

F. MYERS.
MACHINES FOR CANCELING STAMPS AND POST-MARKING
LETTERS.
 No. 175,140. Patented March 21, 1876.

Fig 1

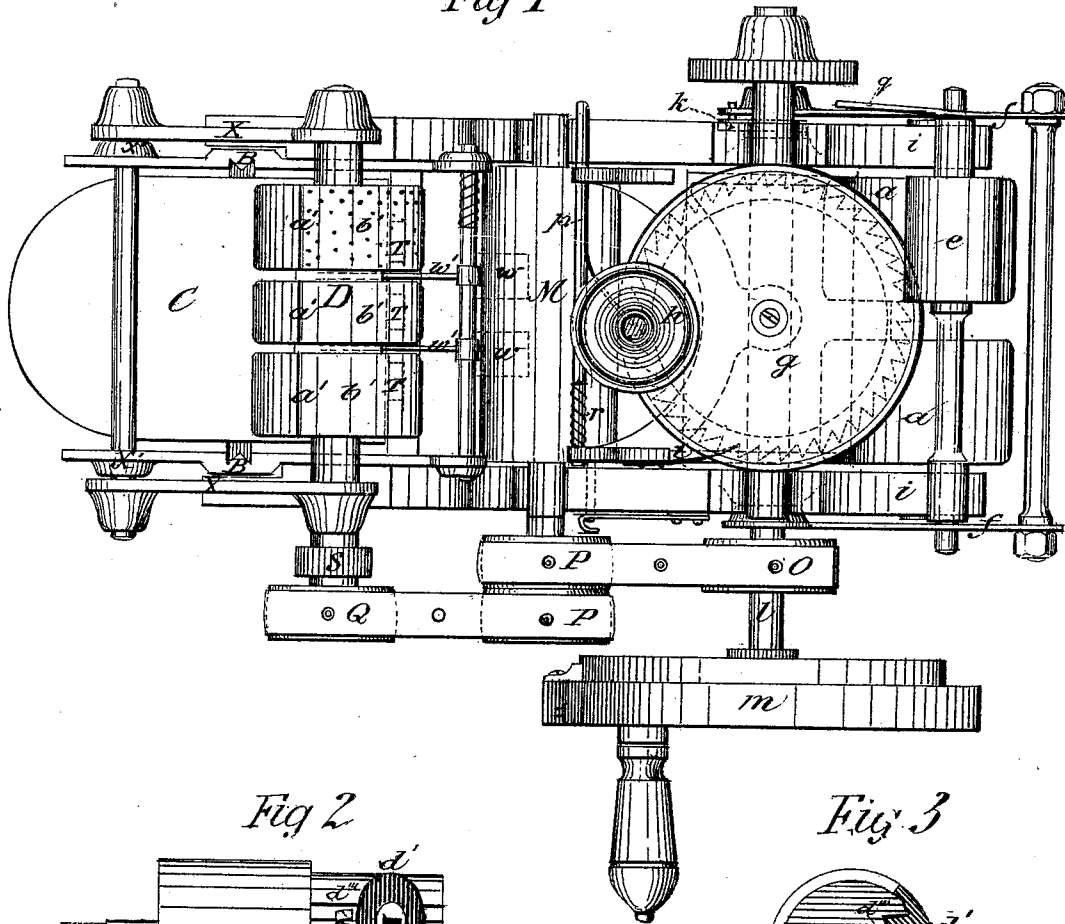


Fig 2

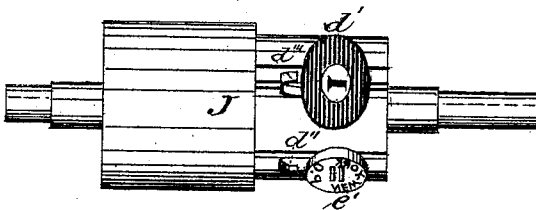
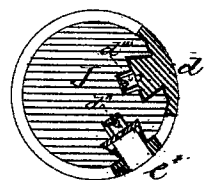


