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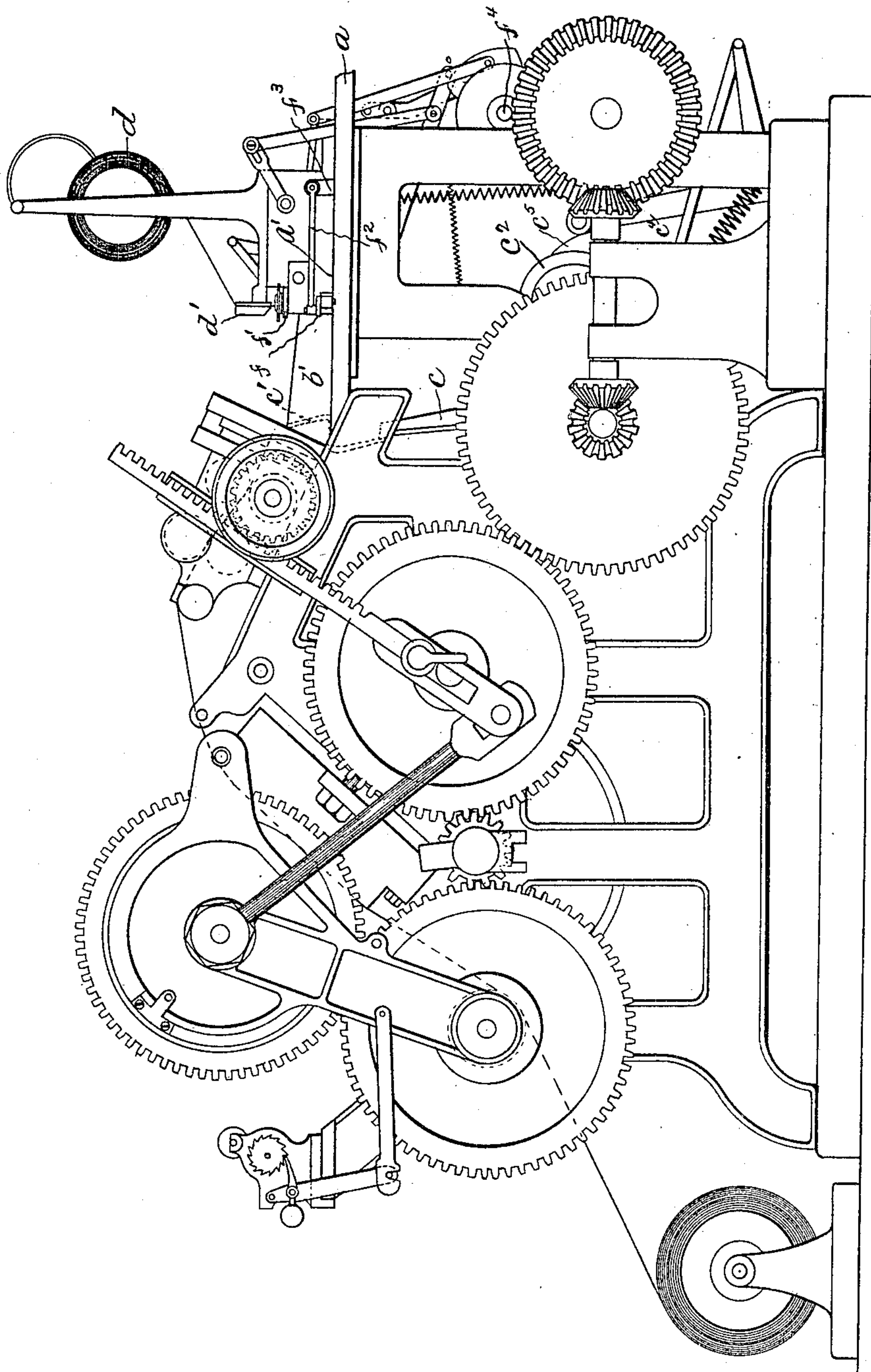
PATENTED FEB. 13, 1906.

W. H. BUNCE.
POSTAL CARD PRINTING AND BANDING MACHINE.

APPLICATION FILED AUG. 5, 1897.

