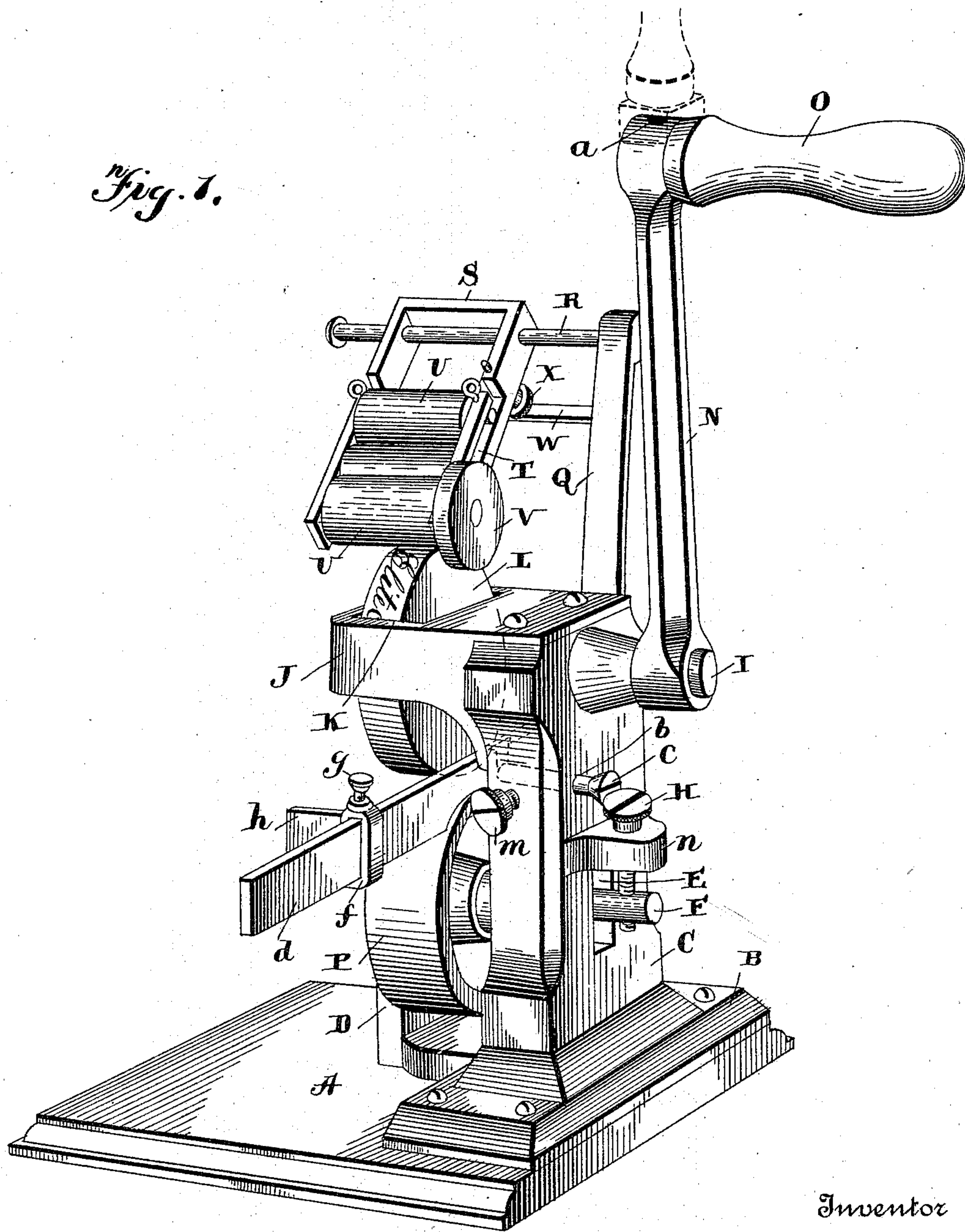
2 Sheets—Sheet 1.

O. C. HALE.
MACHINE FOR EMBOSSEING CARDS.

No. 573,407.

Patented Dec. 15, 1896.

Fig. 1.



