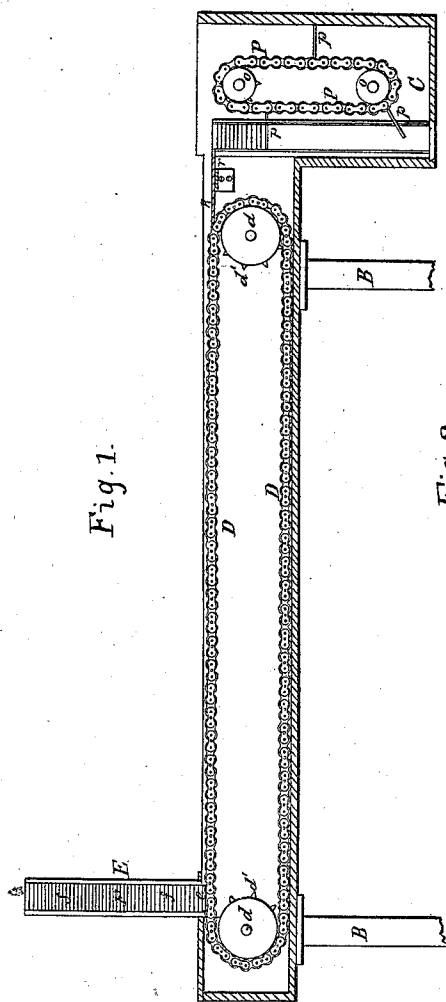
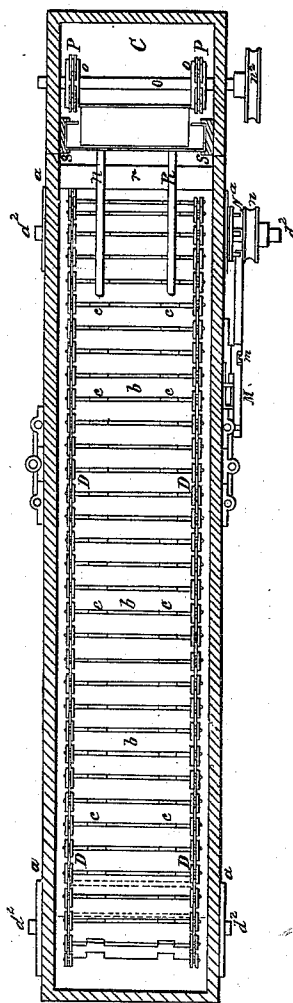


*C. K. Marshall. Sheet 1 of 2 Sheets.*  
*Addressing Mach.*  
*N<sup>o</sup> 86,680. Patented Feb. 9, 1869.*



