

Patented Oct. 28, 1879.

Fig. 1.

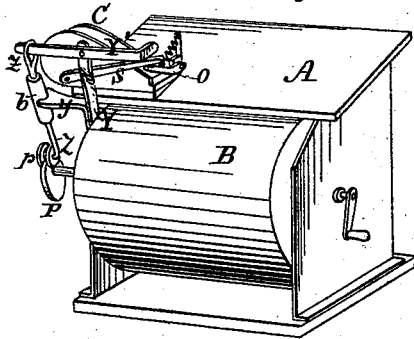


Fig. 2.

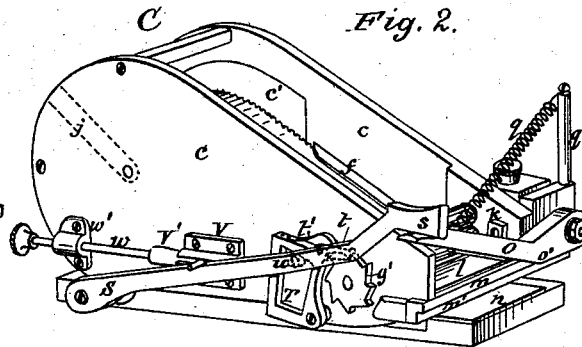


Fig. 3.

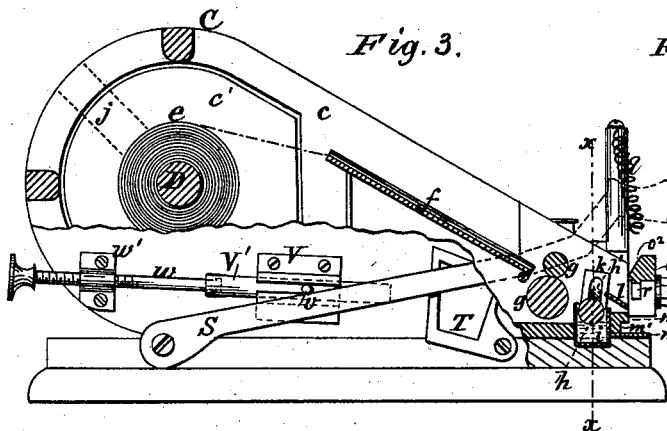


Fig. 4.

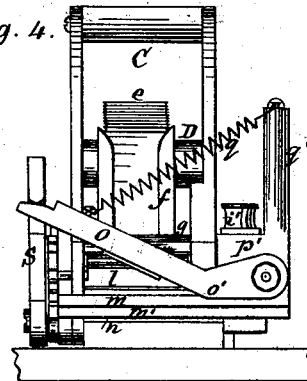


Fig. 6.

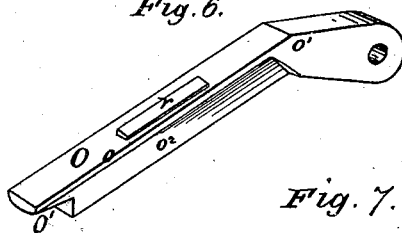


Fig. 7.

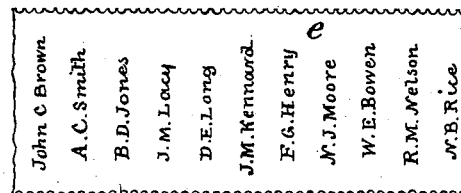
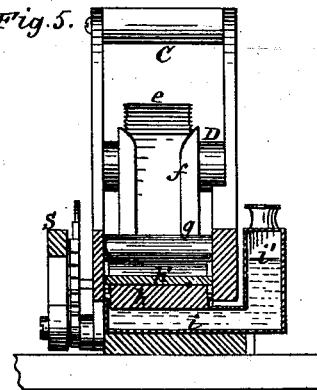


Fig. 5.



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IMPROVEMENT IN ADDRESSING ATTACHMENTS FOR PRINTING-MACHINES.

Specification forming part of Letters Patent No. **220,977**, dated October 28, 1879; application filed April 7, 1879.