4 SHEETS—SHEET 1.

Fig. 1



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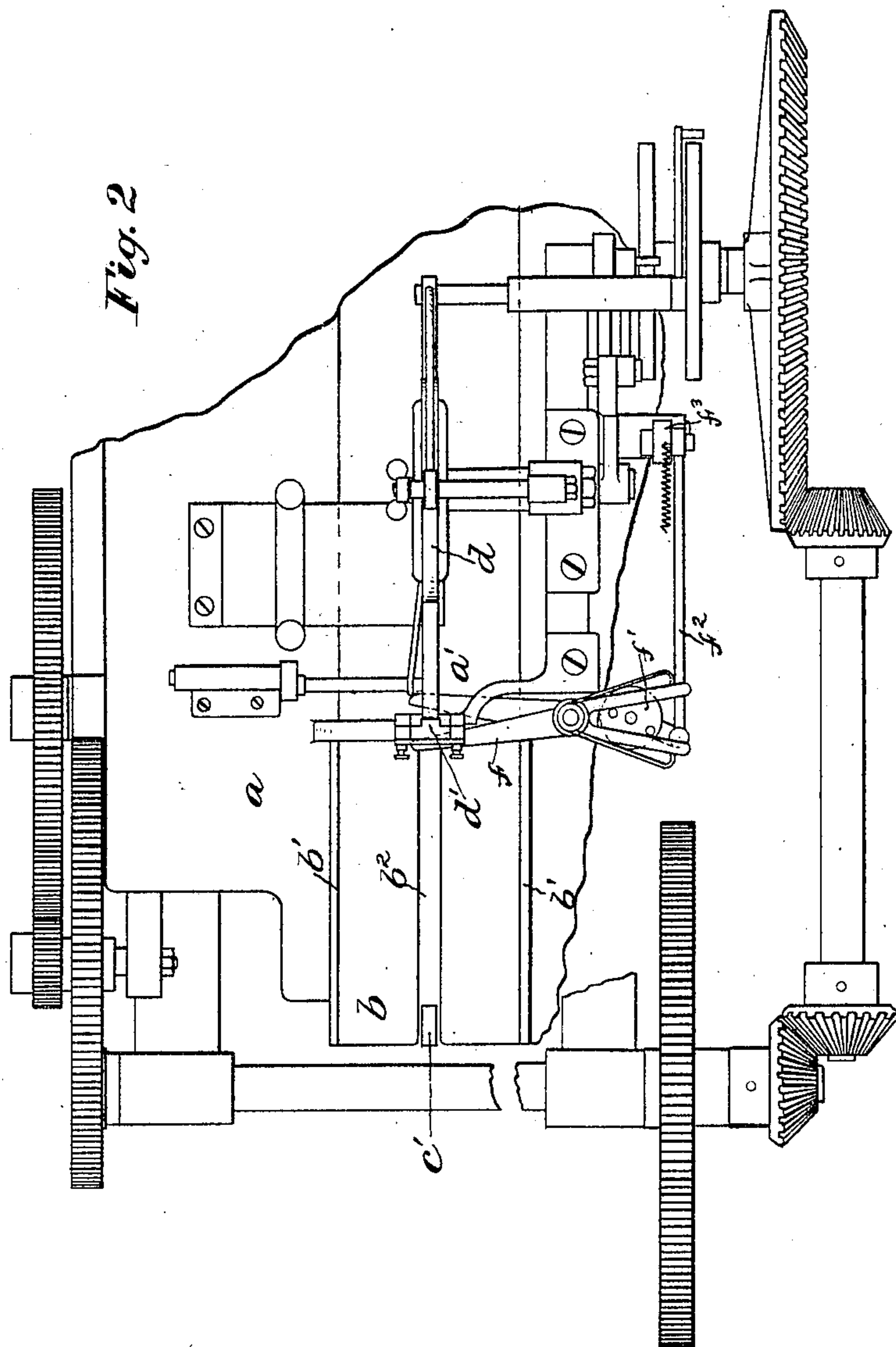
