

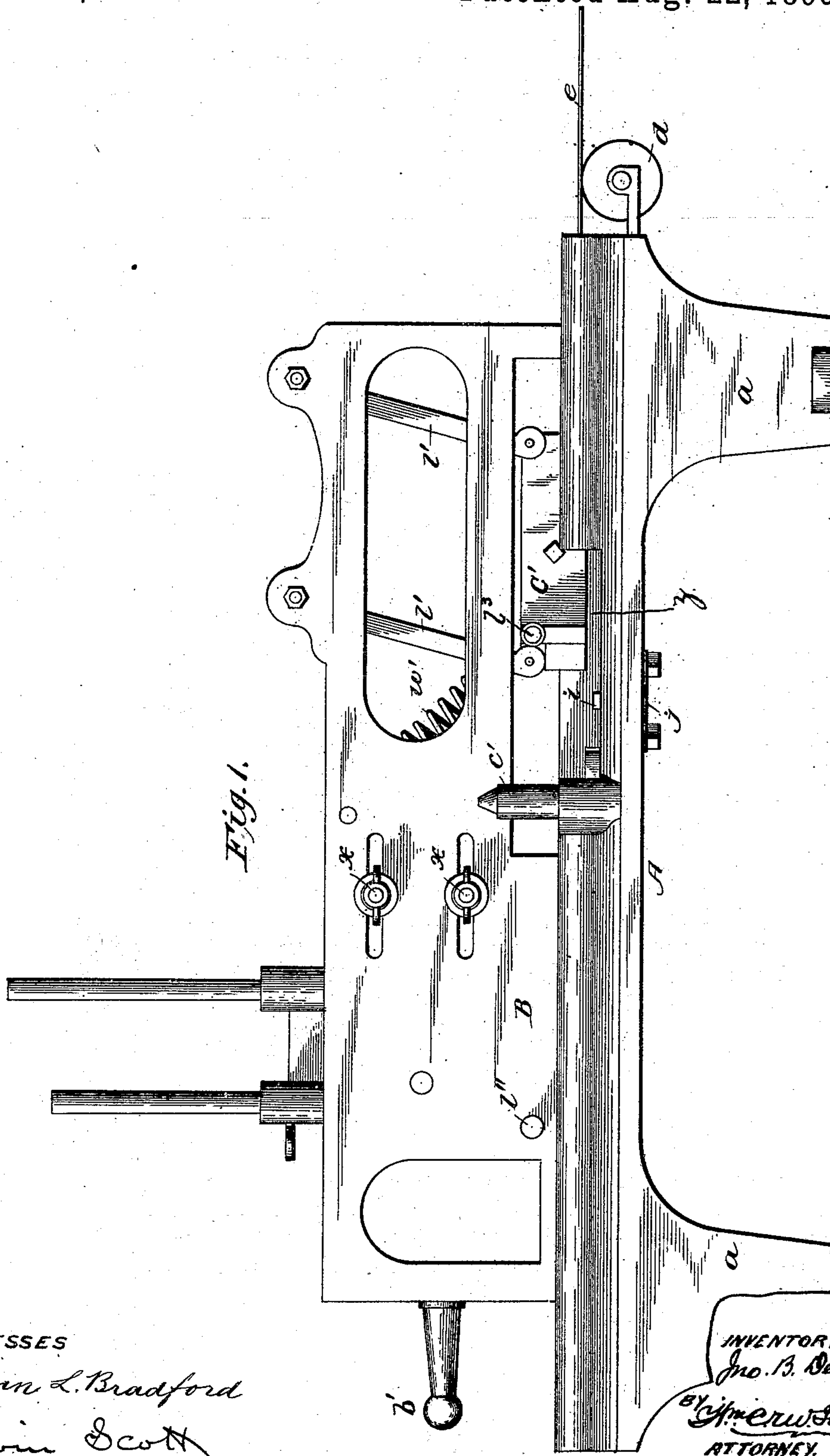
(No Model.)

4 Sheets—Sheet 1.

J. B. DENNIS.
MACHINE FOR PRINTING CARDS.

No. 503,833.

Patented Aug. 22, 1893.



WITNESSES

Edwin L. Bradford
Edwin Scott

INVENTOR;

Jno. B. Dennis

BY *Wm. C. Tuttle*
ATTORNEY.

(No Model.)

