

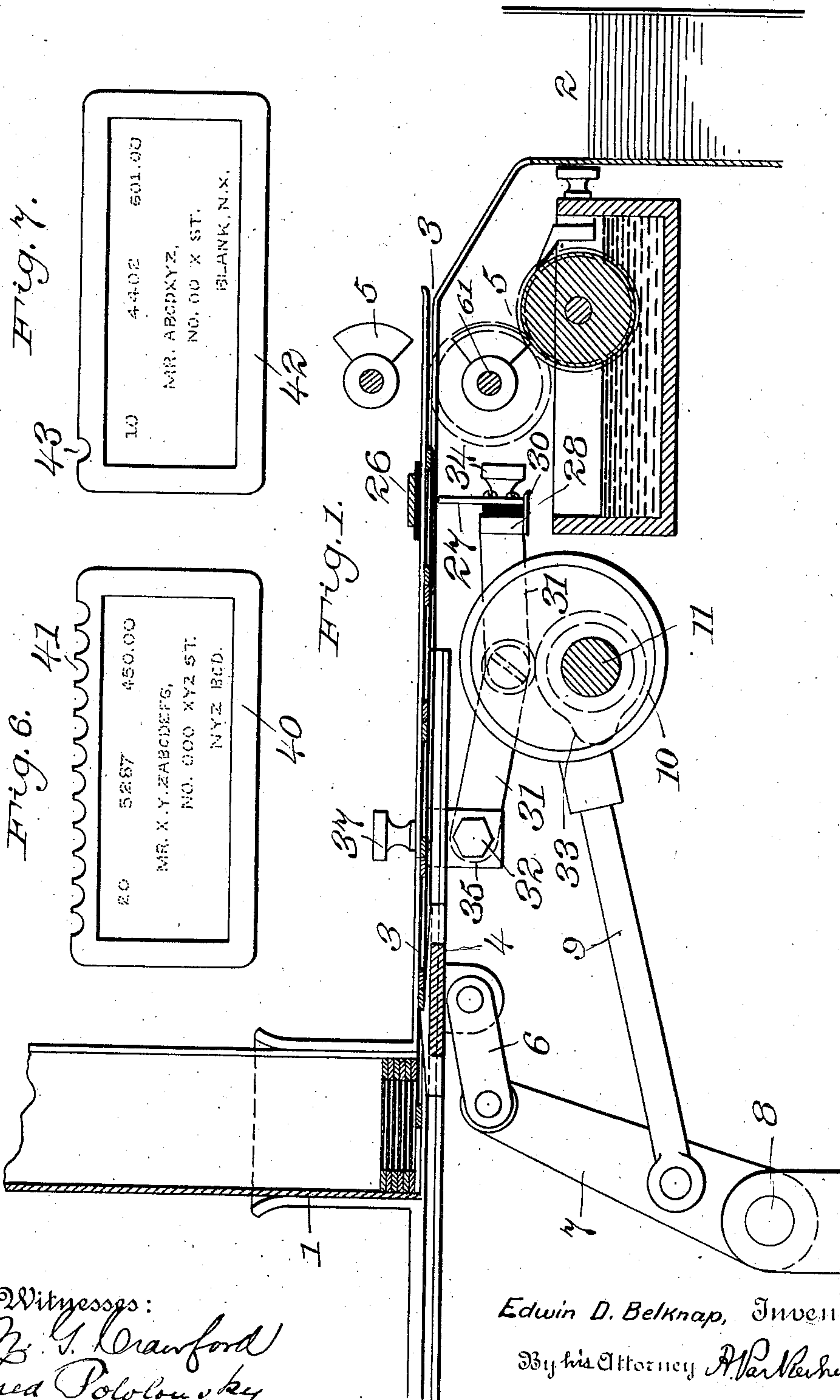
No. 889,503.

E. D. BELKNAP.  
SELECTIVE PRINTING MECHANISM.

APPLICATION FILED AUG. 3, 1907.

PATENTED JUNE 2, 1908.

