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E. H. Barney's Impt in Hand Stamps.

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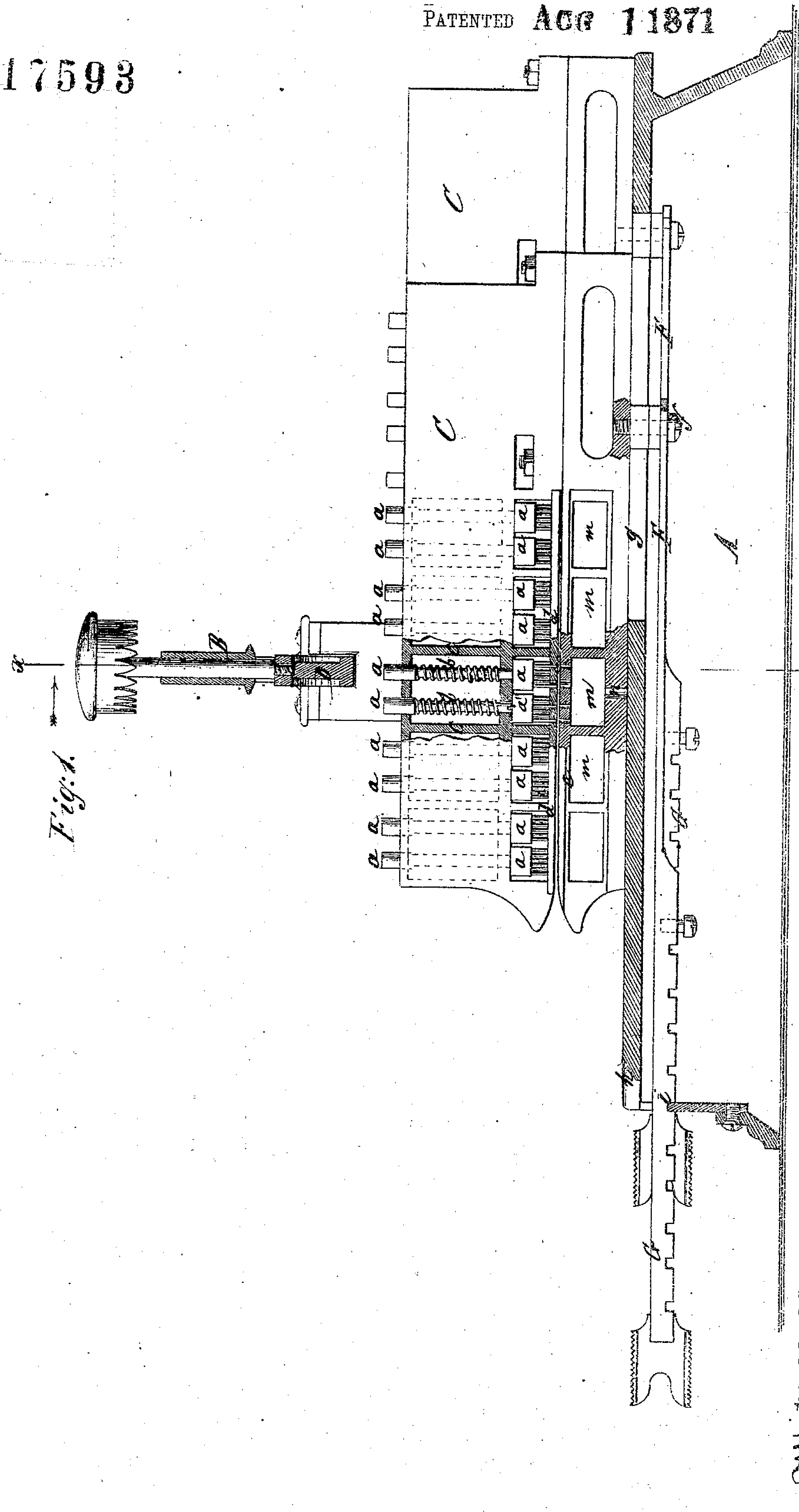

Fig. 1.