Witnesses
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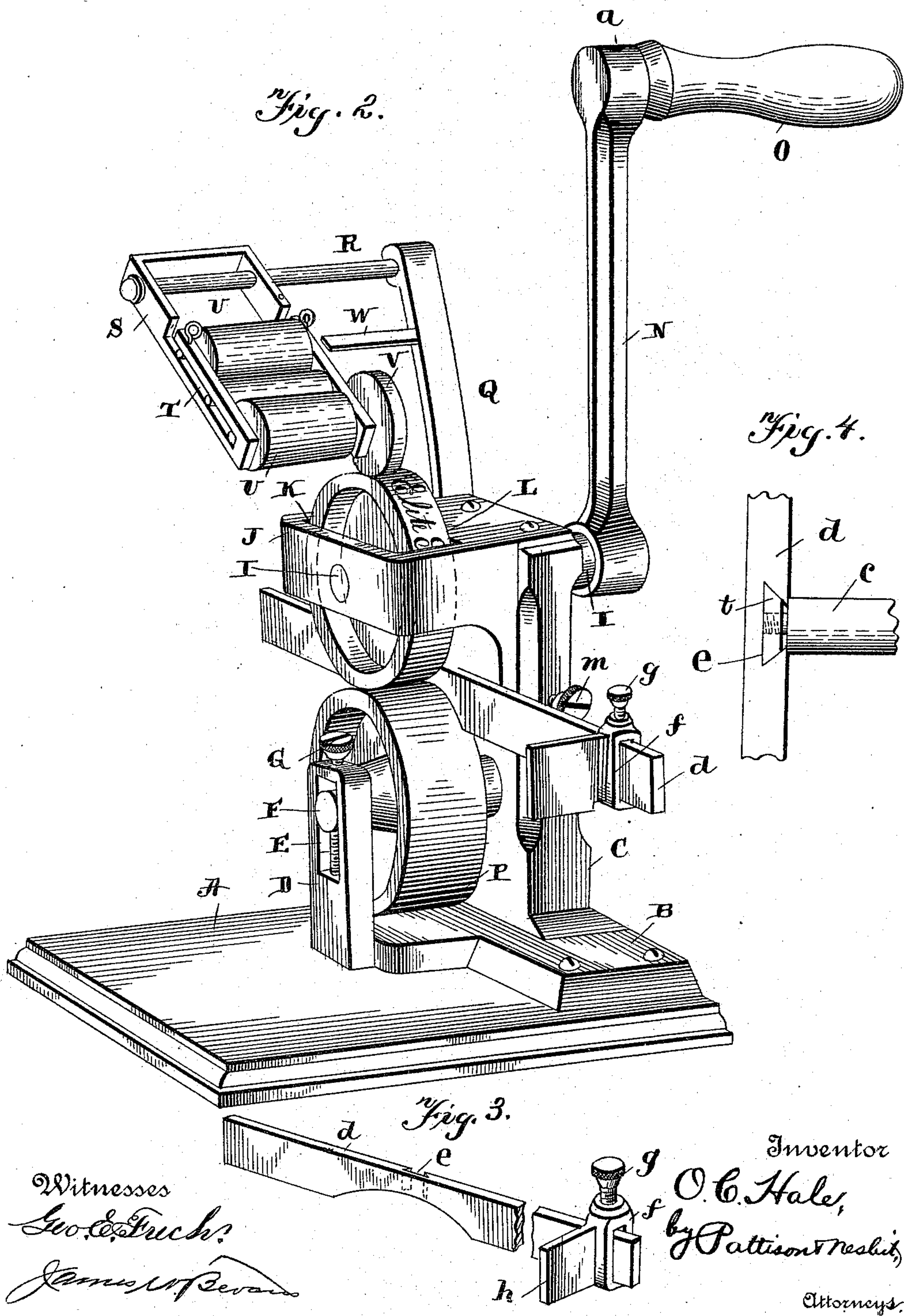
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UNITED STATES PATENT OFFICE.

ORLANDO C. HALE, OF CINCINNATI, OHIO.

MACHINE FOR EMBOSSING CARDS.

SPECIFICATION forming part of Letters Patent No. 573,407, dated December 15, 1896.

Application filed October 28, 1895. Serial No. 567,144. (No model.)

To all whom it may concern:

Be it known that I, ORLANDO C. HALE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Embossing - Machines; and I 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in embossing-machines; and it consists in the construction and arrangement of parts which will be fully described hereinafter and particularly pointed out in the claims.

The object of my invention is to provide a simple and effective embossing - machine adapted to be used by individual photographers for impressing their name, address, design, or other character upon the mount by simply passing it through the machine.

In the accompanying drawings, Figure 1 is a perspective view of an embossing-machine embodying my invention, looking at the same from the outer side thereof. Fig. 2 is a similar view looking at the same from the inner side thereof. Fig. 3 is a detached perspective view of the guides for the mounts. Fig. 4 is a view showing the rod for supporting this guide and the manner in which the same is adjustably held.

