

FIG. 1

Certified to be the Drawings referred to in the Specification hereunto annexed.

This 19th. day of September 1930
at Ottawa, Ont.

Inventor
Joseph O. Lamoureux.

By Caron & Caron

Attorneys.

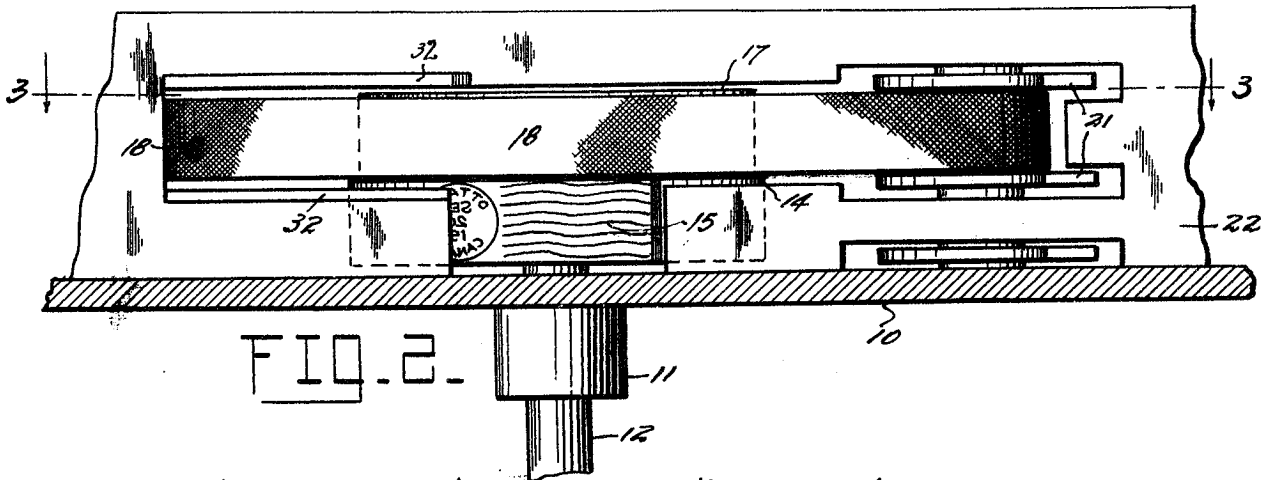


FIG. 2.

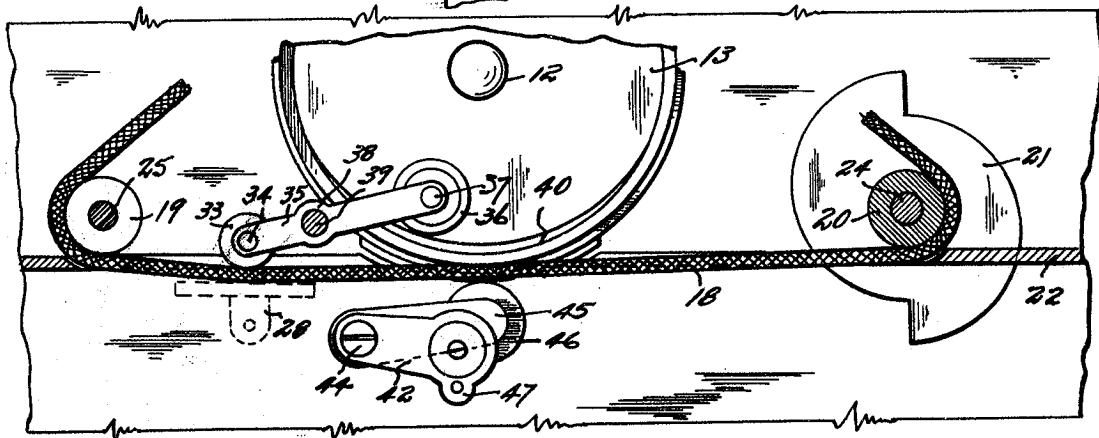


FIG. 3.