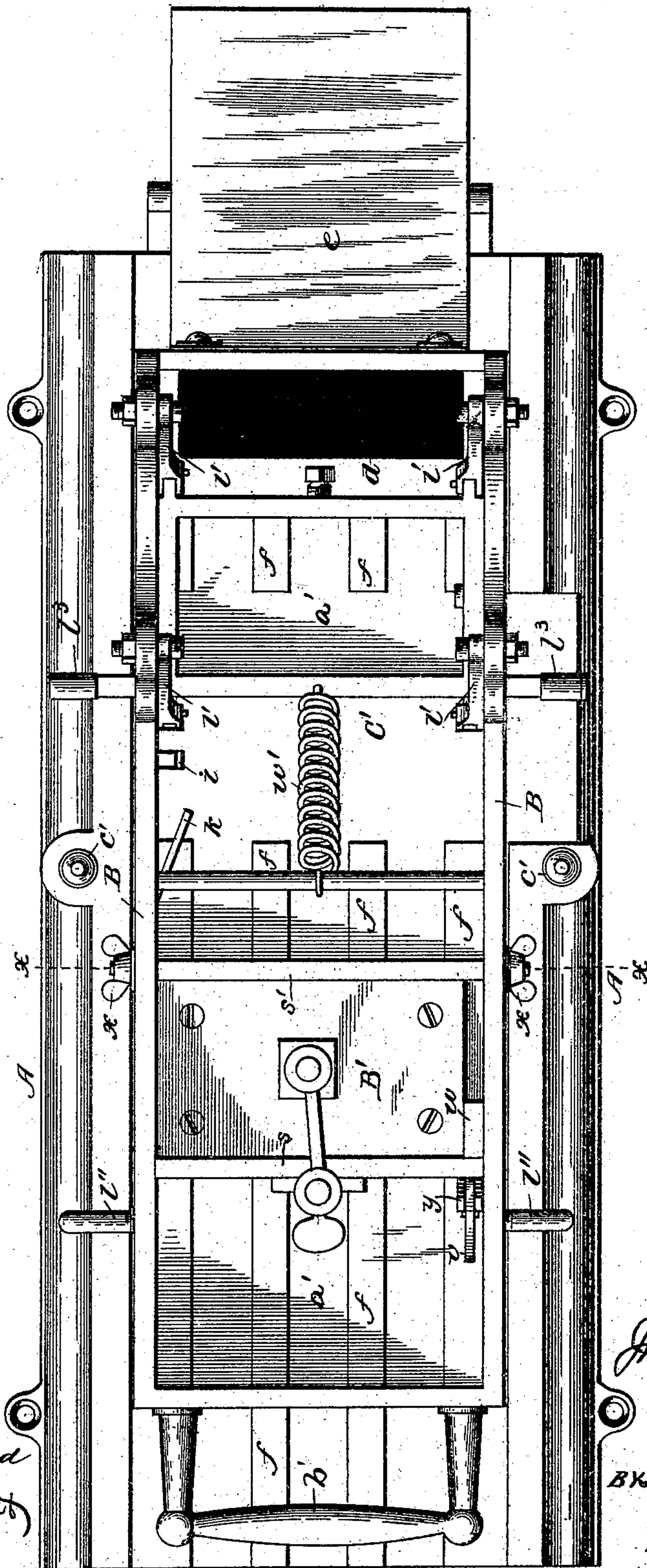
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Fig. 2.



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Fig. 3.