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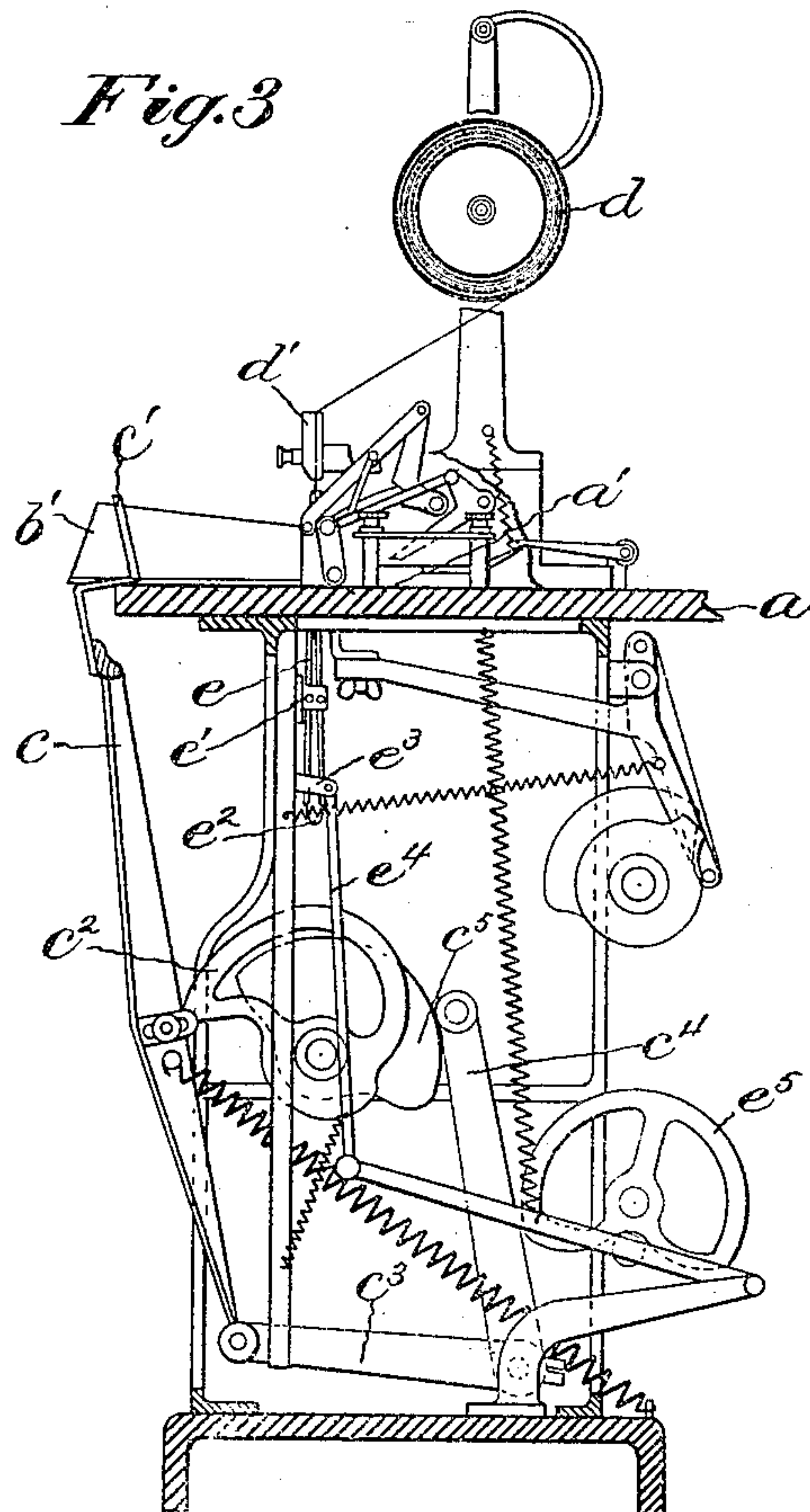
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4 SHEETS—SHEET 3.