4 SHEETS—SHEET 1.



Witnesses:  
M. J. Crawford  
Fred Pollock

Edwin D. Belknap, Inventor  
By his Attorney A. W. Reinhardt

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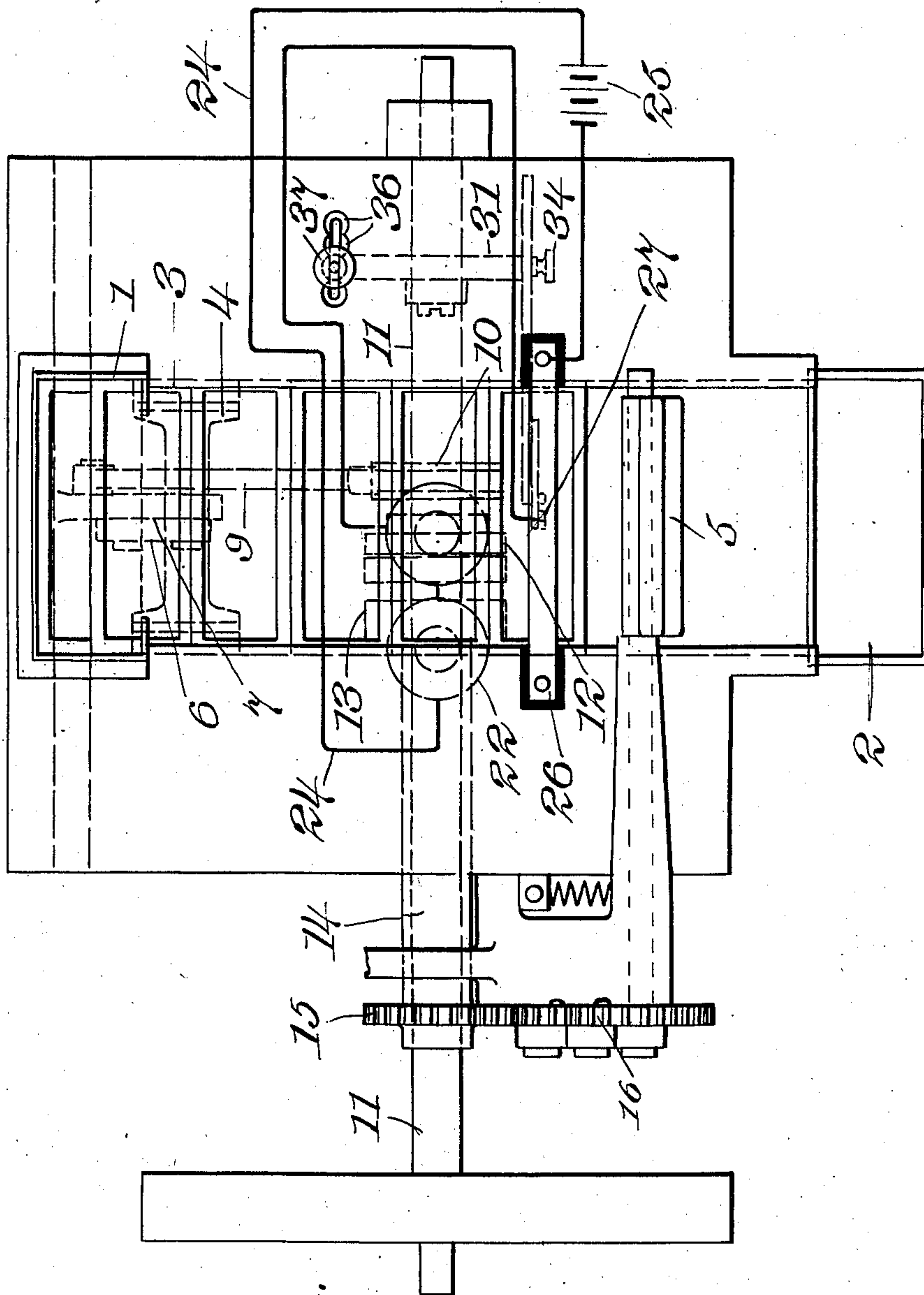


Fig. 2.