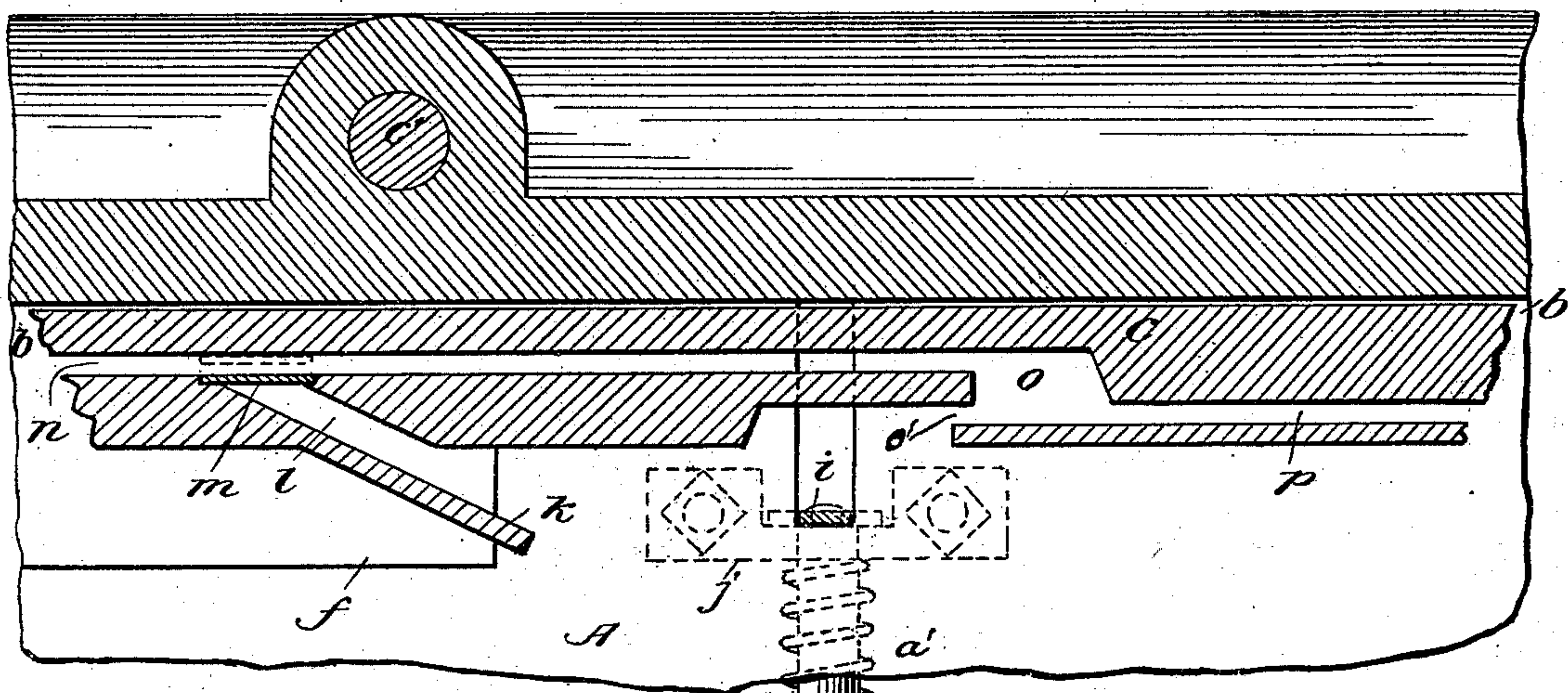
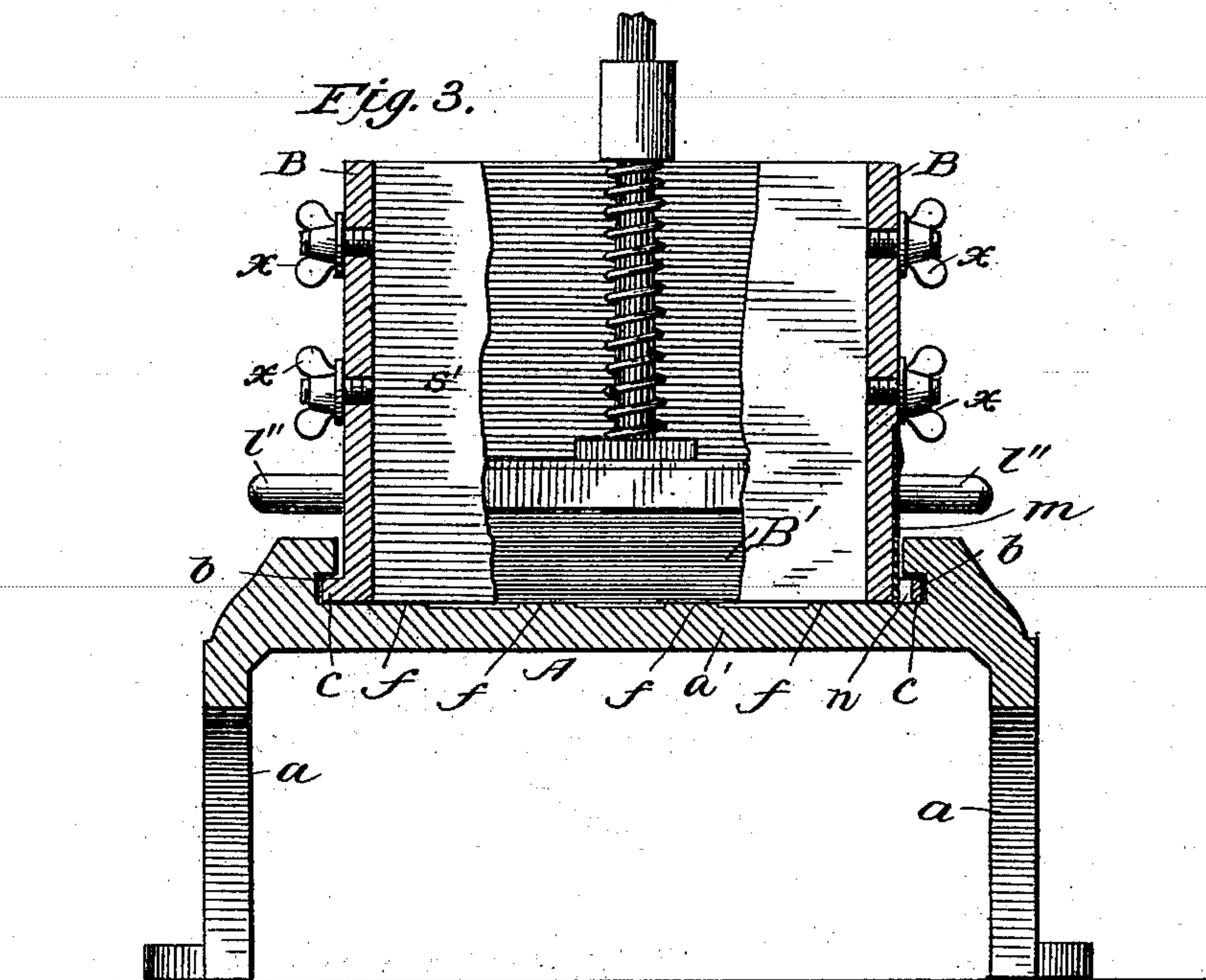