*Fig. 1.*

*Fig. 2.*



*Fig. 5.*

*John Smith, Jr. f*

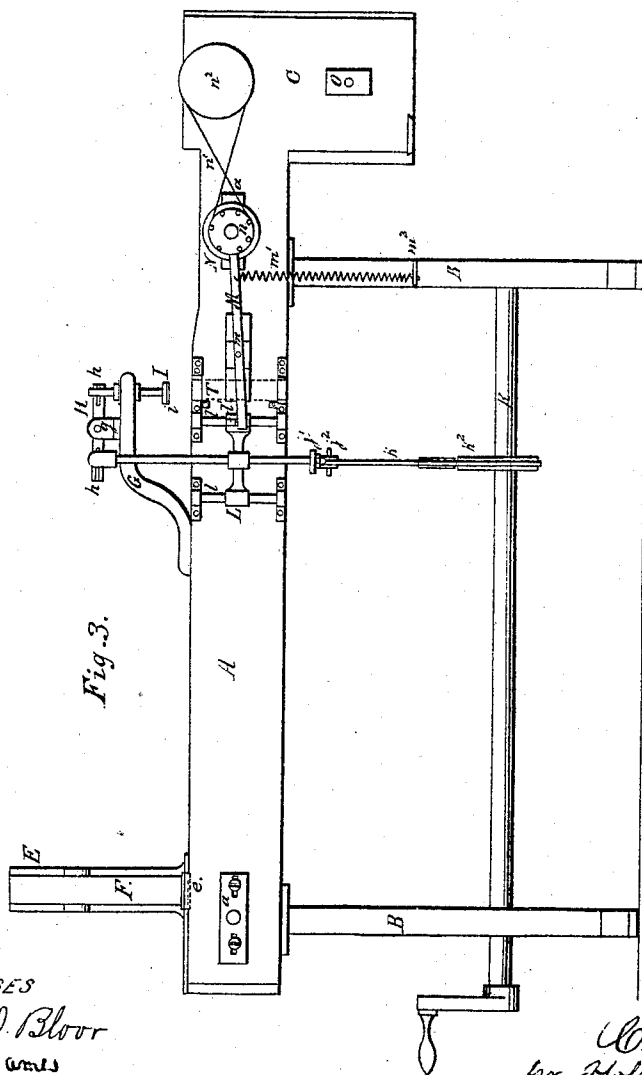
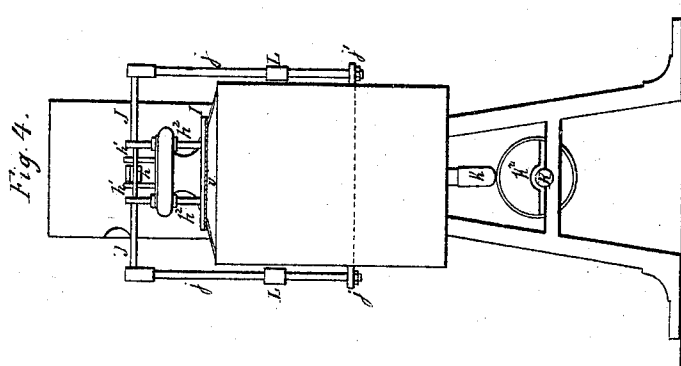
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*C. K. Marshall. Sheet 2 of 2 Sheets.*  
*Addressing Mach.*  
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WITNESSES  
 John D. Bloor  
 Edwin James

INVENTOR.  
 C. K. Marshall.  
 per Holmead & Hollingshead  
 Attorneys

# United States Patent Office.

C. K. MARSHALL, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 86,680, dated February 9, 1869; antedated January 29, 1869.

## IMPROVEMENT IN NEWSPAPER-ADDRESSING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, C. K. MARSHALL, of New Orleans, parish of Orleans, and State of Louisiana, have invented certain new and useful Improvements in Apparatus for Addressing Newspapers, Magazines, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a sectional view of the endless belts, type-cases, &c.

Figure 2 is a plan view of the same.

Figure 3 is a sectional view of the apparatus entire.

Figure 4 is an end view.

Figure 5 is a face view of one of the independent type-plates.

I am aware that numerous attempts have been made to introduce into public use machines for addressing newspapers, magazines, &c., and that various patents have been issued, covering the same; but as yet, no machine has been introduced that is really practical and expeditious.

The object of my invention is to construct a machine that is both simple, practical, and expeditious—one that can readily be worked by the most inexperienced employé of the establishment, and one that saves all the delay of setting up the address of subscribers in type, and also the necessary expense of keeping a large lot of type constantly on hand for this purpose.

To enable others skilled in the art to which my invention is applicable, to make and use the same, I will proceed to describe its construction and operation.

A is a box-frame, in which works the endless belt. To this frame A, I firmly secure suitable legs, B B, which may be made of any desired height.

At the outer end of the frame A, I attach a box, C, in which is properly arranged the necessary mechanism for conveying the type-plates from the endless belt to the receiving-case.

D is an endless belt, which may be constructed in sections, which have their bearings in chains, or may be constructed in one continuous sheet, and may be made of metal or any other suitable material.

This endless belt D passes over rollers *d d*, which, when the sectional belt and chains are used, are toothed, as shown at *d' d'*.