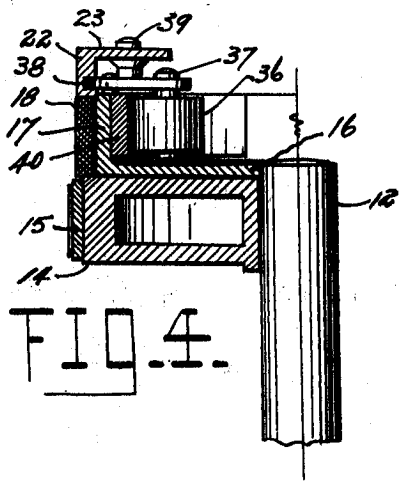


FIG. 4.

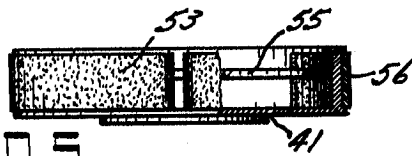


FIG. 5.

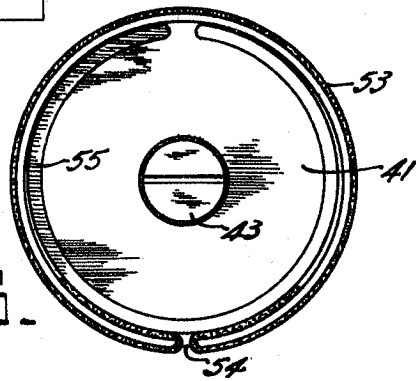


FIG. 6.

Certified to be the Drawings referred to
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This 19th day of September 1930
At Ottawa, Ont.

INVENTOR
Joseph O. Lamoureux

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I claim as my invention:-

1. In a machine of the class described, a rotating member, printing means on said member, feeding means dependent on said rotating members normally inoperative, and means dependent on said rotating member whereby said feeding means will become operative in timed relation to said printing means.
2. In a machine of the class described, a continuously rotating printing member, feeding means consisting of a belt depending from said rotating member, means to receive mail matter, said belt normally being free from said mail matter, and means dependent on said rotating member to cause said belt to engage said mail matter timed so as to properly engage said mail matter with said printing member.
3. In a machine of the class described, a rotating printing member, means to hold mail matter, feeding means for said mail matter, a feeler to select the passage of said mail matter, said feeler consisting of an abrasive adapted to come in contact with said mail matter.
4. In a machine of the class described, a printing member, means to hold mail matter, friction feeding means for said mail matter to said printing member, and a feeler adapted to regulate the passage of said mail matter to said printing member, said feeding means consisting of a friction element coming in contact with said mail matter, having less friction on the mail matter than the said feeding means but a greater amount of friction than exists between pieces of said mail matter.

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5. In a machine of the class described, a rotating member, means to receive mail matter, feeding means for said mail matter to said rotating member, said feeding means consisting of an endless belt deriving its motion from said rotating member and adapted to come in contact with said mail matter, and means to impart to said mail matter the required pressure for proper engagement with said feeding means.

6. In a machine of the class described, a printing member, means to receive mail matter, feeding means for said mail matter, a feeler for selecting said mail matter from said feeding means to said printing member said feeler consisting in a strip of sandpaper so arranged as to expose a small surface thereof to contact with said matter, means to allow for substitution of said surface along said strip, and means to hold said feeler in proper relation with respect to said feeding means.

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My invention relates to Stamp-Cancelling Machines, of the type wherein mail matter is fed through the machine with the result that the postage stamps are cancelled by printing on the surface thereof.

The main object of my invention is to provide a machine of this type wherein the usual failure to cancel a certain percentage of stamps by overlapping of mail matter is completely avoided.

Another object of the invention is to provide a machine in which the printing means is of a large circumference, thereby producing an even print and avoiding any damage to the mail matter.

Other objects, as well as many advantages over machines known or used at the present time, will become apparent in the description of my invention, which follows:

The machine constructed according to this invention is somewhat similar to my invention disclosed in my co-pending application, Serial No. 366,905, in so far as it has a continuously rotating printing element driving an endless belt, which in turn feeds the mail matter. The present machine differs, however, in not having a stop mechanism to retain the mail matter which is at all times in friction with the belt until the printing plate is ready to engage the same. Instead, the belt travels free from friction with the postal matter except when pressed thereon by a mechanism dependent on the printing wheel. This mechanism functions whenever the plate is in proper position to engage the mail matter. This manner of feeding has proved very efficient in actual operation of the machine.