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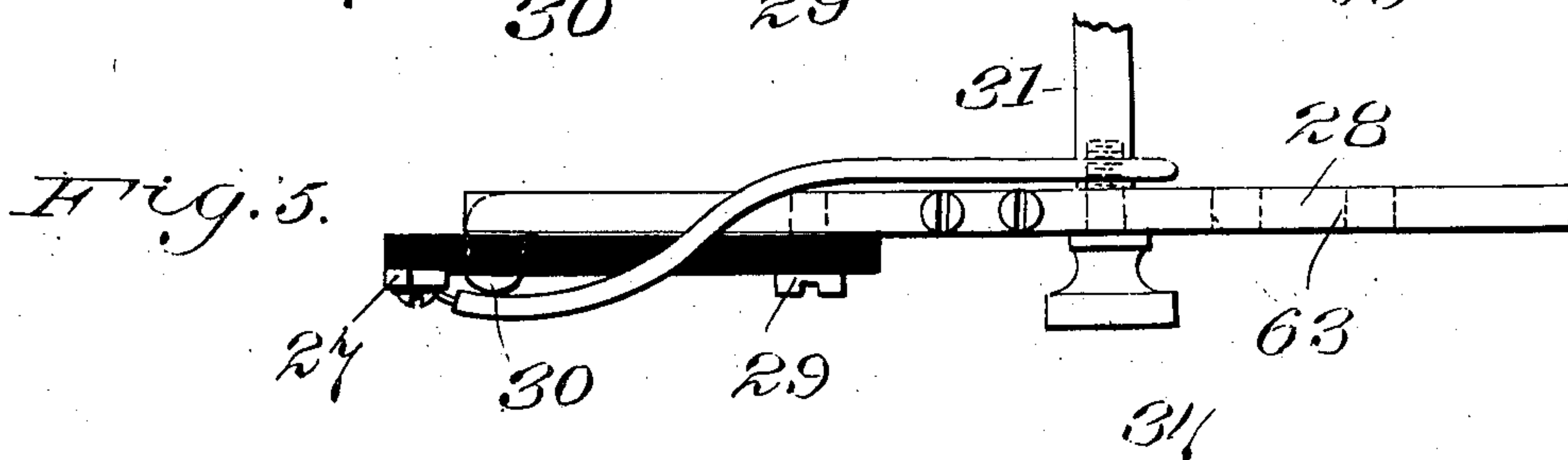