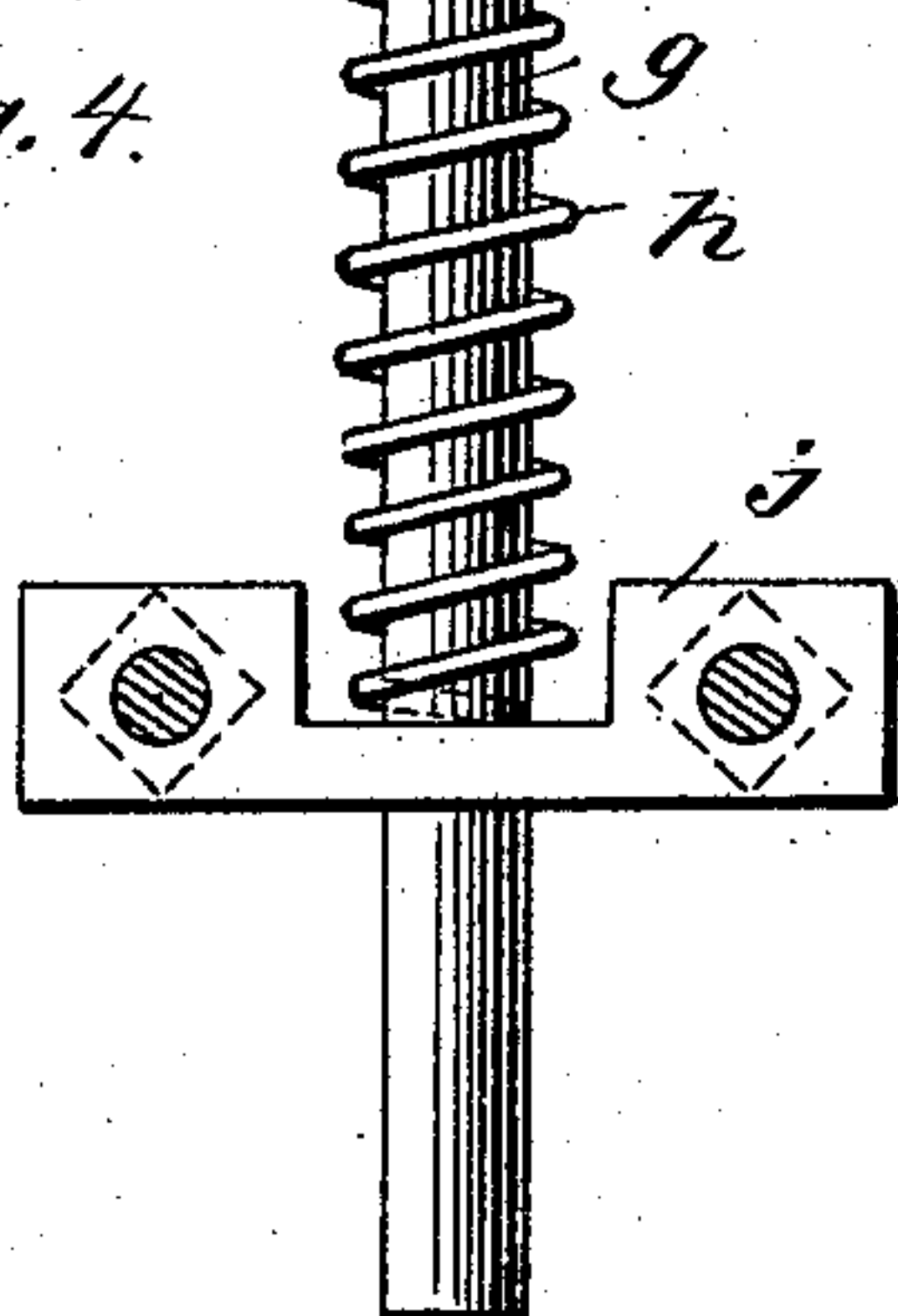