Fig 3



Witnesses;
Ernest J. Kattenbach

Inventor;
Frederick Myers

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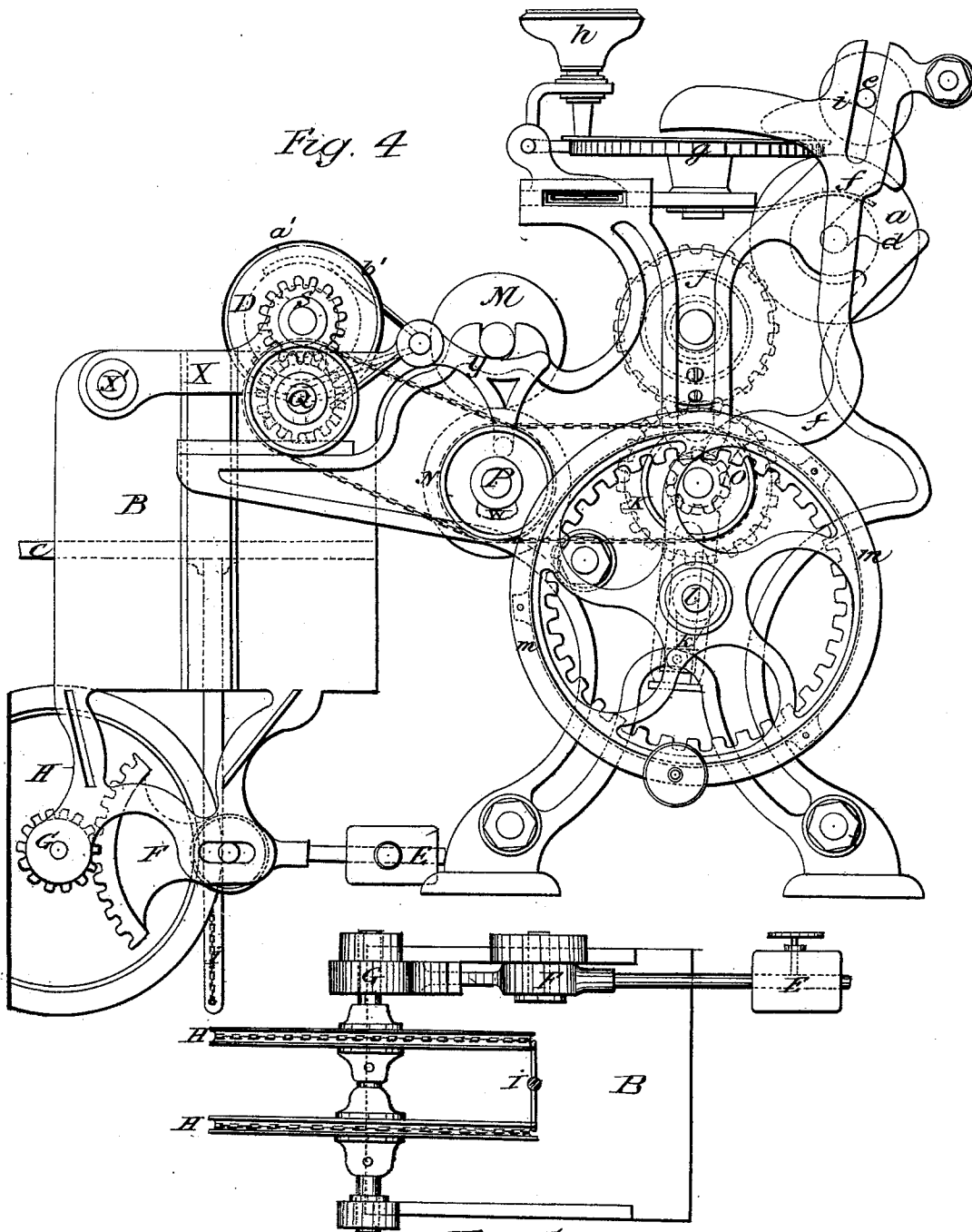


Fig. 4

Fig. 5.

Witnesses:
Ernest J. Kattenbach

Inventor:
Frederick Myers

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Fig. 7.