A represents a base of any desired material and of any desired form, and B a casting secured to the base, the said casting having at its outer side an upwardly-projecting standard C and at its inner side a short vertical standard D. Each of these standards has registering or corresponding vertical openings E, through which a horizontal shaft F loosely passes, the said shaft adapted to receive and support an impression-roll P. The inner end of this shaft F is held in vertical adjustment by means of a screw G passing through the upper end of the standard D, through the end of the shaft F, and having its lower end resting upon the lower wall of the opening E, made in said standard D. By this arrangement it will be seen that the turning of the said screw will effect the vertical adjustment of the inner end of the shaft F for the purpose to be

presently described. The opposite and outer end of the shaft F is held in vertical adjustment by means of a screw H, which passes through a bracket *n* and through the shaft F, the same being screw-threaded, as shown. The vertical adjustment of this end of the shaft is effected likewise by the turning of the screw H, as will be readily understood.

Passing through the upper end of standard C is a shaft I, carrying a type or printing roller L, which roller is provided with the characters which it is desired to impress in the card or mount. A bracket J is rigidly connected to the standards C and provided for supporting the inner end of the shaft I, and this bracket is provided with an opening K, in which the type or printing wheel is held freely rotatable. This arrangement effects a perfect and thorough support for the shaft I, as will be readily understood. The bracket, as shown, is wider than the diameter of the printing-roller, so that the bracket surrounds the roller, making a more rigid support therefor.

The inking apparatus consists of an upwardly-extending arm Q from the standard C, carrying an inwardly-extending horizontal rod R, upon which the upper end of an inking-frame S is pivoted, and which frame slides in and out upon the rod. This frame carries a series of ink-rollers U, journaled in the slots T of the frame, and the inner end of the lower roller is provided with a friction-wheel V, adapted to be rotated by the type or impression wheel L in a manner to be presently set forth.

Projecting inward from the arm Q is a horizontal rod or arm W, and the frame S is provided with an adjusting-screw X, adapted to engage this arm W when the inking-frame is in the position shown in Fig. 1, and by means of which the lower free end of the frame can be adjusted to rest with any degree of weight upon the printing-roller, as will be readily understood. The upper ends of the slots T preferably open through the edges of the frame sides, so that the rollers loose in the slots can be easily removed for cleaning, &c.

When the inking-frame is in the position shown in Fig. 1, it is adapted to ink the printing-roller, so that the embossing or impression-printing will receive either a sizing or an

inking adapted to be filled in with gold or other colors in the usual manner, as will be readily understood. If it is desired to throw the ink attachment out of operation, it is done through the adjustment of the screw X, lifting it entirely away from the printing-roller L. When the ink is applied to the inking-rollers U, the inking-frame is moved outward, as shown in Fig. 2, which brings the friction-wheel V upon the printing-roller, and by rotating the printing-roller through the medium of the handle O and crank N the inking-rollers are rotated and the ink easily distributed throughout them in the usual manner of effecting this result.

A guiding-plate *d* is provided which extends longitudinal the feed of the machine, and this guiding-plate is supported by means of a rod *c*, which passes through an opening *b*, made in the standard C. The plate *d* is provided intermediate its ends with a dovetail slot *e*, receiving a dovetailed block *t*, and this rod *c* is provided with a screw-threaded inner end adapted to enter the said dovetail block *t*. The rod *c* is held in any desired longitudinal adjustment by means of a screw *m* passing through the standard and adapted to engage it, so that the said guide can be moved in and out, that is, nearer to and farther from the printing-roller L, as may be necessary to place the impression or printing at any desired portion of the card, mount, or envelop which is to be embossed or printed.

The block *t* is capable of vertical adjustment in the dovetailed groove *e*, so that the guiding-plate *d* can be moved vertically to adapt itself to the vertical adjustment of the impression-roller P, the operation of which will be fully set forth presently. By turning the rod *c*, which is provided with a screw-head at its outer end, as shown, the said block *t* can be either tightened or loosened in the dovetailed slot *e*, and thus made to either clamp or release the plate *d*. When it is released, the plate can be moved vertically, as will be readily understood, and then by tightening the screw the plate will be held in the desired vertical adjustment. As clearly shown, the tread of the impression-roll P is wider than the tread of the printing-roll and extends inside thereof, and the guide-bar *d* is over the impression-roll, as also shown.

At the receiving end of the guide-plate *d* is a socket *f*, carrying an inwardly-projecting arm or wing *h*, said socket being adapted to move longitudinally upon the guiding-plate *d* and held in any desired adjustment by means of a thumb-screw *g*. The object of this is, together with the plate *d*, to adapt the card or mount to be printed at any desired point, so that the embossing or printing will be uniform and properly placed thereon.

The vertical adjustment of the pressure-roller P is provided to adapt it for cards or mounts or other material of different thickness. That is, if the mount is thick the distance between the pressure-roller P and the

printing-roller L must be increased, and must be diminished when the mount is thin, as will be readily perceived.