Through these rollers, *d d*, pass shafts *d<sup>2</sup> d<sup>2</sup>*, which have their bearings in metallic plates, *a a*, arranged on the side of the frame A.

On the endless belt D, at suitable intervals, I arrange metallic plates, or ridges, *b b*. The distance between these ridges is just sufficient to receive a type-plate, and corresponds exactly with the depth of the plate.

E is a frame, having its side left open to receive the type-case, and is firmly secured to the end of the frame A, extending at right angles therefrom.

The bottom of this frame communicates with a trough, *e*, by means of which the type-plates are conveyed to the endless belt.

F is a type-case, which is constructed with flanged sides, and an open face and sliding bottom.

The face is left open, or slotted, so as to enable the operator readily to ascertain at any moment to what degree the matter contained therein has been exhausted.

*f f* are type-plates, or strips, which may be made of metal, wood, rubber, or any other suitable material.

These plates, or strips *f f*, may be made of any length or width that is deemed most desirable. I usually make them about two and a half inches long, and a half inch wide, and of depth sufficient to run from about twelve to sixteen to the inch, when arranged in the case F, and have the names of subscribers, &c., either stamped, engraved, or printed, by stereotyping, upon their surfaces, as shown in fig. 5.

About midway of the frame A, I firmly secure a curved arm, G. On the top of this arm G, I firmly secure the bearing-plates *g g* of the lever H.

This lever H is slotted at both ends, as shown at *h h*, fig. 3.

The forward slot *h* receives and works the rod *h<sup>1</sup>*, which unites two uprights, *h<sup>2</sup> h<sup>2</sup>*, which pass through suitable openings in the head of the arm G, and at their lower ends are firmly secured to the platen or follower I.

This platen or follower I, I construct of metal, and usually in the form of a flat plate; but the material and form may be changed, and any other substituted, when the same is deemed desirable.

I face the platen I with a thin sheet of rubber, *i*.

In the other slot *h*, of the lever H, enters and works the rod J. This rod connects, by suitable bracing at their upper ends, the uprights *j j*.

These uprights, *j j*, are firmly bolted, and united, at their lower ends, to a plate, *j<sup>1</sup>*.

On the lower surface of this metal plate *j<sup>1</sup>* there is a slotted projection, *j<sup>2</sup>*, to which is firmly bolted the cam-shaft *k*. This cam-shaft, *k*, is firmly secured at its lower end to the cam-wheel *k<sup>2</sup>*, which is firmly secured to the main driving-shaft K.

To one of the uprights, *j*, I firmly secure a sliding plate, L. This plate L works on suitable guide-rods, *l l*, attached to the side of the frame A.

On this plate L there is a flange, *l<sup>1</sup>*, which, as the plate L ascends and descends, at regular intervals, is caused to strike the lever-pawl M. This lever-pawl M has its bearing in the side of the frame A, and may be held by a screw, *m*, or any other convenient means.

To this lever-pawl *m* there is attached a spring, *m<sup>1</sup>*, which, at its lower end, is firmly secured to a plate, *m<sup>2</sup>*, which projects from the forward leg B.

The tension of this spring, *m<sup>1</sup>*, must be such that the lip of the lever-pawl will always be caused to rest on one of the teeth of the ratchet-wheel N.

N is a ratchet-wheel, which is firmly bolted, immediately outside of the frame A, to the shaft  $d^2$  of the endless-belt roller  $d$ .

Outside of the ratchet-wheel N there is also bolted to the shaft  $d^2$  a grooved wheel,  $n$ . This grooved wheel  $n$  receives an endless grit-band,  $n^1$ , which also passes over a grooved wheel,  $n^2$ . This grooved wheel  $n^2$  is firmly secured to a shaft, O, which has its bearings about midway of the box C.

In the lower portion of the box C there is also another shaft, O'.

To the ends of these shafts, O and O', are secured grooved wheels  $o o$ , two on each shaft.

These grooved wheels  $o o$  receive and operate endless chains P P.

To these chains P P are secured, at proper intervals, leaves, or plates,  $p p$ .