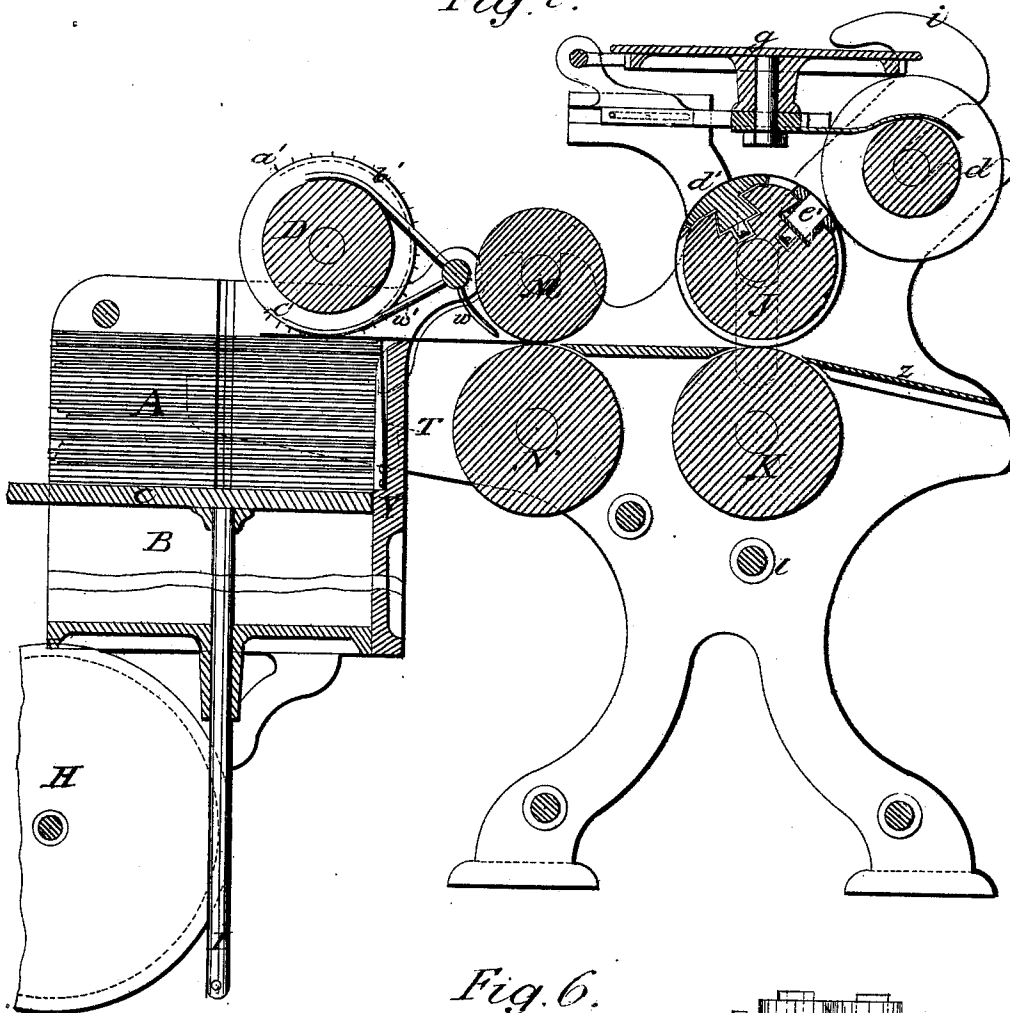
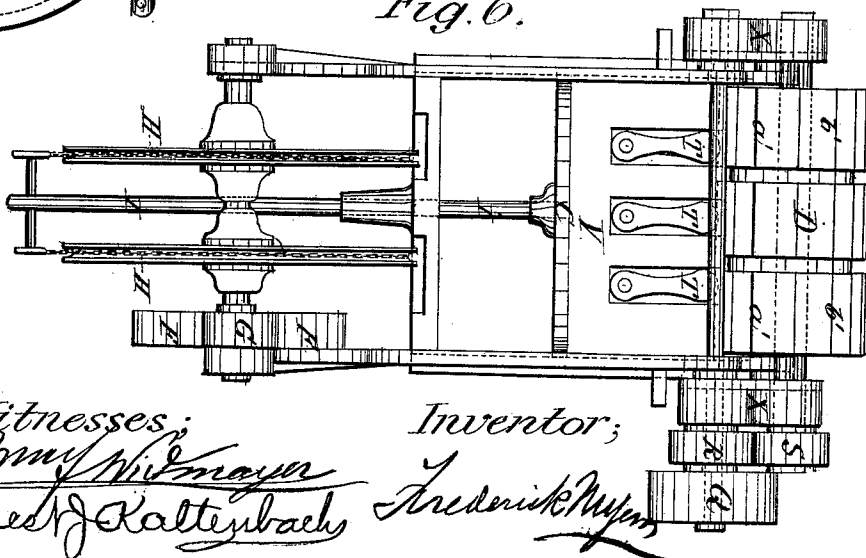


Fig. 6.