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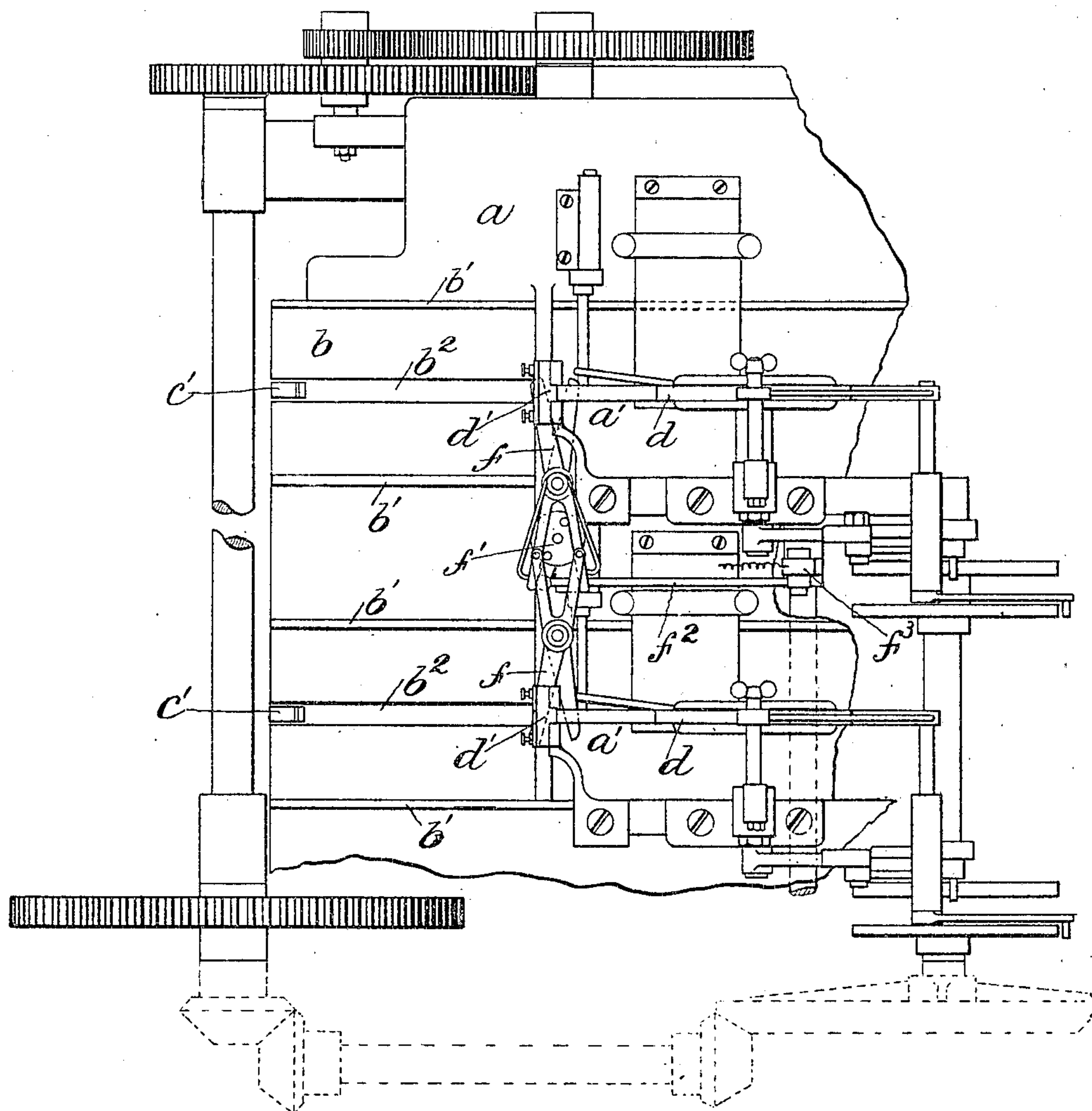
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4 SHEETS—SHEET 4.