Fig. 4.



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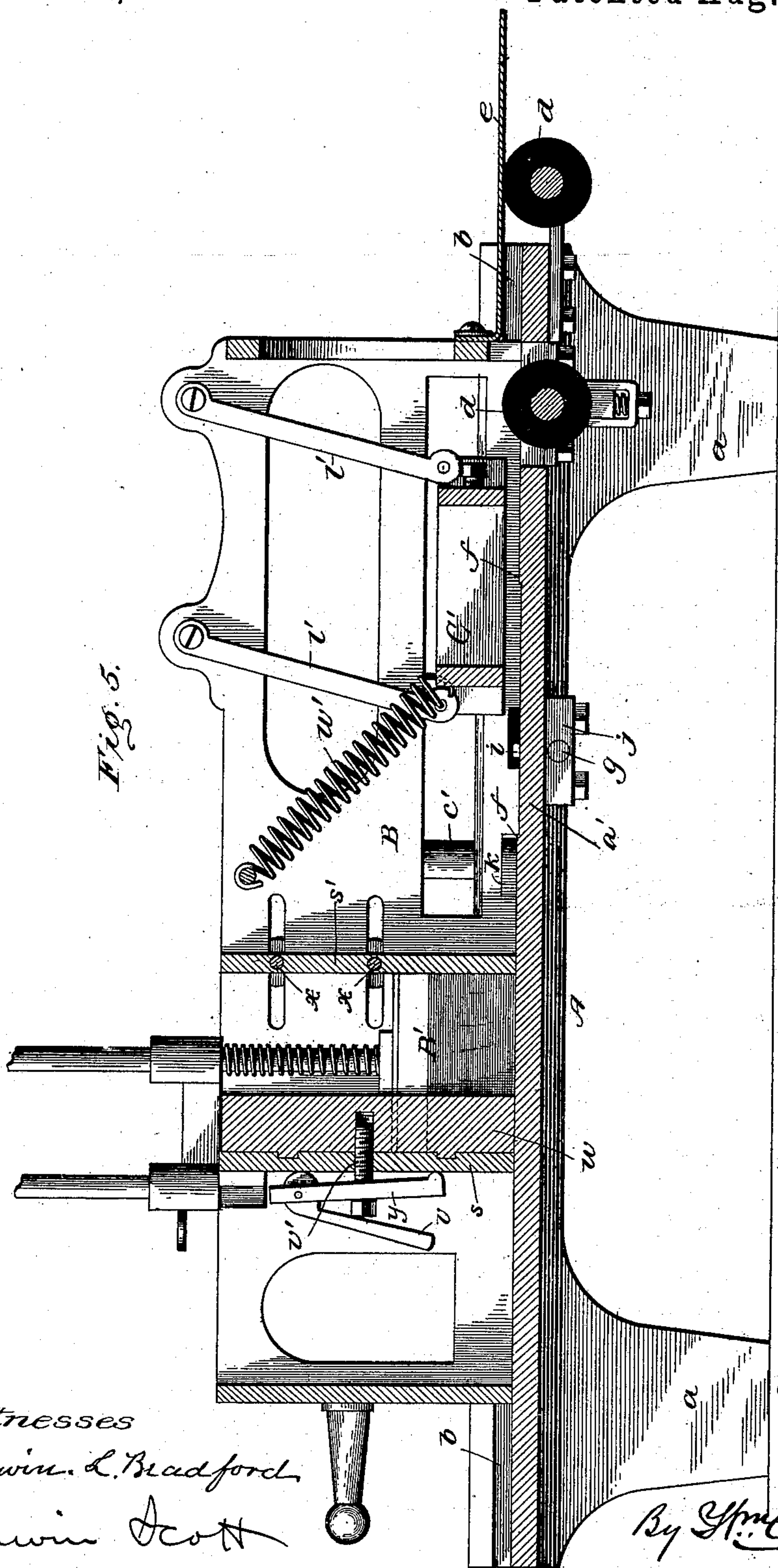
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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN B. DENNIS, OF OTTUMWA, IOWA.