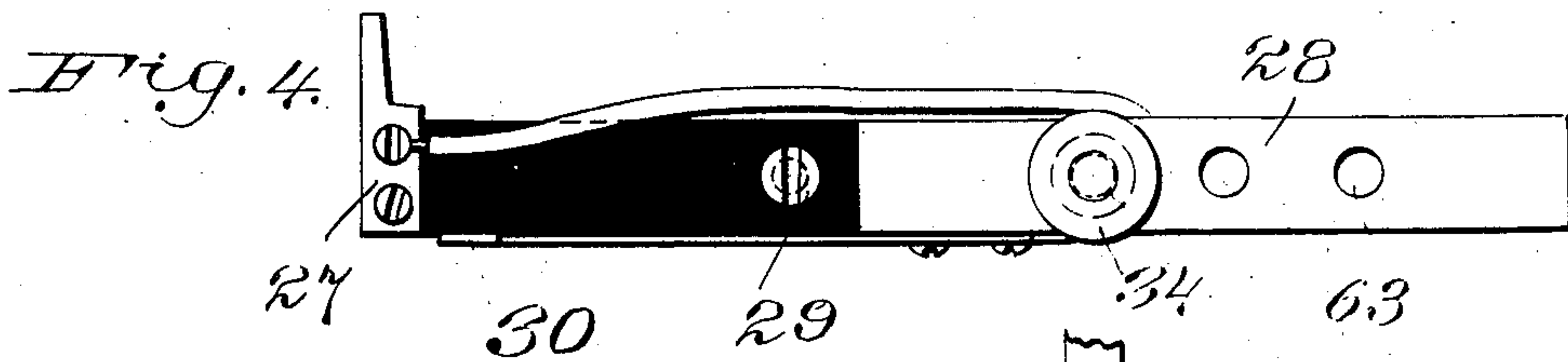
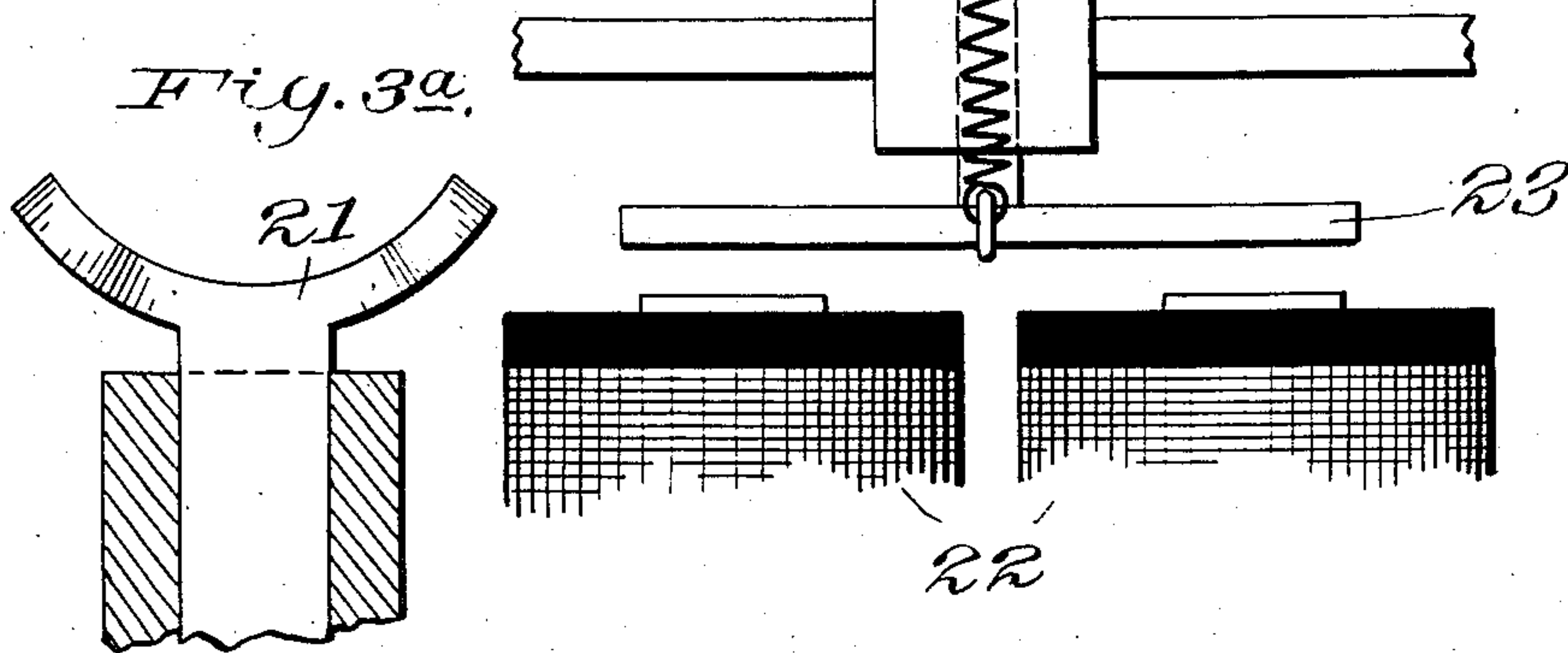