Fig. 4



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UNITED STATES PATENT OFFICE.

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POSTAL-CARD PRINTING AND BANDING MACHINE.

No. 812,180.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed August 5, 1897. Serial No. 647,150.

To all whom it may concern:

Be it known that I, WILLIAM H. BUNCE, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Postal-Card Printing and Banding Machines, of which the following is a full, clear, and exact description, whereby any one skilled in the art can make and use the same.

My invention relates to the class of machines for printing, forming to the required size, and banding into packages of the required number postal cards or like articles; and the object of my invention is to construct a machine of this class that shall be extremely simple as to construction and few in number of parts as compared with machines of the prior art.

To this end my invention consists in the combination of the mechanism making up the machine as a whole or in part, as hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a view in side elevation of a printing-press of the Kidder type with my improved machine attached to and connected therewith. Fig. 2 is a detail plan view of a portion of my improved machine, showing the mechanism appurtenant to a single pocket, with parts broken away to show construction. Fig. 3 is a detail sectional view in side elevation, illustrating the mechanism appurtenant to a single pocket. Fig. 4 is a plan view of a postal-card machine, showing a banding device appurtenant to each pocket.

A roll of material of any desired width is fed into the press and impressions for any desired number of cards made widthwise of the roll at a single operation, the sheet from the roll being then cut to proper dimensions with reference to such impressions to properly form a card, the severed cards being delivered by well-known mechanism to pockets hereinafter described. The machine which I have chosen to illustrate herein for accomplishing this purpose is of the well-known "Kidder" type, and as this forms no part of the invention a detailed description has been omitted.

I contemplate the use of any number of pockets arranged side by side and into which the cards are delivered from the printing-press; but to simplify the description and

make more clear the operation I have limited the showing to two pockets only (see Fig. 4) and the mechanism appurtenant thereto. It is obvious that when a greater number of pockets are employed, as contemplated by the invention, that they will bear the same relative arrangement as shown in Fig. 4.

In the accompanying drawings the letter *a* denotes the table of my improved banding-machine, on which is located a pocket *b*, formed by the side walls *b'*. A slit *b²* is formed in the bottom of the pocket in which a finger *c'*, secured to the upper end of the lever *c*, has a reciprocating movement, the lever being pivoted to a lever *c³*, secured to the rock-shaft and operated by means of a cam *c²*. The rock-shaft is operated by a cam *c⁵*, through the lever *c⁴*, to draw the lever *c* downward to clear the cards in the pocket *b* in its backward movement. The cards are delivered into the pocket *b* from the printing-press, each card resting on the flat side and with the longer edge of the card crosswise of the pocket, the edge of the pile lying in advance of and preferably close to the finger *c'*. The cam *c²* is properly timed to move the finger *c'* forward when the proper number of cards have been deposited in the pile, the pile being moved forward onto the portion *a'* of the table *a*. A roll of tape *d*, preferably of paper, is supported in proper position above the table, the end of the tape projecting through the guide *d'* and in position to be grasped by the pincers *e*. These pincers consist of two members each pivoted in a sliding block *e'*, a spring *e²* tending normally to force the upper end of the pincers apart. A block *e³* is pivoted to the slide *e'* and is operatively connected by a lever *e⁴* with the cam *e⁵*, which causes the slide to be reciprocated in a vertical plane. As the lever *e⁴* commences its upward movement the block *e³* swings a short distance and through the medium of cam-surfaces on the block and pincers allows the upper end of the latter to be forced open by the spring *e²*. The continued movement of the slide brings the pincers upward into position to engage the end of the tape *d*. As the rod *e⁴* commences its downward movement the block *e³* is swung downward a short distance, causing the pincers to grasp the tape, and the slide is then moved downward under the continued movement of the lever *e⁴*, pulling a length of tape from the roll downward in position to lie in

front of the package of cards in the pocket *b*. The cam *e*⁵ is timed to cause a movement of the lever *e*⁴ at a time while the cards are being deposited in the pocket and before the finger *c*¹ is operated to push the package out of the pocket. For a more complete description of this banding device reference may be had to United States patent to Bunce *et al.*, dated June 4, 1889, No. 404,773.

The blades of the shears *f* are pivoted in position so that the pincers *e* in their reciprocating movement will pass through the opening between the blades when open. The blades are held normally in a closed position by means of a spring secured to the pivot and pressing on the outer edge of the shank of each blade. A disk *f*¹ is provided with pins located on opposite sides of its center that as the disk is rotated act on the shank of opposite blades simultaneously to open the latter. A rod *f*² is operatively connected with the disk at one end and a lever *f*³ at the opposite end. This lever *f*³ is pivoted between its ends to the frame of the machine, and its lower end is located in proper position to be operated by a cam secured to the cam-shaft *f*⁴. A spring is connected to the rod *f*² to hold it normally in position to keep the blades open. The cam for operating the lever *f*³ is timed to cause the rod to be moved backward against the force of the spring to allow the blades of the shears to close just after the pincers have completed their downward movement and at the same time or immediately after as that at which the edge of the pack of cards encounters the tape.