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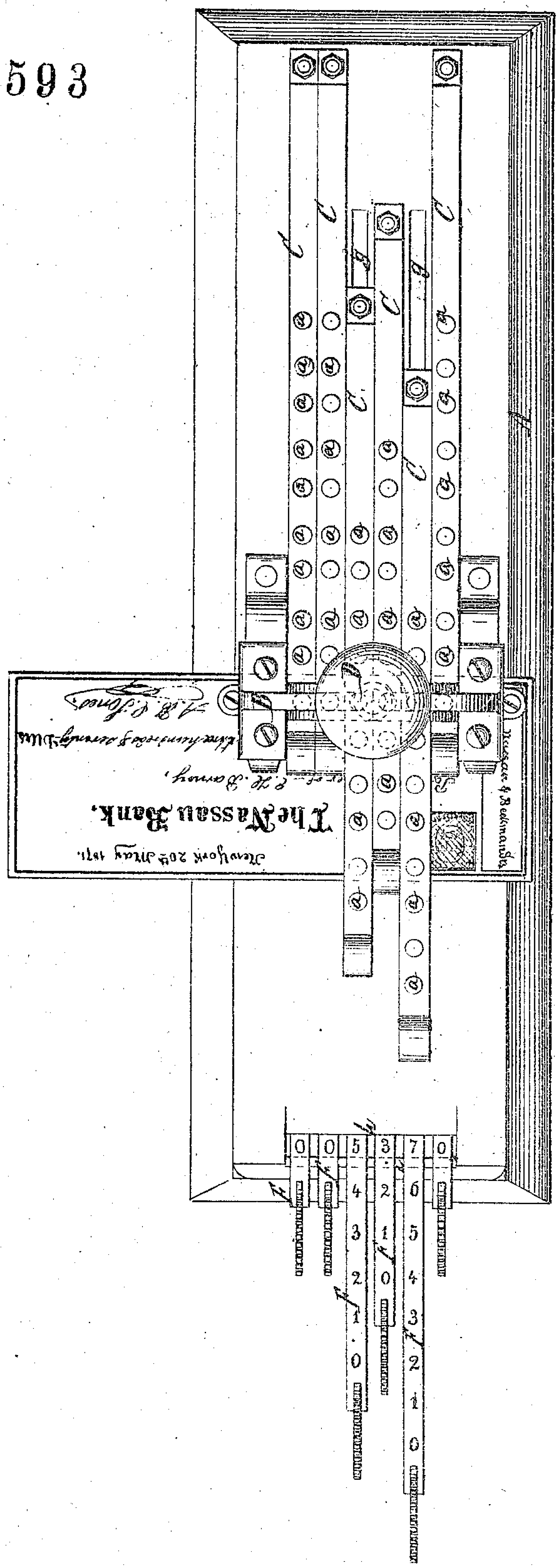

Fig. 2

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Fig. 4.