To all whom it may concern:

Be it known that I, JOHN M. KENNARD, of Waterloo, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Apparatus for Attaching Address-Labels to Newspapers; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to that class of addressing-machines which are used in connection with printing and folding machines, being arranged upon the feed-boards of such machines, and adapted to attach the labels to the sheets as fed to the printing or folding devices.

Heretofore addressing-machines attached to printing or folding machines have been very complex in their construction, their operation being to print names upon papers by means of a large number of stencils or stereotyped plates fed in succession to the machines.

The object of my invention is to produce a simple device to be attached to, and be operated automatically by, a printing-press or folding-machine, and in which is used a long strip of addresses previously printed.

My invention consists in the combination of new mechanism and means employed for that purpose, as will be more fully described in the following specification and claims.

In the accompanying drawings, Figure 1 is a perspective view of the feed-board and impression-cylinder of a printing-machine, my improved apparatus being arranged upon the feed-board. Fig. 2 is a perspective view of my improved apparatus detached. Fig. 3 is a side elevation of the same, with part of its side wall broken away to show the interior arrangement. Fig. 4 is a front-end view of the apparatus. Fig. 5 is a section on line *x x* of Fig. 3. Fig. 6 is a perspective bottom view of the label cutting and affixing arm. Fig. 7 is a view of a strip of paper having names printed transversely upon it, and adapted to be cut up to form address-labels.

Referring to Fig. 1 of the drawings, the letter A indicates the feed-board, and B the impression-cylinder, of a printing-machine. The various attachments of these parts, not being

necessary to illustrate my invention, are omitted.

The letter C indicates my improved apparatus in the position it occupies upon the feed-board, and connected with the rotary shaft of the machine-cylinder in a suitable manner to be operated automatically thereby.

Referring to Figs. 2, 3, 4, 5, the letters *c c* designate the side walls of the frame of the apparatus, said walls being high at their rear ends and tapering toward the front.

Between the high portions of these walls is journaled a drum, D, which carries the strip of labels *e*, formed into a roll or coil, and *f* is a guide for the strip. This guide is arranged in front of the coil or roll, and is inclined in proper position to direct the strip *e* between the feed-rollers *g g*, journaled transversely near the front of the apparatus, and having their peripheries touching each other, and preferably covered with some yielding fabric, such as felt or cloth. The journal of the lower feed-roller projects through the side wall of the apparatus and carries a ratchet-wheel, *g'*. Immediately in front of the feed-rollers *g* are located the moistening-rollers *h* and *h'*; the lower of which, *h*, rotates in a trough, *i*, arranged transversely in the bottom of the apparatus, and connecting with a tank, *i'*, outside the apparatus. The upper roller, *h'*, lies upon the lower roller, and its ends extend through nearly vertical slots in side plates, *k*, in order that it may rest freely by its own weight upon the said lower roller. In front of the moistening-rollers, with its rear edge standing above their junction, is an inclined guard-plate, *l*, extending between the walls *c c*, and terminating forward slightly above the edge of the stationary knife *m*, which projects over a recess or is recessed at *m'*. Immediately in front of this recess *m'*, and slightly below the stationary knife *m*, is the table covered with a pad or cushion, *n*, of elastic rubber or other suitable material, across which the sheets are fed to have the labels affixed thereto.

The letter O designates a vibratory arm or cutter pivoted to a lateral projection, *p'*, of the stationary cutter, said arm extending across the open front of the apparatus in such position that when swinging downward its edge

o will move close to the edge of the stationary knife *m*. This edge *o* is sharpened to perform a shear-like action in conjunction with the stationary knife *m*. A spring, *q*, attached to the post *q'*, retracts the knife *O* upward after it has been pressed downward for cutting off a label.

The cutter *O* has a flat under surface, from which projects an oblong plate, *r*, the surface of which has about the same shape as, but is somewhat smaller than, the labels as cut by the apparatus, and said surface inclines downwardly somewhat from its inner edge, so as not to deflect the label before it is grasped between the sharp edges of the cutters *m O*.