MACHINE FOR PRINTING CARDS.

SPECIFICATION forming part of Letters Patent No. 503,833, dated August 22, 1893.

Application filed September 1, 1892. Serial No. 444,782. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. DENNIS, a citizen of the United States, residing at Ottumwa, in the county of Wapello and State of Iowa, have invented certain new and useful Improvements in Machines for Printing Cards, &c.; 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 appertains to make and use the same.

This invention relates to certain new and useful improvements in machines for printing cards and labels; and it consists substantially in such features of arrangement, construction, and combination of parts as will hereinafter be more particularly described and claimed.

The invention has for its object to provide a machine from which postal cards, invoices, tags, &c., can be readily struck off or printed, as required, and thus save much time heretofore incident to such operation.

A further object of the invention is to provide an automatic feeder for the cards or tags to be printed; as well as also to provide an ejector for casting or delivering the printed card or tag from the machine as soon as the type impression has been made thereon.

A final object of the invention is to provide a machine for the purpose named which shall automatically feed the card or tag into position, print the same, and finally eject or throw such printed card or tag from the machine all at one operation substantially as will hereinafter more fully appear when taken in connection with the accompanying drawings, in which—

Figure 1 is a longitudinal side elevation of a machine embodying my improvements; and Fig. 2 is a top or plan view thereof. Fig. 3 is a transverse section taken on the line $x x$ of Fig. 2, and showing the front side of the card or tag-holder broken away so as to reveal the arrangement of the cards or tags therein. Fig. 4 is a horizontal sectional view of that part of the sliding frame or carriage which operates the tag or card ejector, substantially as will more fully hereinafter appear. Fig. 5 is a vertical longitudinal section through the machine.

In carrying my invention into effect I pro-

vide a suitable longitudinal platform or base which may or may not be provided with supporting legs; and within or upon such platform or base a longitudinally movable carriage or frame works which operates the printing devices as well as controlling the action of the automatic ejector which discharges or ejects the card or tag from the machine immediately after an impression has been made thereon. Working in connection with the longitudinally movable frame is a pivoted or vibrating spring-controlled platen which holds the type from which the impressions are obtained; and also formed with and working in connection with such carriage is an automatic spring controlled card feeder which is so arranged and constructed as to feed a single card or tag into position to receive a type impression each time the movable carriage is drawn backward into position to be given another movement forward. Immediately after the impression is made the ejector is set into action and a card or tag is let off, and the machine is thus in readiness to print a new card or tag and so on.

The card holder is provided with means by which cards or tags of varying sizes can be used or accommodated and in providing the machine a pack of the cards is placed in and a single card only fed out each time.

Reference being had to the drawings by the letters marked thereon A represents the base of the machine which, as shown, is provided with suitable supporting legs a , the said base being formed or provided with side grooves or channels in which the flanges c, c , of the movable frame or carriage B are received, forming guide-ways in which the carriage travels backward and forward. The carriage B is, by preference, a rectangular structure provided at one end with a handle b' by which it is manipulated, and it carries or is provided with a receptacle or holder B' in which is placed a pack of cards or tags to be printed, and a support or chase C' for the form or die from which the cards receive the impressions.