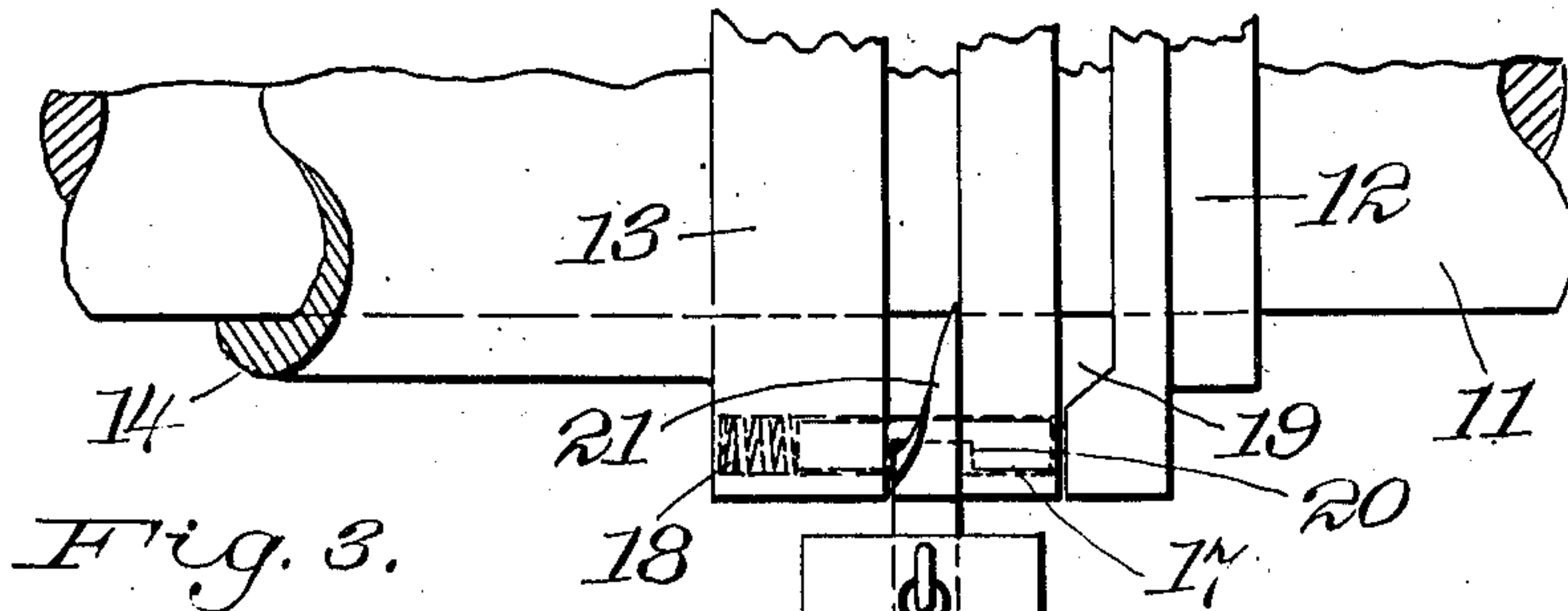
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4 SHEETS—SHEET 3.