The arm *O* is bent at *o'*, and its pivot is located above the edge of the stationary knife, in order that when said arm is raised, to fully uncover the edge of the stationary knife and permit the passage of the label-strip, it will also be entirely above the recess *m'* in the stationary knife for the reception of the paper to which the label is to be attached, and when it has finished its cut will lie parallel with the cushion *n*, upon which the plate *r* will press.

The free end *o'* of the arm *O* projects under the free ends of an arm, *S*, pivoted near the rear end of the base of the apparatus. The end of this arm *S* is so bent that its edge will lie nearly or quite horizontally upon the end of the arm *O* when both arms are inclined upward to their normal positions.

The letter *T* indicates a swinging open frame, arranged between the arm *S* and the wall of the apparatus, and pivoted at its lower front corner to the base. At the upper front corner of this frame is pivoted a pawl, *t*, (shown in dotted lines in Fig. 2,) which, by means of a spring, *t'*, is held in engagement with the teeth of the ratchet-wheel *g'*, carried by the projecting journal of the lower feed-roller.

From the inner side of the arm *S* a stud, *u*, (shown in dotted lines,) projects into the opening of the frame *T*, and when said arm rises this stud strikes the upper wall of said opening, swinging the frame forward, and causing the pawl *t* to move the ratchet-wheel *g'* the distance of one tooth, thus turning the feed sufficiently to advance the label-strip the width of one label.

When the arm *S* is pressed down, the stud *u* strikes the lower wall of the frame, (in case the frame *T* should not previously have been tipped back by its own weight,) swinging it backward, and causing the pawl *t* to engage a fresh tooth of the ratchet-wheel.

To the wall of the apparatus is secured a horizontal guide, *V*, in which moves a slide, *V'*, from which a pin, *v*, projects outwardly in the path of the arm *S*, and forms a stop or abutment to limit the upward movement of said arm. This stop is adjustable in the direction of the length of the apparatus by means of a screw-threaded rod, *w*, turning in a stationary nut, *w'*, and swivel-jointed to the slide *V'*. The function of this adjustable stop

or abutment is to regulate the position of the strip, in order that the cut may be on a proper line between the labels.

In operating the device the strip will occasionally slip in the guide, or the feed-rollers will slip slightly on the strip, so that the cut will be made too close to, or even through, the printed portion of the label; and whenever this occurs it may be rectified while the machine is in motion by adjusting the stop or abutment *v*, so that the pawl *t* will be advanced or retracted, as desired, so that it will move one tooth only a little more or less than the regular distance after this adjustment, the movement, of course, being uniform for all the following teeth and revolutions.

When the apparatus is arranged in position for use its base should form a portion of the feed-board of the printing or folding machine, or be let into said feed-board, as shown in Fig. 1, so that the pad or cushion *n* will be flush therewith, or be elevated but little thereabove, for convenience in feeding the sheets across said pad, with their edges extending into the recess *m'*.

A standard, *Y*, rises from the frame of the printing or folding machine, and to this standard is pivoted a lever, *Y'*, one end of which is bent laterally and stands over the forward end, *s*, of the arm *S*, which is formed with a seat for the bent end of the lever to strike. The other end of said lever extends through a loop, *z*, formed at the upper end of a rod, *Z*, which has a longitudinal movement in a sleeve, *b*, carried by an arm, *y*, projecting from the standard *Y*. The lower end of the rod *Z* is bent to form the journal of a friction-wheel, *p*, the periphery of which rests upon the edge of an eccentric, *P*, which, in the present instance, is carried by the projecting shaft of the cylinder *B*.