The pack of cards is moved out of the pocket *b* directly to the bander, which wraps this tape about the upper and under surfaces of the pack, leaving an end projecting from the under surface beyond that edge toward the finger *c*¹ and of a length sufficient to be wrapped about said edge and over onto the upper surface of the pack. This projecting end of the tape is wrapped around the edge and laid on the upper surface of the pack, encountering in its movement to this position proper mechanism for daubing the inner surface of the tape with mucilage or like adhesive material to cause it to adhere to that portion of the tape already lying on top of the pack. The mechanism for accomplishing the completion of this banding and for daubing the tape with an adhesive material may be of any old and well-known construction.

After the banding has been completed the pack is moved in a direct line along the table by contact of the next succeeding pack as it is moved from the pocket *b*.

Any desired mechanism for registering the number of packs as they are moved from the banding device may be employed, if desired.

From the above description it will be seen that the device embodies mechanism in which a banding device is appurtenant to each

pocket into which the cards are delivered from the printing device and in which the packs of cards are moved from each pocket in a direct line to a banding device and from thence in a direct line away from said banding device, such construction requiring but a single device for moving the piles of cards to commence and complete the operation. In prior devices of this class a single banding device has been employed in connection with a number of piles of cards, and this necessitates the moving of the cards in a curved or angular path and the employment of a number of devices for advancing a pack along the machine. By my improved machine the employment of a single device only is required for each pocket to move the cards to and from the banding device, and by providing a banding device appurtenant to each pocket in connection with the arrangement of the banding devices with respect to the pockets the mechanism is simplified and the capacity of the machine greatly increased.

I claim as my invention—

1. In combination in a machine for printing and banding postal cards and like articles, means for printing the cards in multiple and delivering them in direct lines in piles of the desired number to receptacles, the receptacles for receiving the cards, means for moving the piles from the receptacles in direct and parallel lines to banding devices and in position to be moved forward from the banding devices by contact of the next succeeding pile therewith in each parallel line, and means for banding the package.

2. In combination in a machine for printing and banding postal cards and like articles, means for printing the cards in multiple and in parallel lines and delivering them in piles of the desired number to receptacles, the receptacles, means for moving the piles from the receptacles in a direct line to banding devices, and also in like lines from the banders, and the banding devices.

3. In combination in an apparatus for printing and banding postal cards and like articles, means for printing the cards side by side and in parallelism and delivering them in direct lines in piles of the desired number to receptacles, the receptacles for receiving the cards, means for moving each of the parallel piles from the receptacles in a direct line to a banding device, means for banding the packages, said means for moving the piles from the receptacles in a direct line to the banding devices also effecting the discharge of the piles from the banders.

4. In combination in a machine for printing and banding postal cards and like articles, means for printing the cards side by side and delivering them in piles composed of the desired number to receptacles arranged side by side, the receptacles, means for moving the piles directly from the recep-

tacles to banders appurtenant thereto, and the banding devices, the several packages being moved in the same horizontal plane.

5 5. In combination in an apparatus for printing and banding postal cards and like articles, means for printing the cards side by side and delivering them in parallel piles composed of the desired number to receptacles for said piles, the receptacles, means 10 for moving the cards in parallel lines and in the same horizontal plane and directly from said piles to banding devices appurtenant to each receptacle, and means for banding the packages, said means for moving the cards 15 from the piles to the banding devices being adapted to eject the banded packages from the banders.

6. In combination in an apparatus for

printing and banding postal cards and like 20 articles, means for printing the cards in multiple side by side and for delivering them to receptacles, the receptacles arranged side by side, means for moving the piles in parallel lines from said receptacles to banding de- 25 vices, a banding device arranged appurtenant to each receptacle for operating upon the pile of cards delivered therefrom, and means for moving the piles in parallel lines from the banders, each pile being moved to the banders and away therefrom by the con- 30 tact of the next preceding pile.

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