At the forward end of the frame or base A there is a set of ink rollers d, d , over and in contact with which passes a cleaning and distributing plate e secured to the forward end of the movable carriage B. The plate e serves not only to turn the rollers so they present

freshly inked surfaces to the die or form, but also serves to spread the ink evenly upon them.

The chase C' is suspended by the links l' , l' and is acted upon by a spring w' which tends to draw it backward, so that the links normally assume an inclined position, as shown in Fig. 5, and the form or die is held above the base or bed a' of the frame A.

l^3 , l^3 are arms projecting laterally from the chase beyond the sides of the movable carriage, and so disposed that as the carriage is nearing the limit of its backward movement these arms engage with the studs or posts c' rising from the frame A. This engagement of the arms l^3 with the posts c' arrests the backward movement of the chase C' and causes it to swing downward, toward the bed a' , the links l' , l' insuring that this latter movement shall be in a plane parallel with the bed a' , upon which the card to be printed rests. The arms l^3 are by preference provided with anti-friction rollers which engage with the posts c' .

l'' , l'' , represent arms projecting laterally from the carriage B and arranged to engage with the studs or posts c' , c' so as to limit the forward movement of the carriage.

That portion of the bed a' of the frame A upon which the card or tag rests during the printing operation is slightly depressed. The bed a' is preferably formed as indicated in the drawings, that is to say, it is provided with a series of longitudinal slightly raised portions f , f , which are cut away at the place where the cards are to rest while receiving the impressions from the die or form—thus forming in effect a depressed portion of the bed at this place, as hereinbefore referred to. The raised portions f of the bed are about the height of the thickness of an ordinary card, and, being cut away as described, whenever the carriage in its forward movement brings the open ended card holder B' over this part of the bed a' one of the cards drops into the depression therein, where it is held by the ends of the raised portions f , being thus withdrawn from the pack, which moves on with the carriage, and held in position to be printed.

The automatic ejector which operates to throw the card out of the machine through the opening Z, Fig. 1, after it has been printed, consists of a spring actuated bolt g arranged under the bed a' and mounted in suitable bearings j . The bolt g is acted upon by the spring h and is provided with a finger i which extends up through the bed a' , as indicated in Figs. 2, 4 and 5, and is adapted to move across the face of the base or bed so as to act upon the card to eject it at the proper time. The finger i of the ejector is engaged by an arm k , which is formed with or secured to the carriage B, as the carriage is being moved forward, and by said arm is forced outward—through a channel l —into the groove n in one of the side pieces of the carriage. The opening between the channel l and the groove n is normally closed by a flat spring m which

yields to permit the finger i to pass into the groove during the forward movement of the carriage, but closes as soon as the finger enters the groove, so that, on the return movement of the carriage, it prevents the finger from again passing into the channel l , but causes it to continue in the groove n . The groove in the carriage in which the ejector finger travels is broken at o and continues beyond this part, as a groove p , in a plane parallel with but inside of the part n of the groove—see Fig. 4. The groove or channel opens, at o' , at the side of the offset or broken part o thereof, and opposite the end of the part p .

The operation of the parts just described is as follows: As the carriage B is moved forward the arm k engages the finger i of the ejector and directs it into the inclined channel-way l , whereby it is withdrawn from over the bed a' , this movement putting the spring h under a tension, which tends to move the ejector over or across the bed a' to the extent permitted by the slot in the bed through which the finger i extends. In passing out of the channel-way l and into the portion n of the groove in the carriage the spring m is moved, but immediately closes behind the ejector, so that on the return or backward movement of the carriage the ejector finger follows the groove, n , o and p . At the close of the backward movement of the carriage, which leaves a card, printed, on the bed a' , the finger i is in the portion p of the groove. As the carriage is moved from this position forward the opening o' is brought opposite the finger i which—under the influence of the spring h —as soon as it escapes from the groove, ejects the card, immediately after which the arm k engages the finger and the sequence of movements just described is again repeated. The cards which are placed in the holder B' may be fed down either by gravity, or by a spring actuated follower or plunger, as shown in the drawings. The card holder B' is formed by the side frame pieces of the carriage, the stationary cross-piece s , the adjustable cross piece s' , and an adjustable end piece w . The plate or cross piece s' is provided with screw threaded studs which extend through slots in the side pieces of the carriage, and upon which are mounted the set screws x . This construction permits the plate s' to be adjusted toward or from the stationary cross piece s , so as to make the width of the holder B' to fit the particular width of the cards to be printed, and after such adjustment to be held in a fixed position. The adjustable end piece w of the card receiver is provided with ribs which fit into grooves on the inside face of the plate, as illustrated in Fig. 5, whereby it is held in proper vertical position parallel with the opposite side piece of the carriage frame. A screw v' passes through a slot in the cross pieces s , and enters a screw-threaded socket in the adjustable end-piece w with which it moves. A locking lever y is mounted upon