The apparatus being thus arranged, the operation is as follows: The drum *D*, carrying a roll of the label-strip, having been placed in its bearings through the opening closed by the door *c'*, or through grooves *j* (indicated by dotted lines) in the inner surfaces of the walls *c*, the strip *e*, which is coated on its back with an adhesive substance soluble in water, is led forward through the guide *f*, passed between the feed-rollers *g g'*, and also between the moistening-rollers *h h'*, the tank or trough *i* having been previously filled with water, as well as the fountain *i'*, sufficiently to submerge the lower portion of the lower moistening-roller. Now, if the cylinder *B* be turned, the eccentric will force the rod *Z* upward, causing the lever *Y'* to strike and force downward the arm *S* and knife-arm *O*, the shear-like action of which will sever from the strip *e* any portion thereof which may be projecting between the guard *l* and stationary knife *m*, thus forming a label, the back of which will have been wetted by the lower moistening-roller and rendered adhesive. The label thus cut off will be struck by the plate *r* and forced down upon the margin of a sheet of paper

which is fed across the pad or cushion *n*. The further revolution of the eccentric permits the spring *g* to elevate the two arms *O* and *S*, the stud on the latter striking the frame *T*, as before explained, and causing the pawl *t* to advance the ratchet-wheel and feed-rollers, by which another label is projected across the edge of the stationary knife *m* in position to be severed.

As has been stated, the surface of the plate *r* is somewhat smaller than one of the labels of proper size, this being so in order that it may not come in contact with the adhesive substance upon the label, a slight portion of which would ooze outward were the edges of the label too forcibly pressed upon the paper, and render the plate sticky.

The object of the recess *m'* is to permit the sheets of paper to extend beyond the path of the descending labels, which will thus be affixed at a little distance from their edges, and not liable to be brushed off.

It will be observed that the inner surface, *o'*, of the knife-arm *O* is inclined or beveled outwardly from its cutting-edge, this inclination being given it in order to avoid fouling of the arm, and the consequent obstruction of the passage between the guard *l* and the stationary knife, or the clogging of both knives.

The length of the rod *Z* and the throw of the eccentric *P* are so adjusted that the inner bent end of the lever *Y'* will be permitted to rise higher than the free end of arm *S*, in order that said arm may, when desired, be given a greater upward movement in adjusting the feed of the strip.

The contents of the tank *i* have been described as being simply water; but it may be mucilage, or even paste, without modifying the construction of the machine; but with it the knives will be clogged sooner. With a gummed strip simply dampened immediately before the labels are cut off, the knives do not require to be cleaned while in use.

The label-strip has its edges serrated. This is generally done by having it divided on a line of perforations from the sheets in which they are printed; but these perforations are mainly intended to produce this result—viz., giving the ends of the labels better adhesive edges than if they were straight.

Having now described my invention and explained its operation, I claim—

1. The combination of the receiving or feed table of a printing-press with an addressing-machine carrying a strip of addresses, knives for cutting transversely, and devices for sticking said labels or addresses on paper automatically by mechanism operated by the machine to which it is attached, for the purpose described.

2. In combination with the strip-feeding arm and rollers of an addressing-machine, the adjustable abutment or stop *v* and slotted guide *V*, from which it projects in the side of said machine, the stop *v* being controlled by a screw, substantially as and for the purpose set forth.

3. In combination with the stationary cutter of an addressing-machine, the movable cutter pivoted at one extremity to the front of the frame, and bent at *o'*, so as to bring the under edge of the portion adjoining its pivot in a horizontal plane above the lower edge of the stationary cutter, whereby the paper to be addressed can be admitted under it to the stationary cutter, substantially as described.

4. In combination with the stationary cutter of an addressing-machine, the movable cutter provided with a projecting plate, *r*, on its under side, to bear upon a detached address and secure it to paper without touching the edges of the address.

5. In an addressing-machine, the combination of a movable cutter having its pivot on the front of the frame, above the cutting-edge of the stationary cutter, with the stationary cutter *m*, recessed or grooved at *m'*, under its edge, to enable the machine to apply the address on a paper at a distance from its edge.

6. In combination with a vertically-reciprocating rod, *Z*, operated by a cam from the shaft of a cylinder-press, and also an addressing-machine, the vibrating arm *Y'*, having its free end capable of rising higher than its bearing on the feed-rod *S*, to allow the feed to be adjusted by the stop *v* above arm *S*, and a strip of addresses to be advanced as may be required, and as specified.

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