Witnesses:
Ernest J. Kattenbach

Inventor;
Frederick Myers

F. MYERS.

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Fig 8

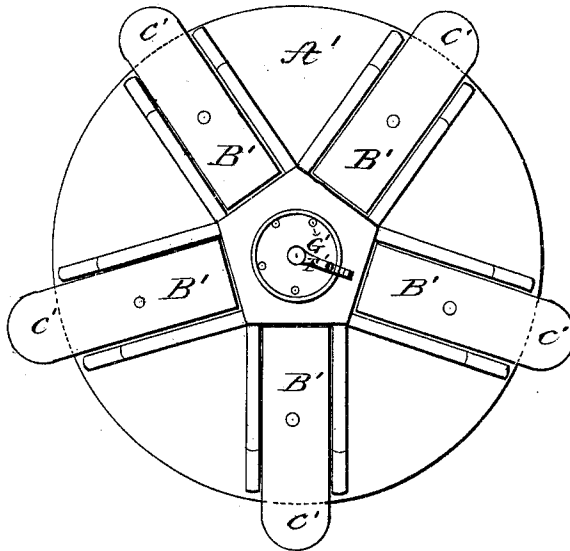
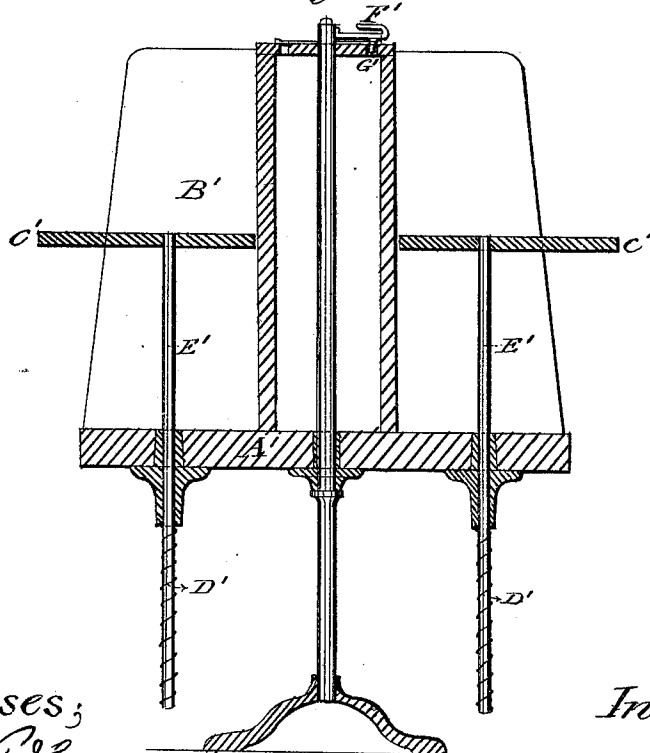


Fig 9



Witnesses;

Ernest J. Kallenbach

Inventor;

Frederick Myers

UNITED STATES PATENT OFFICE

FREDERICK MYERS, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR CANCELING STAMPS AND POSTMARKING LETTERS.

Specification forming part of Letters Patent No. 175,140, dated March 21, 1876; application filed January 21, 1876.

To all whom it may concern:

Be it known that I, FREDERICK MYERS, of New York city, New York, have invented a Machine for Canceling Stamps and Postmarking Letters.

The following is a description of the newly-invented machine for canceling stamps and postmarking letters, which is a full, clear, and exact description thereof, reference being had to the drawings hereunto annexed.

The invention consists of an improved automatic rotary feed mechanism, combined with impression-rollers in such manner that the letters are taken, one after another, in rapid and continuous succession, from a pile in a holder, in which they are placed by an attendant, and passed between the printing-rollers, where the stamps are canceled and the postmark applied by printing-dies on the rollers.

The feed mechanism consists mainly of the contrivance of a continuously-revolving feed-roller, so operating in conjunction with the pile of letters, by running in contact therewith, that by such contact it feeds the letters one after the other in rapid succession, taking them singly from the pile and presenting them to the printing-rollers, so as to be marked in the right place, with as nearly as practicable unvarying certainty, no matter what may be the variations in the length and width of the letters.

Another essential feature of the feed mechanism is a contrivance of it so as to effect a movement of the pile of letters in the feed-holder toward the feed-roller as the pile diminishes, and to graduate the pressure of the pile against the feed-roller, so that it is always the same, without reference to the size and weight of the pile, thus enabling the action of the feed-roller to be uniform, which is of the utmost importance for the successful performance of this kind of work automatically by machinery.