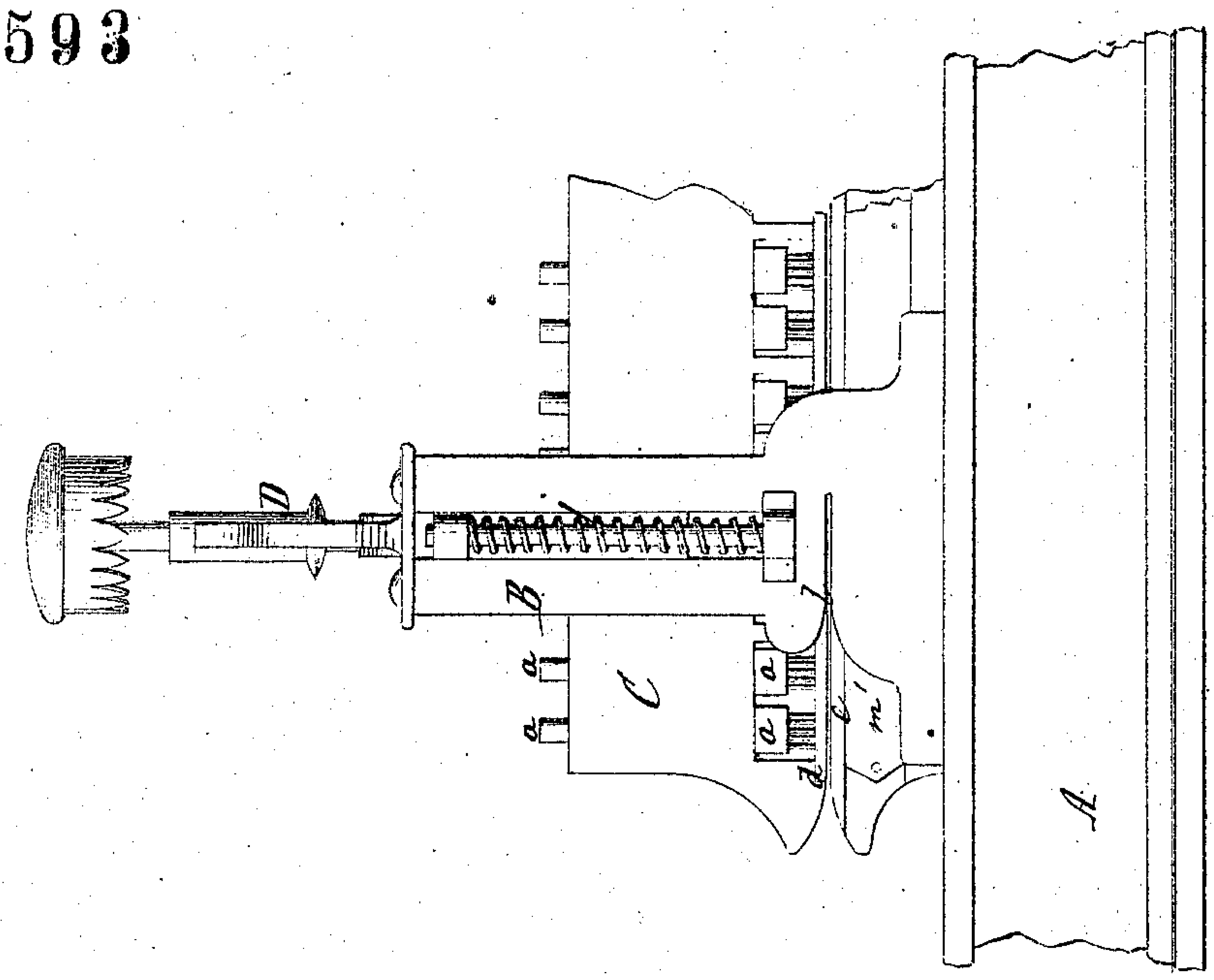
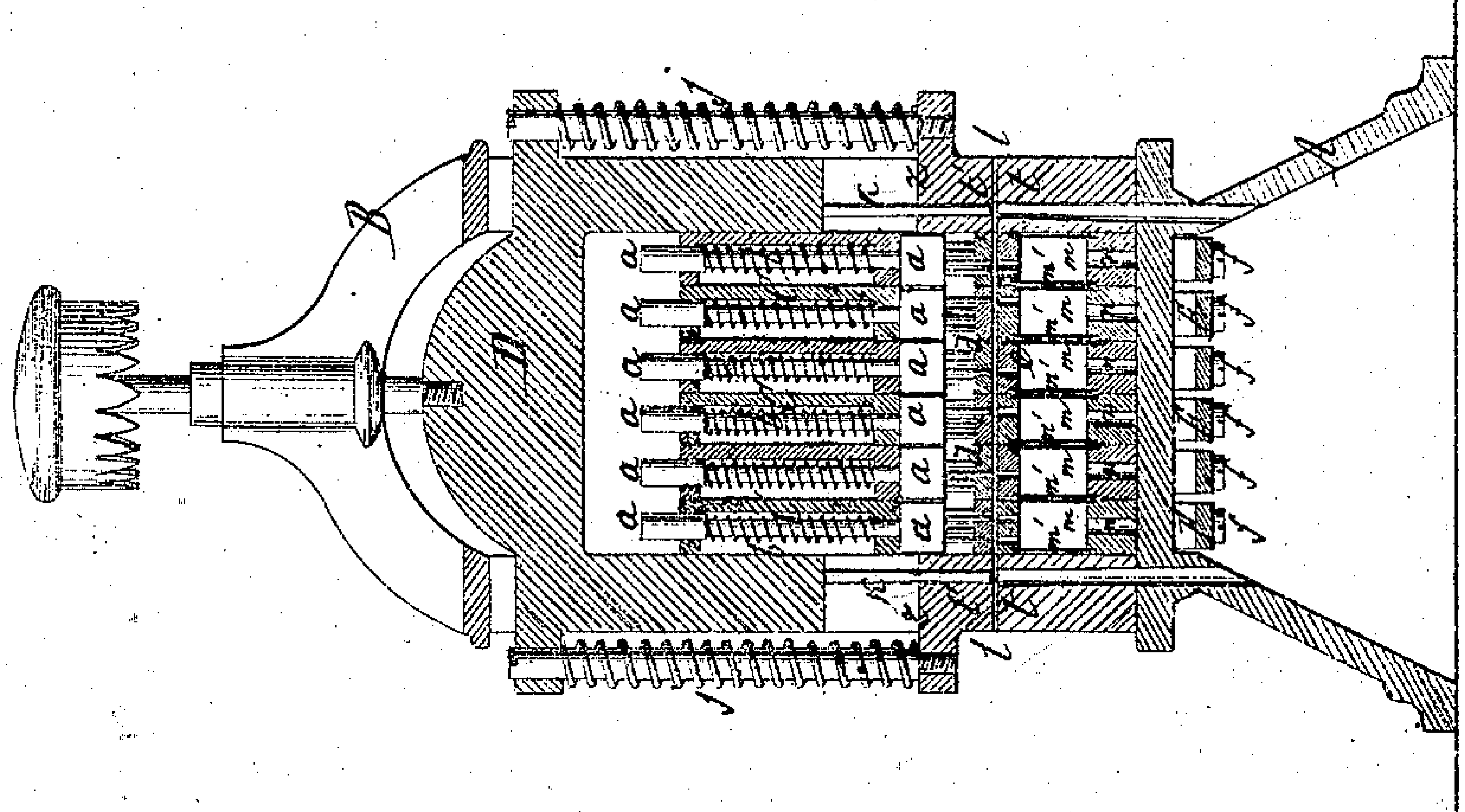