Witnesses:  
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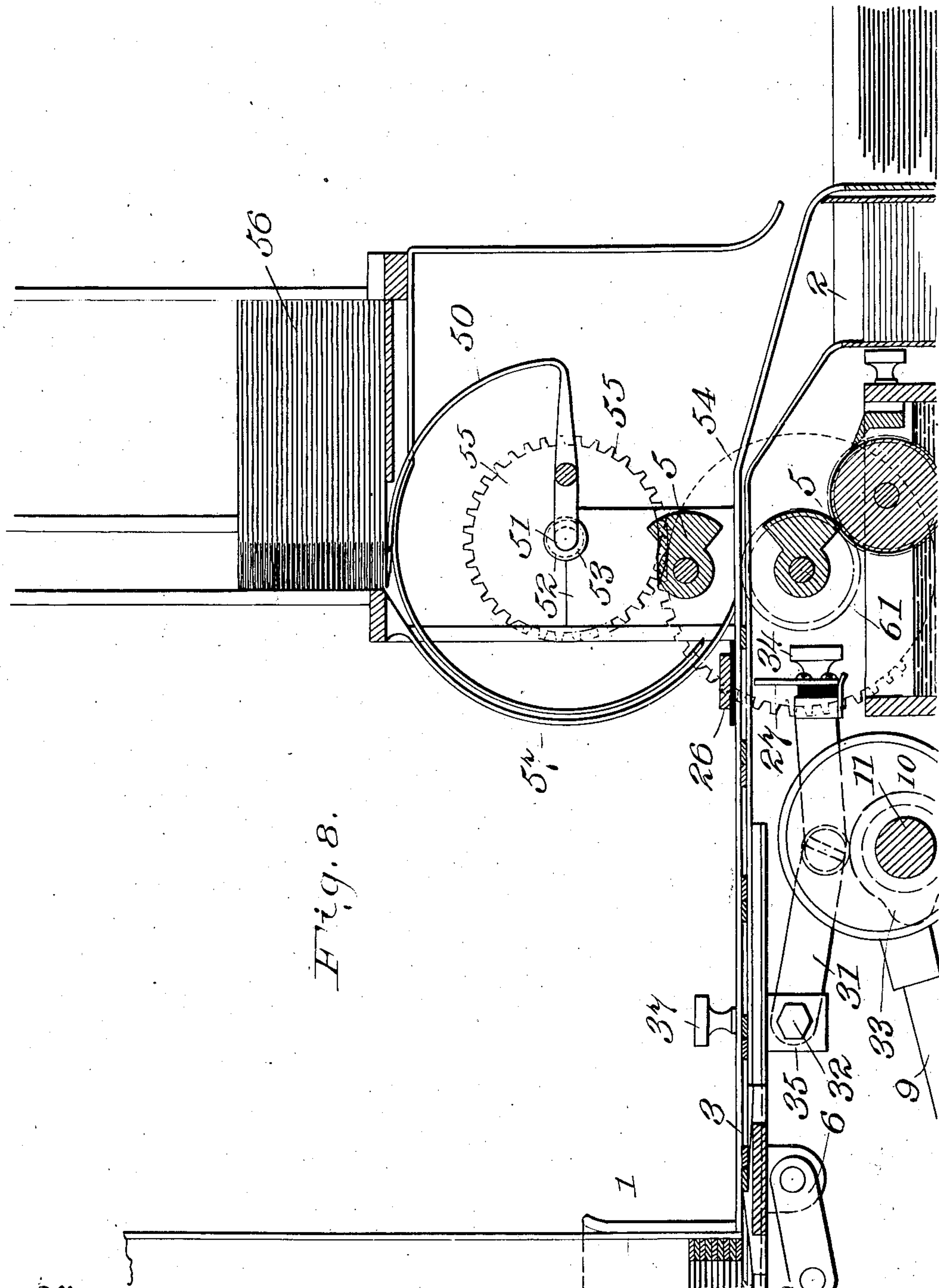
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4 SHEETS—SHEET 4.