In this type of machine, a great quantity of mail matter may be placed at one time and is not required to be held by hand due to the fact that means are provided to hold the same at the proper pressure against the belt; and in order to prevent any but the piece of postal matter next to the belt from being fed by friction between it and the next piece, I have devised a very sensitive retainer or feeler. This feeler consists principally of an abrasive which provides less friction on the mail matter than the belt will, but a greater amount than there results between any two pieces. This principle will obviously prevent any more than one piece from going through at one time, thereby preventing blanks. In actual tests, I have found that a surface coated with a fairly coarse grade of sand proved to be very satisfactory for the feeler and I have successfully employed ordinary sandpaper, set up in the manner hereinafter described.

This description is supplemented by drawings illustrating but such parts of my machine as are necessary to show what is new therein, as well as the functions thereof, so as to avoid complicity of the case.

In the drawings:-

Figure 1 is a top plan view of the machine;

Figure 2 is an elevation of the part of the machine rearwardly from line 2--2 of Figure 1;

Figure 3 is a top plan view of part of figure 1 as from line 3--3 of Figure 2;

Figure 4 shows, in section, part of the printing wheel and associated parts;

Figure 5 is a side view of the feeler; and

Figure 6 is a top plan view thereof.

Similar numerals of reference indicate similar or corresponding parts throughout the Figures.

As in my co-pending application, the machine has for a base a plate 10 supported by suitable legs, not shown, and having, substantially central thereof, a boss 11 having a bore serving as a bearing for a shaft 12, the upper portion of which is shown. On this shaft, at the upper end thereof, which extends above the plate, is mounted the combined printing and driving element 13. This element is keyed in a suitable manner, not shown, to the shaft. To the lower end of the shaft, which is not shown, is connected a source of power, also omitted in the drawing, either by a belt or by direct connection to a motor.

The combined element consists of a lower printing disc 14, having the printing and cancelling plate 15 and a driving wheel 16, having a flange 17 to serve as a pulley for the belt 18. The wheel and the disc may be machined integrally if so desired.

Belt 18 is supported at three points, one of which is the rear of wheel 16 where it derives its motion, a pulley 19 and pulley 20 being part of a stacker 21. The stacker is of conventional design, as shown, and therefore need not be described any further. Pulley 19 and stacker 21 are located so that the belt, which is slightly shorter than the distance around the three points, will lie in a straight line along the forward side of the flange 17, as shown, when stretched in place.

It will be seen that wheel 16 is of smaller diameter than the disc 14, so that the belt will lie slightly back of the plate 15.

Positioned so that the forward side of same is approximately in the same plane as the outside of the belt is a wall 22 rigidly mounted on base 10 and perpendicular thereto. It is provided with the required openings, as shown, to expose the belt and the printing disc, as well as to allow for the stacker.

Wall 22 is surmounted by a rail 23 extending rearwardly, as shown. This rail serves as a guard, as well as a support, for the upper end of the stacker shaft 24 and may also serve as a support for the upper end of shaft 25 of roller 19. The lower ends of shafts 24 and 25 are, of course, suitably mounted in base 10.

Referring to Figure 1, mail matter is placed in stacks in that space on the base enclosed by wall 22 at the rear and guard 26, the whole stack being pressed against the wall by means of an arm 27 terminating in a swiveled hand 28. This hand is pivoted to the arm, as shown, so that it will always lie flat on the mail matter. The other end of the arm is mounted on a shaft 29, suitably mounted in base 10. Pressure for the hand 28 is derived from a compression spring 30 located between the arm and abutment 31, as shown.

In order to prevent mail matter from being continuously in friction with the belt, two small rails 31 and 32, one below and one above the belt, are mounted on wall 22.