Fig. 3.



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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

EVERETT H. BARNEY, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN HAND-STAMPS.

Specification forming part of Letters Patent No. 117,593, dated August 1, 1871.

To all whom it may concern:

Be it known that I, EVERETT H. BARNEY, of Springfield, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Hand-Stamps; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a sectional side view of this invention. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 4 is a partial side view of the same.

Similar letters indicate corresponding parts.

This invention relates to a hand-stamp composed of a number of carriers, each containing a series of punches which can be adjusted under the plunger by means of said carriers, while the plunger extends across the whole series of carriers in such a manner that, if the punches are made to represent letters or figures, the stamp can be readily set for any desirable word or number, and, by depressing the plunger, said word or number is punched out of or otherwise impressed on a piece of paper or other material placed beneath it. The carriers are provided with horizontal plates perforated to correspond to the punches so as to guide the same while they do their work and clear the paper from the punches. With the plungers and the carriers are combined end punches to produce a mark at each end of the row of marks produced by the carrier-punches, in such a manner that said row cannot be increased by the use of detached punches. With these punches are combined clearers, which also form stops to arrest the downward motion of the plunger. Each carrier is provided with a scale-bar and a notched rack, so that said carrier can be brought into the position desired, and be retained while the plunger is being depressed.

In the drawing, A designates a frame, from which rises a yoke B, (see Figs. 1 and 3,) which forms the guide for the plunger D. Between said yoke are situated six (more or less) carriers, C, which rest upon the flat top of the frame A, and each of which carries ten (more or less) punches, *a*. The stems of these punches project above the upper surfaces of the carriers all to the same height, so that, if a transverse row of the punches is adjusted beneath the plunger, (see Fig. 3,) said plunger, on being depressed, will exert a uniform action on all said punches. Each of the punches is subjected to the action of a spring, *b*, (see Figs. 1 and 3,) which has a tendency to carry its punch up until the head of said punch strikes against a shoulder provided for that purpose in the carrier; and, in order to give to the carriers the requisite strength without rendering them unnecessarily heavy, I have made them hollow, with a series of transverse partitions, *c*, (see Fig. 1,) so as to divide the hollow space in the carriers in a series of chambers, each chamber to contain two (more or less) punches. The cutting part of each punch is composed of a series of pins, arranged in such a position in relation to each other that they form figures or letters, the punches shown in the drawing being made to represent figures, and each carrier containing punches representing the figures from 0 to 9. The pins or cutting-faces of the punches are guided in horizontal plates *d* of the carriers, said plates *d* being perforated to receive the pins, so that the punches are prevented from getting bent when put in operation and to clear the paper off the pins after the characters have been punched. The horizontal plates *d* are sufficiently elevated above the bottom plates *e* of the carriers to allow of introducing a sheet of paper or other material to be acted on by the punches, and these bottom plates *e* are also perforated to correspond to the punches and to form the dies or female parts of said punches. The bottom plates *e* are made with chambers *m* beneath the perforations, which chambers are open at the sides, and a thin slide-cover, *m′*, is made to slide longitudinally in a dovetail groove at the open side of said chambers, so that said slide, when in place, entirely closes the chambers, and the bottom of each chamber has an aperture or slot, *n*, therein, which should not be wider than the width of the slot *g* in the bed, and these apertures or slots *n* are arranged in line directly over each slot *g*. By this arrangement the small pieces which are punched out of the paper are free to drop into the said chambers *m*, and from thence, through the openings *n* and slots *g*, to the table or a space beneath the bed of the machine; otherwise, being so small, they would be