Witnesses:  
M. G. Crawford  
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# UNITED STATES PATENT OFFICE.

EDWIN D. BELKNAP, OF EAST ORANGE, NEW JERSEY.

## SELECTIVE PRINTING MECHANISM.

No. 889,503.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed August 3, 1907. Serial No. 386,950.

*To all whom it may concern:*

Be it known that I, EDWIN D. BELKNAP, a citizen of the United States of America, and a resident of East Orange, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Selective Printing Mechanism, of which the following is a specification.

My invention relates generally to printing mechanism, and specifically comprises an improved apparatus for printing a selected number from a list or series of mail addresses.

In certain lines of business, such as industrial life insurance, there are long lists of addresses to which notices or other documents have to be mailed at different intervals of time. Thus, in industrial life insurance some policy holders pay their premiums once a year, some once every six months, others once every three months and still others once every month. It is often customary to keep these addresses on stencil cards which are fed through a machine such for instance as that shown in U. S. Patent No. 609,402, granted to F. D. Belknap August 23rd, 1898, to print said addresses upon the notification cards, or envelopes containing same. These cards are arranged alphabetically or geographically, and sometimes it is necessary to print all of the address contained by them, while at others it is desired to print only those whose premiums fall due in a certain month. I have invented a simple attachment for this and other forms of addressing machine which enables the operator to set the machine so that it will automatically select the stencil cards which are to be used in printing and pass the others through into the collecting magazine without printing from them. The best form of apparatus at present known to me embodying my invention is illustrated in the accompanying sheets of drawings in which:

Figure 1 is a longitudinal vertical section of a machine with my invention applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of the magnetically controlled clutch which operates the inking mechanism. Fig. 3<sup>a</sup> is a further detail of the trip piece of the clutch. Fig. 4 is a side elevation, and Fig. 5 is a detail plan view of the movable contact finger. Figs. 6 and 7 are specimens of cards, and Fig. 8 shows a form of apparatus for automatically feeding the envelopes or other articles to be printed.

Throughout the drawings, like reference figures indicate like parts.

1 is the magazine of stencil cards ready for use, and 2 is the magazine in which they are collected after use.

3 is the guideway along which the cards are pushed by the reciprocating slide 4 to the rotary inking mechanism 5. The slide 4 is operated by the link 6, lever 7, pivoted to the frame at 8, and to the eccentric rod 9. The eccentric 10 is on the main driving shaft 11. On this shaft is fastened one member 12 of a clutch (see Fig. 3). The other member 13 of which is on a sleeve 14 loosely mounted on said shaft. On the outer end of this sleeve 14 is a gear wheel 15 which transmits motion through the train of gearing 16 to the inking mechanism.

The two members of the clutch are locked together when the pin 17 is driven by the spring 18 into a recess 19 in the clutch member fast on the shaft. After one revolution the pin 17 is withdrawn by its notch 20 engaging the curved face of the trip 21. This trip piece can only be withdrawn from such engagement by the electromagnet 22 attracting the armature 23, connected to such trip piece.

The coils of the electromagnet 22 are in a circuit 24 in which is included the battery or other source of current 25. One terminal of this circuit is connected to the stationary contact piece 26 which is insulated from the rest of the machine, and the other terminal is connected to the movable yielding finger 27. The finger 27 is pivoted on the cross head 28 by pin 29, and normally held up by spring 30. Cross head 28 is adjustably mounted on lever 31 pivoted to the machine at 32 and vibrated by the cam 33 on the main shaft 11.

The finger 27, as shown, is capable of twelve different adjustments. The cross head 28 has three holes 33, through any one of which the thumb screw 34 may be inserted to connect with the lever 31, and lever 31 is pivoted to a block 35 which may be held in any one of the four openings 36, by thumb screw 37 (see Figs. 1 and 2).

In Fig. 6, 40 is a stencil card having twelve cut-away portions 41, in one edge of its frame, corresponding to the twelve different adjustments of the finger 27. Another stencil card 42, shown in Fig. 7, has only one cut-away portion 43, which corresponds to the extreme left hand position of adjustment of the finger.

Any convenient form of device may be em-



played for feeding the envelop blanks, or other articles to be printed. I have illustrated in Fig. 8, the envelop feeding device shown and described in Patent No. 592,603, granted October 26, 1897, to F. D. Belknap.

50 represents a set of curved spring fingers mounted on shaft 51 journaled in housing 52. Spiral spring 53 normally retracts these fingers into the position shown. When the teeth on mutilated gear wheel 54 on the shaft 61 of the inking mechanism engage the teeth of gear wheel 55 on shaft 51, the fingers are vibrated toward the left and force the bottom envelop in the magazine 56 down the curved guides 57 to the inking mechanism, and are then retracted by the spring 53 to their original position when the mutilated gear 54 lets go of the gear wheel 55.

In operation of my invention, the stencil card feeding mechanism operates to feed a card forward at each revolution of the main shaft. The inking mechanism is normally inoperative, the clutch being out of gear. If cards having no cut-away portion in line with the movable finger contact are fed to the inking mechanism, the two contact pieces do not touch and no current passes through the coils of the magnet, the clutch is not tripped into action, and the inking mechanism and envelop feeding mechanism remain inoperative. The cards are thus fed through without printing. When a card is fed to the inking mechanism which has a cutaway portion opposite to the movable finger, the said finger will strike the stationary contact, complete the electric circuit, energize the magnet, withdraw the trip piece, allow the clutch to engage and give the inking mechanism one revolution with corresponding operation of the envelop feeding mechanism.