Figure 1 is a plan view of the machine. Fig. 2 is a plan view of the impression-roller, with the canceling and postmark dies attached. Fig. 3 is a transverse section of the same. Fig. 4 is a side elevation of the machine. Fig. 5 is a plan of the contrivance for presenting the letters in the holder to the feed-roller, and

Fig. 6 is an end elevation of the same. Fig. 7 is a longitudinal sectional elevation of the machine. Figs. 8 and 9 are plan and sectional views of a modification showing a revolving hopper for receiving the letters from the machine.

A represents a pile or batch of letters to be canceled and postmarked, for which they are first arranged by the attendant with the stamped sides uppermost and the stamps at the right-hand end, and then placed in the holder B on the follower C under the feed-roller D, against which they are continuously moved as the pile diminishes, and are slightly pressed, with practically unvarying force, by the weighted lever E, which is connected to the follower in this case by the segmental wheel F, pinion G, chain-pulleys H, and the follower-stem I; but any other contrivance that will give the follower sufficient range of movement may be used.

The movement of the pile and the pressure are obtained by the falling of the weighted lever, and the pressure is graduated to practical uniformity by the lessening of the leverage of the weight, by swinging toward the vertical line of its axis in the same proportion as the weight of the pile diminishes.

The feed-roller D is geared with the printing-rollers J K, so as to run in unison with them, to which the letters are delivered from the feed-roller by means of a pair of carrier-rollers, M N. In this example the gear by which the feed-roller, carrier-rollers, and printing-rollers are connected consists of the pulley O on the shaft of the impression-roller K, and the double-faced pulley P on the shaft of the roller N, and the pulley Q, which is geared with the feed-roller D by means of pinions R and S, the pinion S being attached to the shaft of the feed-roller D; but any approved gear by which they will work exactly in unison may be employed. Every time the points *a'* of the sectional bands *b'* of the roller D, which are armed with little teeth, sand or emery paper, cloth, rubber, or any suitable friction material, come around to the pile, they catch a letter on its upper surface and push it forward over the stop-gages T in the top of the side V of the holder, and along under the guide *w* to the carriers M and N, which carry

it to the printing-rollers, where the stamp is canceled and the postmark imprinted by suitable dies *d'* and *e'*.

The roller D and the printing-rollers are so adjusted with relation to the points *a'* of the roller D, the stop-gages T, and the impression-dies of the type-roller J, that the letter being started from said stop-gages by points *a'* of the toothed or friction bands of roller D, will, on coming to the printing-rollers, be presented to the dies thereof, so that the stamp of the letters will unerringly receive the impression of the canceling-die, provided the stamp is located in the usual position on the upper right-hand or lower left-hand corner of the letter. Letters not having the stamp so placed, nor in such proximity thereto as to be reached by the canceling die, which is designedly of large size, to suit all sizes of letters, will be omitted from the holder by the attendant, to be canceled by hand in the ordinary way.

The friction-bands *b'* extend far enough around the roller D to push the letter along until it is fully in the power of the carrier-rollers M N, and terminate at *c'* sufficiently short of the starting-point *a'* to pass as soon as or before the rear end of the letter passes, so that the next letter will not be moved until points *a'* come around, thus insuring the feeding of the letters so that the stamps pass correctly under the canceling-die. The stop-gages are just high enough to allow the uppermost letter of the pile to be passed over them by the feed-roller D, while they retain all the others. In practice they will be made adjustable in order to set them accurately from time to time, as may be required.

The feed-roller D is supported by a swinging frame *x* pivoted at *x'*, which allows the feed-roller to rise during the passage of thick letters over the stop-gages. To the said frame are also attached the pulley Q and pinions R S. The top letter, when being moved off by the feed-roller, draws the next one below it by friction up to the stop-gages in case it does not happen to rest there, so that although the attendant may not always adjust the letters evenly against side V of the holder, they will not fail of being in the right position for the feed-roller.

In addition to the guide *w* there is a guard, *w'*, projecting under the grooved portion of roller D and over the letters, to prevent them from sticking to the roller and being raised up out of their course.