When the apparatus is in operation, one of these leaves, or plates,  $p p$ , is always in the receiving-case, and descends as the type-plates are deposited therein by the fingers R R, one of said leaves always furnishing the bed for the type-plates.

R R are two metallic plates, or fingers, which are firmly secured to a plate,  $r$ , the ends extending to the edge of the case, which receives the discharged type-plates.

These fingers, or plates, R R, extend some distance along the endless belt D, and receive the type-plates soon after the action of the follower or platen I.

These fingers rest in recesses  $c c$ , on the endless belt, said recesses being of depth sufficient to allow the fingers to be level with the face of the belt.

S S are guide-plates, arranged in the box C, and which receive the type-plates as they are discharged from the fingers R R.

T is an inking-belt, that is caused to revolve by any convenient means, as occasion requires.

The operation of the apparatus is as follows:

The type-plates  $f f$ , bearing the names and address of the different subscribers, all properly classified and arranged, are placed in a series of type-cases, F. The belt T is then properly inked. One of these type-cases, F, is then placed in the outer frame E, and the sliding bottom is then withdrawn from the case F, which causes the lower type-plate  $f$  to fall, through the trough  $e$ , to the endless belt D. The crank-handle is then turned, which revolves the shaft K. This gives motion to the cam-wheel  $k^2$ , which, in turn, imparts motion to the cam-shaft  $k$ , which not only imparts motion to the platen I, but also, through the agency of the flange  $l$ , on the sliding plate L, causes the pawl-lever to move, the distance between its teeth, the endless belt D. Now, this distance is nearly the width of one of the type-plates  $f$ . As the endless belt revolves, one of the plates, or ridges,  $b$ , on the endless belt D, strikes the type-plate  $f$ , which is in the trough  $e$ , and conveys it, by successive stages, to a position immediately under the platen or follower, when, after the impression is taken, it is carried on, by the movement of the belt,

until it reaches the plates or fingers R R, where it is left until the next type-plate,  $f$ , arrives, when it is advanced along the fingers or plates the width of a type-plate, and so on, until it reaches the end of the fingers, when it drops on the leaf or plate  $p$ , which works in the empty case F, which has been previously placed in the box C to receive the type-plates. The type-plates have meanwhile been received successively upon the belt, until the entire belt is occupied with them, so that at each revolution of the crank a new one is added at the left, while an old one is dropped from the fingers, at the right-hand end of the machine, into the receiving-box F.

Thus it will be observed that as one of the type-cases is being emptied, the plates are transferred, in precisely the same order, to another case for future use, and thus, day after day, the operation can be continued, the type-plates being always in proper order, without the liability of becoming disarranged.

I would here remark that various modifications of the mechanism herein shown would readily suggest themselves to any skilled mechanic.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent, is—

1. The endless belt D, with its plates, or ridges,  $b b$ , and recesses,  $c c$ , and the fingers or plates R R, when the whole is so combined and arranged as to operate substantially as described, as and for the purpose specified.
2. The slotted lever H, cam-wheel  $k^2$ , platen I, up-rights  $h^2$ , connecting-rod  $h^1$ , when the whole are combined and arranged so as to operate substantially as described, and for the purpose specified.
3. The sliding plate L, with its flange  $l$ , in combination with the lever-pawl M and spring  $m^1$ , when the same are so constructed and arranged as to supply the operating-mechanism for both the ratchet-wheel N and grooved pulley  $n^2$ , substantially as described, as and for the purpose specified.
4. The combination of the endless chains P P with the plate or leaf  $p$ , or their equivalents, when the same are constructed so as to operate substantially as described.
5. The type-case F, in combination with the trough  $e$ , when the former is provided with a sliding bottom, substantially as described, as and for the purpose specified.
6. Constructing the independent type-plates of thin material, so as to be compactly deposited upon each other within the receptacle E, substantially as described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

C. K. MARSHALL.

Witnesses:

JOHN A. BLOOR,  
EDWIN JAMES.