By giving the movable finger twelve positions of adjustment, the machine will handle business for the twelve months of the year. Stencil cards which are to be used to print their addresses every month in the year would have twelve cutaway portions as shown in Fig. 6. Those to be used every three months would have four cutaway portions evenly disposed one from the other, while those to be sent out only once a year would have but one cutaway portion corresponding in location to the particular month in which the card was to be used, as shown in Fig. 7. All cards would, however, be kept together in alphabetical or geographical or other order, and if at any time it were desired to send mail matter to all the addresses on the list, the cards could be fed through a machine not equipped with my herein described attachment.

The advantages of my invention comprise the selective action of the apparatus which permits all the stencil cards to be kept together and handled in a body, though only the desired ones are selected for the printing

operation. This obviates the necessity of keeping the different classes of cards separate, and the consequent recurrence of confusion through mistakes in filing said cards.

It is obvious that various forms of mechanism could be employed to carry out my invention, so long as a series of printing devices be fed through the machine consecutively and the inking mechanism be automatically permitted only to operate and render certain of said printing devices effective while others pass through without effecting any printing.

Having, therefore, described my invention, I claim:

1. The combination of an inking mechanism, a series of stencil cards, mechanism for feeding said cards to said inking mechanism, and means causing said inking mechanism to operate only as certain cards are fed through.

2. The combination of an inking mechanism, a blank feeding mechanism, a series of stencil cards, mechanism for feeding said stencil cards through the inking mechanism one after the other and means causing said blank feeding and inking mechanisms to operate only when certain of the cards are fed through.

3. The combination of an inking mechanism, a series of stencil cards, mechanism for feeding said cards to said inking mechanism, and means causing said inking mechanism to operate only as certain cards are fed through, said means comprising a normally disengaged clutch in the driving gear of the inking mechanism, and devices coöperating with the stencil card within the grasp of the inking mechanism to cause the clutch elements to engage only when certain of said cards are within the grasp of the inking mechanism.

4. The combination of an inking mechanism, a series of stencil cards, mechanism for feeding said cards to said inking mechanism, and electrically controlled means causing said inking mechanism to operate only as certain cards are fed through.

5. The combination of an inking mechanism, a series of stencil cards, having differently arranged cut-away portions, mechanism for feeding all of said cards to the inking mechanism, and means coöperating with the cut-away portions of some of the cards to cause the inking mechanism to operate only when those particular cards are fed to it.

6. The combination of an inking mechanism, a series of stencil cards, having differently arranged cut-away portions, mechanism for feeding all of said cards to the inking mechanism, and means coöperating with the cut-away portions of some of the cards to cause the inking mechanism to operate only when those particular cards are fed to it, said means comprising a reciprocating yielding finger of electrically conductive material located on one side of the path of the cards, a



contact piece located opposite thereto on the opposite side of the cards' path, an electric circuit connecting the said finger and contact piece, a source of current supply and a magnetically operated driving clutch for the inking mechanism, the coils of whose electromagnets are also in said circuit.

7. The combination of an inking mechanism, a series of stencil cards having cutaway portions differently arranged, mechanism for feeding said cards to the inking mechanism, an electrical contact on one side of the path of the cards located at the point in said path at which the cutaway portions of certain of said cards would be when fed to the inking

mechanism, a reciprocating contact piece on the other side of the path opposite to the first contact, a normally open clutch in the driving gear of the inking mechanism and means for throwing said clutch into engagement operated by the flow of current when the two above described contacts come together through the cutaway portions of any of the said cards.

Signed at New York, N. Y. this 26th day 25 of July, 1907.

EDWIN D. BELKNAP.

Witnesses:

MAY FILES,

RALPH BERNHARDT.