In order that no failure of entering between rollers M and N shall occur, by reason of extra thickness of the letters or other causes, the roller M may be made to rise a little by the cam W and rock-arms *y*, and open the space for the letters to enter freely, but it is let down again, so as to be in work before feed-roller D lets go; other suitable or well-known means may be employed for so raising the roller. From the printing-rollers the letters may be delivered by the spout Z to one of the receptacles of a revolving hopper, A'.

The said receptacles of this modified form of hopper are provided with movable shelves *C'*, which are held near the top when empty by means of the spiral spring D' upon the stem E', and gradually descend as the pile of letters increases, the top letter always remaining in the same relative position to the spout Z as the shelf would be when the receptacle is empty, thus piling the letters, with as nearly as practicable unerring certainty, one upon the other ready for distribution. When one of the receptacles is filled the attendant rotates the hopper, placing the next empty receptacle opposite the spout Z. The said hopper is held in position by means of the pawl F engaging in suitable openings G'. The impression-roller K has an elastic surface to accommodate letters of different thicknesses, to secure a plain print.

The ink is supplied to the dies of the type-roller by the inking-roller *a*. The bearings of this roller have a cavity, *d*, into which it may be raised whenever the machine is to stop for the night or any other considerable length of time, to be held out of contact with the impression-roller, to prevent it from flattening by such contact, which it is liable to on account of the soft nature of the composition of which it is made. The ink is supplied to the roller *a* by a roller, *e*, mounted on the rock-arms *f*, and working over the inking-table *g*, onto which the ink may be supplied from any appropriate pot, *h*. The said inking-table is supported by a sliding frame working in suitable grooves in the frame of the machine, so that the same may be slid back to allow the printing-roller to be removed from the machine when changing the type of the postmark die, &c.

The stationary cam *i* serves as a way for the roller *e* to run on and off from the table easily.

The rock-arms *f* are worked by a crank, *k*, attached to the driving-shaft *l*, operated by the driving-wheel *m*, geared so that the said rocking-arms vibrate only sufficient to supply the necessary amount of ink to the type-roller to make a plain print.

The inking-table is revolved intermittingly for distributing the ink by the sliding pawl *p*, which is moved in one direction by the inclined arm *q* on one of the rock-arms *f*, and in the other direction by the spring *r*, the said pawl working in the notched edge of the table *a*, holding pawl *t*, prevents the table from turning backward.

The stamp-killer *d'* and postmark-die *e'* are held in the roller J by suitable dovetails, and secured therein by the springs *d''* *d'''*, and may be removed when desired, and the die *e'* is provided with two openings which receive the type indicating the month, date, and hour, the name of city, &c., being stationary. The said die also has a movable bottom pivoted at one end, to prevent the type from falling out while being removed or attached to the roller. The locking-springs *d''* *d'''* are provided with

a small stud, which inserts itself into openings in the bottom of the dies, preventing the same from shifting.

The dies can easily be removed by pressing down upon the springs, which release the studs and allow the dies to be removed.

The machine is alike applicable for feeding and printing cards, railroad-tickets, or other articles of similar form and irregular size. Instead of placing the hopper or letter-holder beneath the feeding-in device or roller, it may, if desired, be placed above it; in such case the bottom one, instead of the top one, of the pile of letters would be one after the other fed to the canceling or stamping devices.

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

1. In combination, the hopper or holder B, the automatically-operated follower C, the adjustable spring stop-gages T, secured to the end or front side V of the holder, and the feeding-wheel D, substantially as described.

2. In combination with a feed-roller, having a portion of its periphery covered or provided with a toothed or friction material, and intermittently at regular intervals acting to feed a

letter from the pile, an automatically-operated follower within the letter-containing hopper or box, stop-gages T, and the guide *w* and guard *w'*, substantially as shown and described.

3. The combination of the intermittently-rotating ink-table *g*, inking-roller *a*, and distributing-roller *e*, with the type-roller J, substantially as specified.

4. The sliding pawl *p* and inclined arm *q* on the ink-roller arm *f*, combined and arranged with the notched rotating inking-table *g*, substantially as described.

5. In combination with the letter holder or hopper and its follower, a swing-frame pivoted to such holder, and having in its swinging arms bearings for the feed-roller, whereby the latter may be free to rise or fall, as demanded by the varying thicknesses of the letters to be fed, without disturbing its engagement with the devices by which it is driven, substantially as shown and described.

FREDERICK MYERS.

Witnesses:

WM. F. BIDMAYER,

ERNEST J. KALTENBACH.