The upper end of the crank N is provided with an opening *a*, so that the handle O will be preferably placed as shown in dotted lines in Fig. 1 when the machine is being used for embossing, which will give greater power to the operator, which will be readily understood, it being only necessary to move the printing-roller throughout a portion of its circumference and not to give it a complete rotation, which will make the operation of embossing easier for the operator.

By means of a simple machine of this character individual photographers can provide themselves with means for embossing their own mounts, which they can change at will by having different printing-wheels L, and if it is desired merely to impress the characters in the mount the inking-frame is raised above the printing-roller L by means of the screw X, as before described; but if it is desired to make gold letters the inking-rollers will be provided with a sizing and the letters or embossing will be gilded in the usual manner, or if it is desired to imprint in any color the inking-rollers will be provided with that color and the printing embossed. Through a mechanism of this kind, if the embossing consists of several lines, one line can be of gilt and another simply plain embossed or made of different and alternate colors, as the tastes of the photographer may dictate.

The inner side of the machine is open and permits the mount to pass freely through, as will be readily seen, and by the medium of the guiding-plate the mount is accurately and easily placed at every passage.

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

1. An embossing-machine comprising a base having a short vertical upright, the elongated vertical upright having the horizontal extension from its upper end, the impression-roll arranged between and mounted in said two uprights and extending above the short upright, a printing-roll above the impression-roll and mounted in and extending below said lateral extension to coact with the impression-roll and so that cards of any length can be inserted from the front between said rolls and the edges thereof be caught by and carried between the rolls, a rotating handle connected with one of said rolls, an elongated horizontal guide arranged opposite the bite of the rolls and between the same and said long upright, adjustable means to shift the guide horizontally between said upright and the rolls, and an inwardly-projecting stop on the guide, substantially as shown and described.

2. An embossing-machine comprising printing and impression rolls, supports therefor, a guide therefor consisting of an elongated bar situated at a point inside the printing-roller

and extending transverse the journals of the rollers, a supporting-bar for the guide-bar supported and adjustable horizontally in the plane of the engaging surfaces of the rolls and in a line with their journals, and a laterally-projecting arm as *h* supported by the guide-bar and longitudinally adjustable thereon, substantially as shown.

3. An embossing-machine comprising printing and impression rolls, the tread of the impression-roll being below, wider than, and the roll vertically adjustable in relation to the printing-roll, a guide-bar as *d* situated over the tread of the impression-roll, a support for said guide-bar horizontally adjustably supported, the guide-bar *d* being vertically adjustable upon said support to correspond with the adjustment of the impression-roll, and supports for said rolls and said guide-bar support, substantially as described.

4. A hand-operated card-edge-embossing machine comprising in combination, the base provided with the short upright D, the long vertical upright C having the horizontal extension from its upper end provided with the slot or opening K, the impression-roll between and journaled in the uprights and extending above the short upright, the printing-roll in said slot K, and mounted in and extending below said extension to coact with the impression-roll, the crank-handle secured to the printing-roll, an arm extending up from the long upright, a swinging frame carried by said arm having inking-rolls and bearing by gravity on the printing-roll, the printing and impression rolls being so arranged as to permit free and unobstructed access to their biting edges from the front so that cards of any size can have their inner edges passed between the rolls, an elongated horizontal guide arranged behind the bite of the rolls, and a horizontally-adjustable carrier for the guide, substantially as shown and described.

5. In an embossing-machine, the combina-

tion of a vertically-rotating impression-roll, an upright extending up beside said roll and having a lateral extension, a printing-roll carried by said extension, an arm extending up from said upright, an elongated horizontal rod extending from the arm a distance above the printing-roll, a swinging depending frame above the printing-roll and of less width than the length of the rod, and at its upper end confined to slide and swing on the arm, inking-rolls in said frame, the lower inking-roll provided at one end with a friction-disk rigid therewith so that the frame can be shifted slightly on the rod and said roll raised from the printing-roll and the disk held thereon by gravity to turn the rolls and distribute the ink thereon, and by shifting the frame in the opposite direction the disk drops beside and away from the printing-roll and said inking-roll rests thereon by gravity, substantially as shown and described.

6. In an embossing-machine, the combination of supports, printing and impression rolls, a horizontal rod above the printing-roll, a depending swinging frame at the upper end swinging and movable on the rod longitudinally thereof, the frame sides having longitudinal slots, inking-rolls having their journals loosely confined in said slots, the friction-disk rigid with and at one end of the lower roll so that the lower roll or its disk will be held by the weight of the frame on the printing-roll according to the position of the frame on the rod, and an adjustable stop mechanism to limit the downward swing of the frame, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

ORLANDO C. HALE.

Witnesses:

JOHN J. CUSHING,
ORRIS P. COBB.