The mechanism responsible for the engagement of the mail matter previously referred to consists of a small roller 33 positioned against the rear of the belt, substantially opposite to hand 28. It is mounted on a trunnion 34, fixed to a bar 35, which extends over the

flange 17 of wheel 16. A second roller 36 is mounted at the other end of the bar on a trunnion 37. Roller 36 is positioned to roll along the inside surface of the flange. Bar 35 is fulcrumed at 38 by means of a small shaft 39 mounted in rail 23. A cam 40, consisting of a crescent, is mounted along the inside of flange 17, as shown, so that the same will actuate roller 36 by passing between it and the flange when the wheel rotates. It is evident that this action will cause the lever to depress the belt by means of roller 33 so that the portion depressed will run a little outside of rails 31 and 32.

The feeler consists of a circular cup-like member 41 mounted on an arm 42 so that it will lie in a plane central of the belt. It is held rigid to the arm by means of a screw 43 passing through the aperture in the center of the member and threaded in the arm. This screw is adapted to be turned either with the fingers or with a tool, as desired. This arrangement is provided so that any point on the circumference of the cup member may be selected to face the belt. The arm 42 is swingingly fastened to the top of a standard, not shown, by means of a screw 44, as shown. It may be said here that the said standard is intended to support an arm 45, which holds pressure roller 46 against the face of the printing plate by spring means, not shown.

The feeler is not intended to come in contact with the belt but to be very close to it. It is held in that position by means of a retaining rod 46 pinned to lug 47 of arm 42 and which passes freely through a standard 48 mounted on base 10. The end of this rod which protrudes from the standard is threaded to receive a thumb

nut 49, which rests against the standard and therefore limits the reach of the feeler towards the belt. The feeler is held in the set position by means of a light spring 50 mounted around the rod and resting between the standard and a collar 51 adjustably set by a screw 52.

As previously stated, the feeler consists of an abrasive adapted to contact with the postal matter, and consists in the present case of a strip of sand paper 53 encircling the cup-shaped member 41, the ends of which are bent back inside the cup flange by passing through a slit 54 in the said flange. The ends of the strip are held pressed against the inside of the cup by means of a circlip 55. This arrangement provides quick means of replacement for the strip. It will be noted that the outside wall of the cup member 41 is slightly depressed so as to hold the strip from vertical movement thereon, as shown at 56 in Figure 5.

The machine is further provided with additional necessary elements, such as a roller 57 to cause the mail matter to follow with the belt towards the stacker, as well as a guard 58 and stack holder 59. An inking device, working in relation with the printing disc, while not shown will necessarily be provided.

In operation, a stack of mail matter, say, for illustration, consisting of letters, is placed between the hand 28 and wall 22 in such a manner that the stamped corners lie towards the feeler. The source of power having been started, the combined printing disc and wheel will rotate at the set speed and the belt will circulate around its three points, being the roller 24, wheel 16 and stacker 21, both the wheel and belt travelling in the direction indicated by the arrow. Normally, the belt is back of the

rails 31 and 32 so that no letter will be in friction with it until cam 40 actuates roller 36 and causes the belt to be pressed toward the letter next to the wall and rails. At this stage, however, the letter in contact with the belt will be carried by friction towards the printing disc. The end of the letter will then be caught between the printing plate and the pressure roller 46, whereby the stamp will be cancelled and the letter postmarked. At this particular stage, the cam will have passed roller 36 so that the belt will be free from engagement with the next letter until the cam comes around again but the letter just passing through will be forced to reach the stacker owing to the action of the belt on the other side of the feeler in conjunction with roller 57.

While going through this operation, the first mentioned letter will cause its second to follow it owing to friction between the two until this second letter reaches the feeler. There it will be held, as previously explained, by the abrasive until such time as the belt will engage it and force it through, and so on. It is to be stated here that, of course, the location of the cam with relation to the printing plate is such that the letters will be fed so that the edge there will arrive to meet the printing plate as it appears through wall 22.

While I have described my invention strictly in accordance with what is shown in the drawings, it must be understood that I may alter the construction to suit various requirements so long as it falls within the spirit of the invention and scope of my claims: