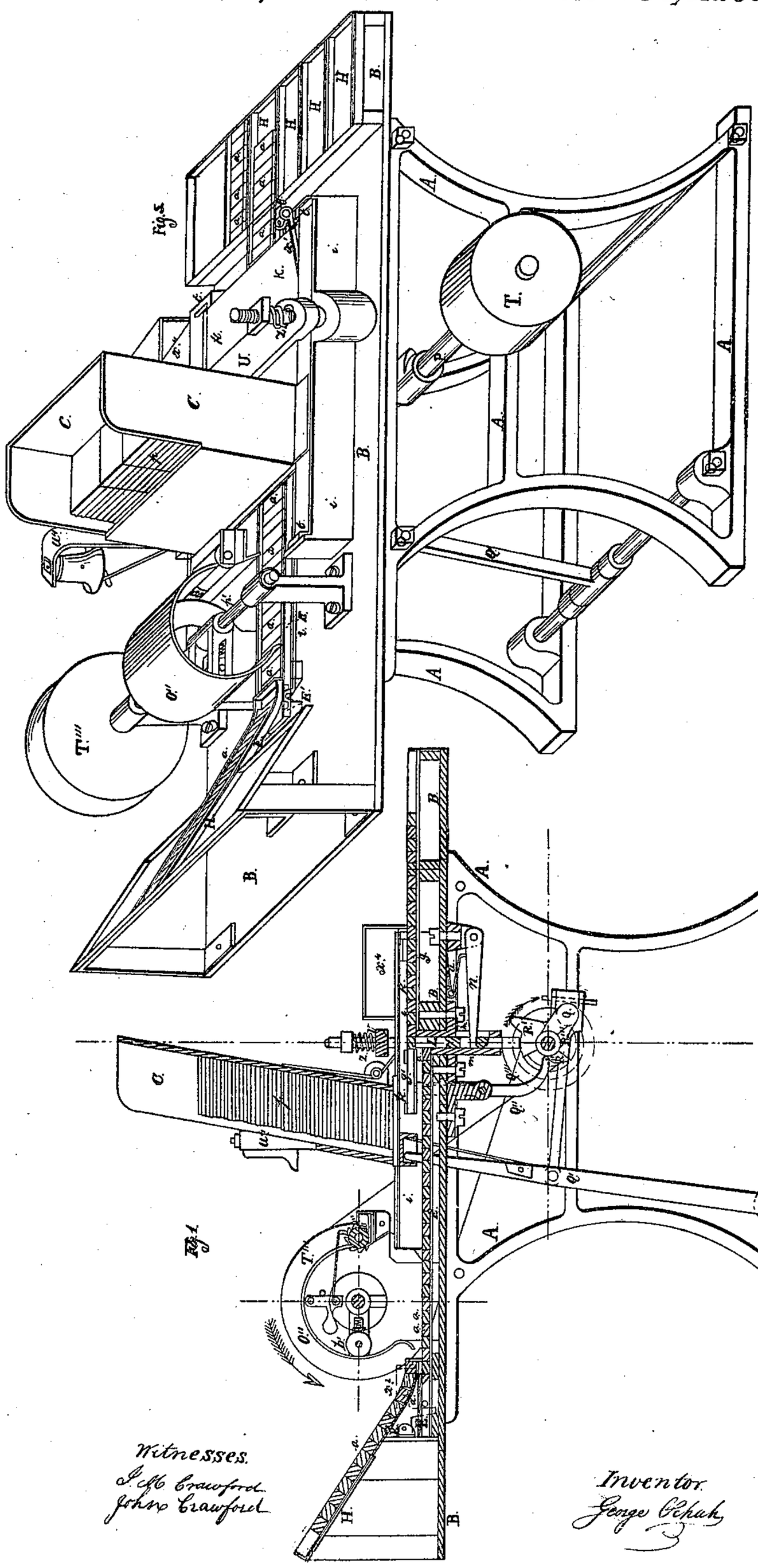
G. Schuh. Sheet 1. 2 Sheets.

# Addressing Mach.

No. 23787. Patented Apr. 26. 1859.



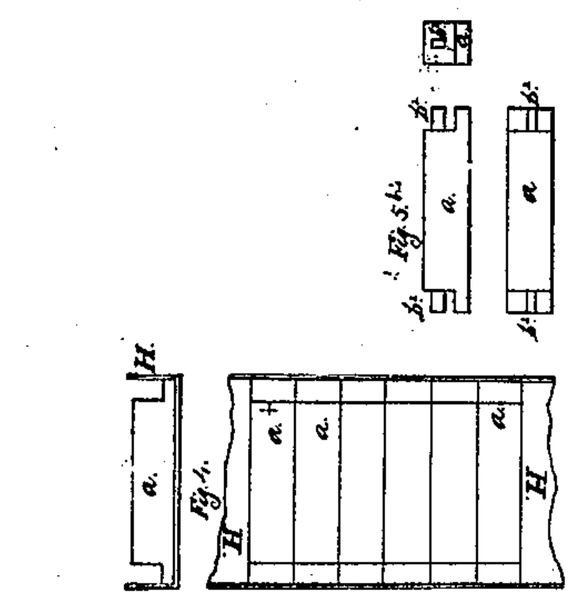

Witnesses.
Jeff. Crawford
John. Crawford

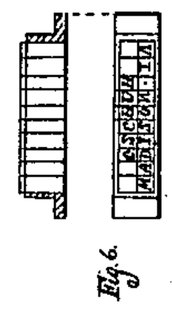
Inventor.
George Schuh

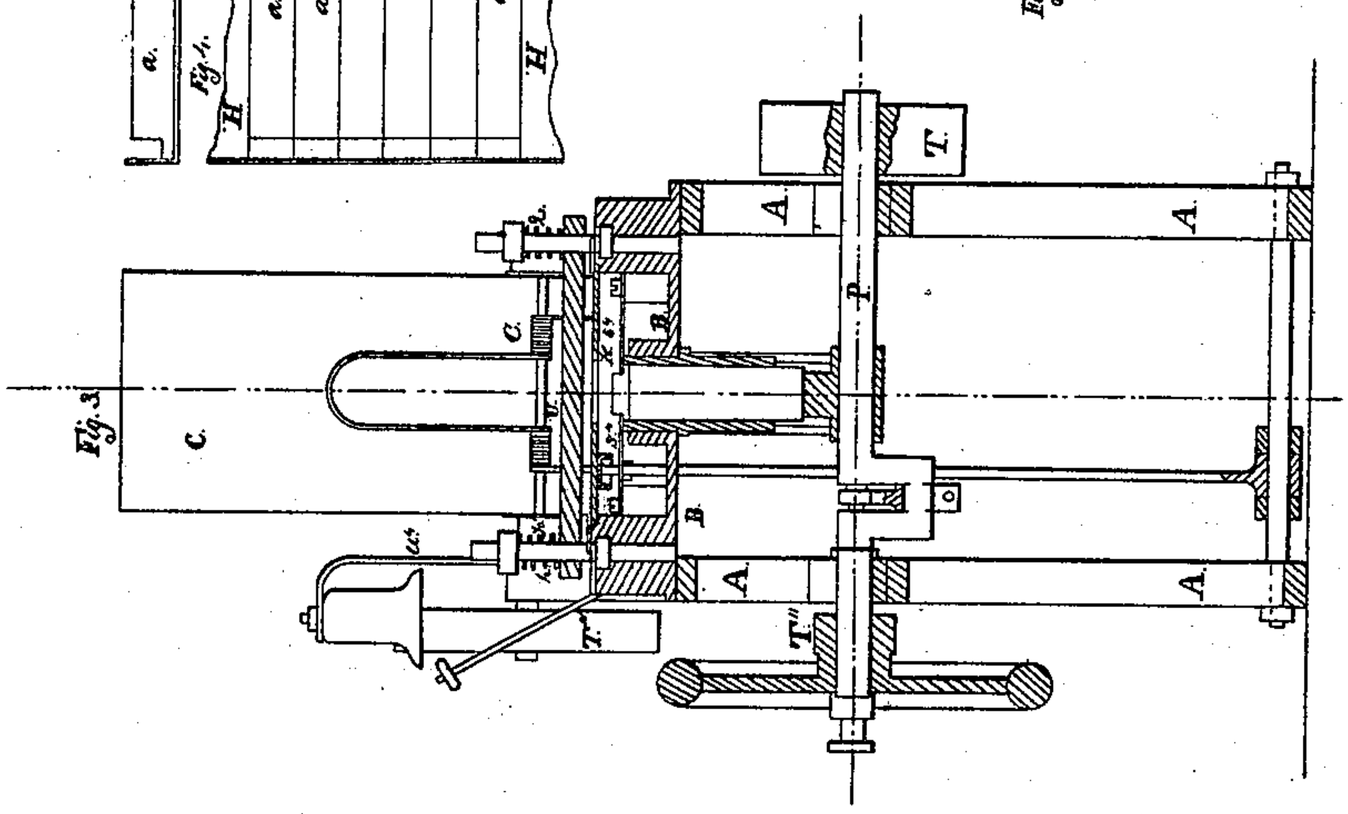
G. Schuh. Sheet 2. 2 Sheets

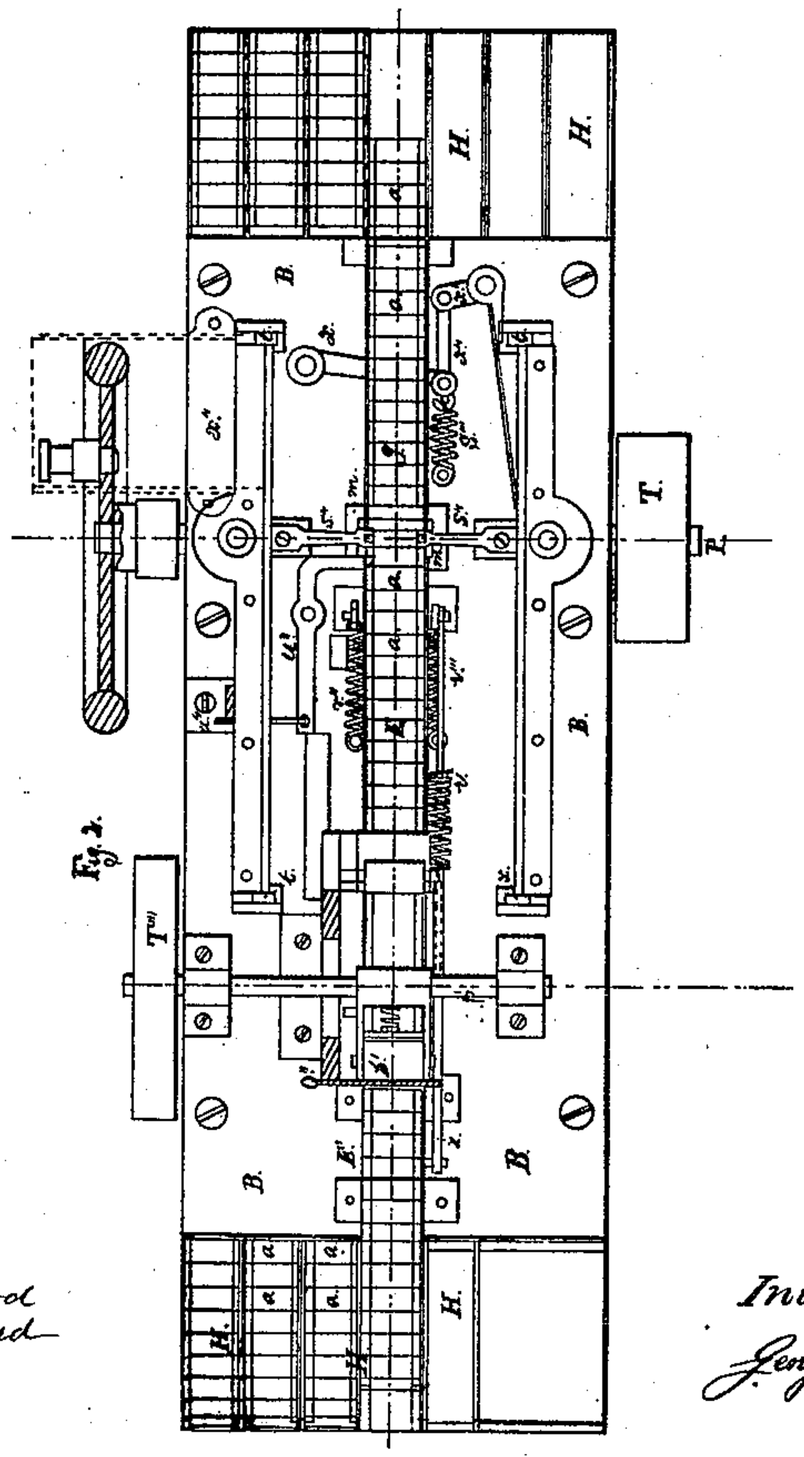
# Addressing Mach.

No. 23787. Patented Apr. 26. 1859.




Witnesses.
S. A. Crawford
John Crawford

Inventor.
George Schuh.

# UNITED STATES PATENT OFFICE.

GEORGE SCHUH, OF MADISON, INDIANA.

## MACHINE FOR ADDRESSING NEWSPAPERS, &c.

Specification of Letters Patent No. 23,787, dated April 26, 1859.

*To all whom it may concern:*

Be it known that I, GEORGE SCHUH, of Madison, county of Jefferson, and State of Indiana, have invented an Improvement in Machines for Printing Addresses on Newspapers and other Documents, of which the following is a specification.

This improvement relates to that class of machines which are intended to substitute the process of printing for that of writing the addresses on papers intended to be mailed.

In the annexed drawings Figure 1 is a vertical section through the middle of the machine. Fig. 2 is a horizontal view of the same; part of the pieces being removed to show the others more distinctly. Fig. 3 is a transverse section by a vertical plane passing through the driving shaft. Fig. 4 is a view, on a larger scale, of the blocks or forms containing the addresses, put up in their boxes or channels. Fig. 5 is a perspective view of the whole machine. Fig. 5$^{bis}$ shows a type form provided with pins $b^2$ which give motion to a bell hammer; the first or last name in each "postoffice" being provided with these pins, the use of which is to give notice at the beginning or termination of each postoffice. Fig. 6 represents a form or type box (on an enlarged scale) filled with the ordinary movable type and containing one complete address.

In all the figures, the same pieces are marked by corresponding letters.

A, are two standards supporting the bed plate B, the driving shaft P, and other pieces.

B, is the bed plate on which most of the machinery is fitted up.

C, is a hopper or box, partly open in front, to facilitate the introduction of folded newspapers *p*. This box is inclined to prevent the falling out of the papers during the working of the machine, and is constantly supplied with papers as fast as they are worked off.

K is a sliding gate which closes the hopper C underneath. This slide has a heel or shoulder, so that when it is moved backward the lowest paper in the hopper C drops down in front of this heel; and this slide being moved forward will carry the paper in front of this heel out of the hopper C and to the platen U where it gets printed.

U is a platen kept in its place by two bolts *y*, *y*, as shown. It is held down by two springs Z, to within a distance from the slide K equal to the thickness of one paper. The papers are pressed against it in the act of getting printed.

*b'* is an inking roller supported by a fork fastened to the shaft *p'*, and pressed outwardly in its rotary motion by a spiral spring against the roller *b'''* of an ink fountain, then passing and distributing the ink along the inside of the cylindrical table *o''*, passed lastly over the types *a* to charge the same with ink.

T''' is the driving pulley of the shaft *p'*. It is put in motion by the pulley T'' on the shaft P. *a*, the types, each one expressing one complete address. They may be cast in one single piece, or be put up in form boxes (as shown in Fig. 6) with the ordinary movable type. H, boxes or channels containing the type *a* put in as shown so as to move freely in the same, and all the names for the same postoffice together, the first or last name in the series being provided with a pin, as shown in Fig. 5$^{bis}$, for the purpose of giving motion to the hammer of the notice bell. These channels are detached and can be put in connection with the feed channel E' of the machine. This latter channel is fastened to the machine and inclined to feed the type by the weight thereof; its end is turned horizontal and closed, but in the bottom is an opening through which the type *a* can fall freely into the channel E when the shifter or feed-bolt E'' is moved back so as to clear the opening underneath. At the end of its course, this bolt presses on one arm of an angle lever $x^2$ (shown in dotted lines in Fig. 1, but removed in the other figures for the purpose of showing the construction of the end of the channel E' more clearly), and makes the other arm of this lever press the type through the opening in front of the feed bolt in case their gravity is insufficient for the purpose.

L is a bolster, in section the same size as the type *a*. This bolster is movable in a housing *m*, and is carried upward by the cam R'. When released, the spring *u* and lever *n* press it down.

*g* is the discharge channel, into which the type is pushed after the impression is made. One of the empty boxes H is put at the end of this channel to receive the type in its proper order.

G′ is a shifter or bolt, put in motion by the cam R″ and lever Q″, and serves to discharge the type.

*l*, are spring fingers holding the paper and preventing the same from being carried backward by the retrograde motion of the sliding gate *k*.

P is the driving shaft provided with a crank which gives motion to the sliding gate *k* by means of the arm Q′. This shaft is put in motion by steam or man power, and has a driving pulley T, and a fly wheel. R′, the cam giving motion to the bolster L, R″, the cam giving motion to the lever Q″ which moves the discharge bolt G′, R‴, the cam giving motion to the feed bolt E″ by means of a lever, which may be designated Q‴, similar to the lever Q″, and jointed to the feed bolt by a spring connecting rod.

$S^4$, $S^4$, are two springs which, pressed on the shoulders of the type forms *a*, detach the latter from the paper after the impression and keeps them in contact with the bolster L during its downward motion.

*x* $x^1$, are two levers connected by a link *x*″, and each turning on a wrist. When the slide *k* comes near the end of its forward course, a butting piece on the same presses against the lever *x*, which latter puts the angle lever *x*′ in motion, by means of the link *x*″, moves the fly arm of *x*′, and pushes rapidly the last printed paper into the channel $x^4$ which guides it into a basket. On the slide *k* being moved backward, the spring *s*‴ sets the fly back again.

*t* are rubber springs to let the gate *k* butt against.

$u^4$, is the alarm bell with its standard.

$u^3$ is a lever having an "incline" in communication with the interior of the feed channel E, and its other end communicating by means of a wire with the notice bell. The type forms which have the pins $b^2$, on passing this lever, cause the hammer to strike the bell.

The boxes H, filled with type, are put on the feed end of the machine, one being put in connection with the feed channel E′, and when emptied, taken aside and replaced by a filled one. An empty box is also put in connection with the discharge channel, and, when filled, taken aside and replaced by another one.

The general working of the machine is as follows. Fill the hopper C with folded papers, and put the shaft P in motion in the direction of the arrow. In the position in which the machine is here shown, a paper is just printed and the bolster L carried down to the first shoulder of the cam R′, and the type having made the impression remains on top of the bolster opposite the discharge channel G, being held there by the two springs $S^4$. In the next motion, the shifter G′ is carried forward, by means of the cam R″ and lever Q″, and the last used type is pushed from the top of the bolster into the discharge channel G. The slide gate K is now carried backward by means of the lever Q′ and the crank Q, and takes another paper which has dropped in front of its heel. By this time, the bolster L has descended and bears on the lowest part of the cam R′, leaving its top face a little lower than the bottom of the feed channel E. The feed bolt E″ is then moved forward and pushes all the type contained in E forward till another type forming an address is carried over the bolster L and pressed against a shoulder or stop on the housing M. By the return stroke of the crank Q, the slide K is moved forward and brings a paper under the platen U. The bolster L is then moved upward by the cam R′ and the type impressed on the paper. The last forward fed paper pushes the preceding one from under and in front of the platen U and opposite to the fly *x*′ which latter is put in motion by the bumper on the slide K and pushes the paper in the channel $x^4$ from whence it passes to the receiving basket. The same series of motions is repeated by each revolution of the crank shaft P, and for each paper. The slide gate K is slotted for the type to act upon the paper when under the platen.

I am aware that there have been previous arrangements, for the like purpose, of type forms brought under the action of a stamp, by means of a slide moving by degrees and operating in connection with a slitted plate for securing to the document the desired impression; and that a traversing bed has been used to bring all the names, numbers, or addresses in the form successively under an aperture in the tympan and causing the matter placed under the platen to receive the desired impression; such I do not claim; but

What I do claim here, is:

1. The combination with the hopper C, which contains the documents to be addressed, of the sliding gate K, provided with a heel or step, and operating to close the hopper discharge, and at intervals to open the same in such manner as to permit of a single document being deposited from the pile in the hopper in front of said heel for after traverse with the gate, substantially as and for the purposes specified.

2. I also claim the combination of the inclined feeding channel E′, main type channel E, and raised discharge channel *g*.

3. I further claim, in connection with the feed bolt E″, the angle lever $x^2$, or its equivalent, to aid the type in its course from the feed channel to the main channel of the machine.

4. Likewise, I claim the employment of

form boxes H, for use as described at either end of the machine.

5. Also, the combination with the traversing type or form, of a notice bell, or its equivalent, for operation by the type at intervals as described.

6. Likewise, the combination with the bolster L, operating essentially sa described, of the springs $S^4$, $S^4$, for relieving the type from the paper and holding it on the bolster; and type shifter G′.

7. And lastly, the document discharging fly $x'$, when operated by the sliding gate K, essentially as described.

In testimony whereof, I have hereunto subscribed my name.

Madison this 15 March 1859.

GEORGE SCHUH.

Witnesses:
J. M. CRAWFORD,
JOHN CRAWFORD.