liable to get in between the carriers or beneath them and clog the machine, and prevent the free movement of the carriers along the bed-plate. To the bottom part of each carrier is secured a bar, F, by means of a screw, *f*, which works in a slot, *g*, Fig. 1, in the top of the frame A. On the surfaces of the bars F are marked the figures from 0 to 9, corresponding to the figures represented by the working-faces of the punches, and placed at the same distance apart, and in such position in relation to the front edge *h* of the frame A (see Fig. 2) that, when one of the carriers is pushed quite in, the 0 on the corresponding scale-bar will just be visible in front of the edge *h*, and in this case the punch in said carrier representing the 0 will be exactly under the plunger; but if one of the scale-bars is drawn out so as to bring the figure 3 in front of the edge *h*, the punch representing this figure will come under the plunger, and, consequently, if it is desired to adjust the punches for the number 5370, the first two bars F on the left-hand side of the machine are left in, the third bar is drawn out to bring the figure 5 in front of the edge *h*, the next is set to the figure 3, the next to the figure 7, and the last to the 0. By these means the punches representing 005370 are brought under the plunger, and if a piece of paper is placed under the punches and the plunger is depressed the desired number is punched out of said paper To the under sides of the scale-bars F are secured notched racks G, Fig. 1, or, if desired, these racks may be made solid with the bars F. The distance between the notches in said racks corresponds to the distance of the punches in the carriers, and said notches can be made to catch over the edge *i* in the frame A. (See Fig. 1.) If one of the bars F is drawn out until the desired punch of the corresponding carrier stands under the plunger, one of the notches in the appropriate rack is in position to catch over the edge *i*, and, if the notch is allowed to catch, the carrier is firmly retained in position and not liable to be thrown out of the correct position while the adjoining carrier is being set, or by any other cause. The plunger D is subjected to the action of two springs, *j*, which have a tendency to carry the same up to the position shown in the drawing, and it requires a pretty smart blow to drive down the plunger, together with all the punches on which it acts. In each end of the plunger is secured a punch, *k*, Fig. 3, intended to perforate the paper on each side of the number produced by the main punches. The principal object of these end punches is to prevent the addition of any figure to the number punched out by the stamp, since, by doing so, the value of the number could be raised in a comparatively easy and simple manner.

My method of making the female die of this punch *k* is as follows: I make the standards or side pieces of the yoke B solid and without the horizontal opening *l* in which to place the paper when being punched, and, after making the vertical hole therein which receives the punch *k*, I then make the horizontal opening before mentioned. By this method of construction I am enabled to make the two holes perfectly coincide, the hole above the horizontal opening being directly above the hole below, and the part of the yoke which is below the horizontal opening I denominate the die *t*, and the part which is above I denominate the clearer *t'*. The die is cored out on the inside, so that the small pieces punched out may drop freely. The tops of the clearers form stops *z* for the plunger, so that said plunger, when forced down to the requisite depth, will be arrested by coming in contact with said stops *z*. (See Fig. 3.) Were there no provision of this kind the force of the downward blow would be expended upon the punches, which would be liable to be bent and injured by such a result. The punches *k* also serve as steady-pins to guide the plunger in a true vertical movement.

My hand-stamp is designed particularly to stamp in a bank-check its face value, or to stamp the proper numbers into bonds, drafts, or other documents of value.

In order to adjust the check or other paper in the proper position the yoke B is provided with guide-slots *l*, (see Fig. 4,) the depth of which is such that when the edge of the paper strikes the end of the slot the punch-marks will come at the proper distance from said edge. By my machine the operation of punching out the number representing the face value of a check is comparatively simple, since the carriers can be adjusted to the desired number in a very short time, and, after the carriers have been adjusted, a single blow on the head of the plunger produces the desired effect.

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

1. The arrangement, in a hand-stamp, of a number of carriers, C, each containing a series of punches, *a*, guide-plates *d*, and counter-punches or dies *e*, the punches to be acted on by a plunger which extends transversely across said carriers, substantially as herein shown and described.

2. The end punches *k*, in combination with the carriers C, punches *a*, and plungers D, all constructed and operating substantially as described.

3. The carrier-bars, provided with gauge-racks G and scales F, as described, in combination with the punches *a*, guides *d*, and plunger D, substantially as set forth.

4. The side punches *k*, with their dies *t* and clearers *t'*, when said dies and clearers are made in one piece, and the clearers *t'* form a stop for the plunger D, substantially as described.

5. The plates *e*, provided with chambers *m*, each having an opening, *n*, at the bottom, the same operating to free the machine from the minute pieces punched out, substantially as described.

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Witnesses:

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