the screw v' , which is forced into locking or clamping engagement with the cross piece s by a cam lever v , as illustrated in Fig. 5. When the handle end of this lever v is thrown
 5 up the locking lever y is freed from its engagement with the cross piece s and the end-piece w is left to be adjusted toward or from the side frame of the carriage and brought to bear against the ends of the cards. If the
 10 end piece should not be required it can be removed from the apparatus after first taking out the screw v' .

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

1. In a card and tag printing machine, the combination of a suitable base or frame, a movable carriage mounted thereon, a card receptacle carried by the carriage and having
 20 its lower end open, through which the cards fall one by one upon the base, means for transferring the card from the receptacle to the base and a die for printing the card while it rests upon the base, substantially as described.
 25

2. In a card or tag printing machine, the combination of a suitable base or frame having its upper surface provided with a depressed portion, a carriage movable over said
 30 base, a card receptacle carried by the carriage and having its lower end open and arranged to move over the depressed portions of the base, whereby the cards are fed thereto, one by one, and a die for printing the card while it lies in such depressed portion of the base,
 35 substantially as described.

3. In a card and tag printing machine, the combination of a suitable base or frame, a reciprocatory carriage movable thereon carrying a card receptacle, a printing die mounted
 40 on and carried by the carriage, means for transferring the card from the receptacle to the base and means for moving the die toward and from the base as the carriage is reciprocated, substantially as described.
 45

4. In a card and tag printing machine, the combination of a suitable base or frame, a reciprocatory carriage mounted thereon, a printing die, the links l', l' , connecting the die with
 50 the carriage, a spring for holding the die out of printing position, and the stops which arrest the movement of the die with the carriage, and cause it to move against the force of the said spring, substantially as described.
 55

5. In a card and tag printing machine, the combination of the base or frame upon which the card or tag rests while receiving the impression, a reciprocatory printing die, and a
 60 spring actuated card ejector which moves transversely across the face of the base and

forces the card from the base or frame after the impression has been made, substantially as described.

6. In a card and tag printing machine, the combination of the base or frame, a reciprocatory carriage, a printing die, a spring actuated card ejector, and a projecting arm carried by the carriage, and adapted to engage with the said ejector and move it out of the way of the card, substantially as described.
 65 70

7. In a card and tag printing machine, the combination of the base or frame, the reciprocatory carriage, a die for printing the card while it rests upon the base, a card ejector having a finger adapted to engage with the
 75 card, and an arm k carried by the carriage, and adapted to engage with the said finger of the ejector, and to guide it into a groove in the carriage wherein it is held while the card is being printed, substantially as described.
 80

8. In a card and tag printing machine, the combination of the frame or base, a reciprocatory carriage having in one of its side pieces the grooves n, o, p , into which is the
 85 break or opening o' , a die adapted to print the card while resting upon the base, a spring actuated ejector having a finger i projecting through the base, the arm k carried by the carriage and adapted to engage with the said
 90 finger and to guide it into the said groove in the side piece of the frame, and the spring m , which closes the opening through which the finger i enters the groove, substantially as described.
 95

9. In a card and tag printing machine, the combination of the base or frame, the reciprocatory carriage, the card receptacle carried by the carriage from which the cards are delivered, one by one, upon the base, the die
 100 for printing the cards as they lie upon the base, also carried by the carriage, and the spring actuated card ejector controlled by the movements of the carriage, substantially as described.
 105

10. In a card and tag printing machine the herein described receptacle B' in which the blank cards are held, provided with the slot-
 110 ted side piece s , and the adjustable end piece w , in combination with the screw v' which passes through the slot in the piece s and into the end piece w , the locking lever y mounted on the said screw, and the cam lever v , substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.
 115

JNO. B. DENNIS.

Witnesses:

E. E. MCELROY,
 M. A. ROBERTS.