May 26, 1925. 1,538,999

J. A. MITCHELL ET AL

MAIL MARKING MACHINE

Filed May 13, 1924

Fig. 1

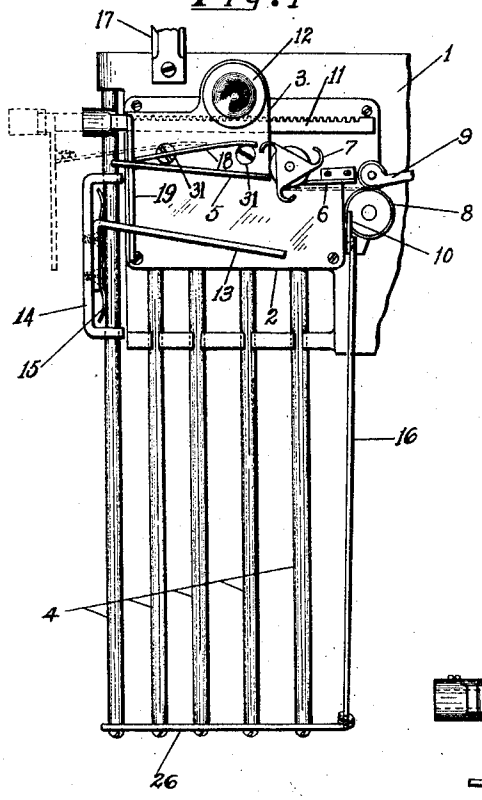


Fig. 3

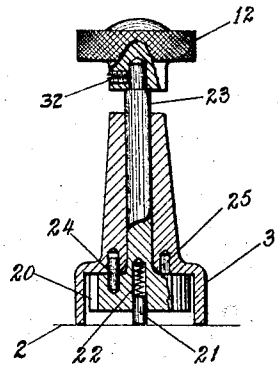


Fig. 4

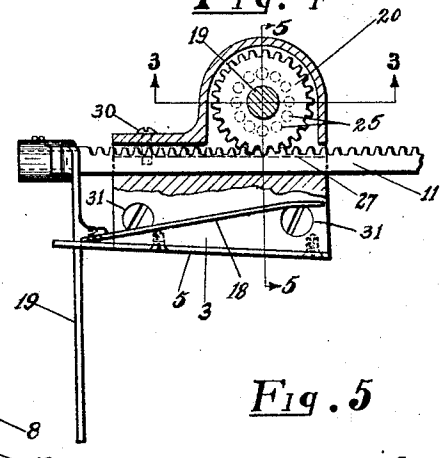


Fig. 2

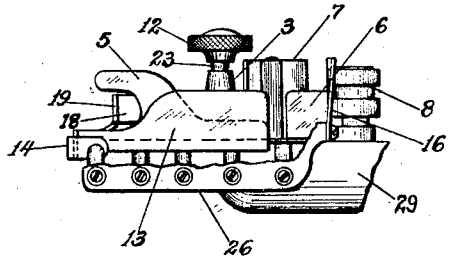


Fig. 5

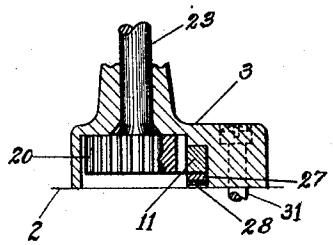
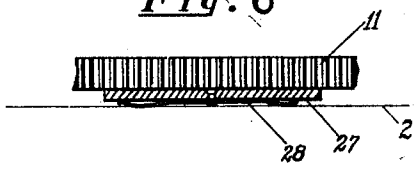


Fig. 6



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UNITED STATES PATENT OFFICE.

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MAIL-MARKING MACHINE.

Application filed May 13, 1924. Serial No. 713,094.

To all whom it may concern:

Be it known that we, JOHN A. MITCHELL, residing at Newark, in the county of Essex and State of New Jersey, and LAWRENCE J. ZAHN, residing at Long Island City, in the county of Queens and State of New York, have invented certain new and useful Improvements in Mail-Marking Machines, of which the following is a specification.

This invention relates to improvements in parts of a mail marking machine, such as used in post offices for marking mail matter or cancelling the stamps thereon, and refers particularly to that part of such a machine known as the stacker.

For many years, the stacker which has been in general use, has been constructed along the line of that disclosed in Patent 856,345 issued June 11, 1907 to F. G. Jahn from which, particular reference being made to Fig. 2 thereof, it is seen that a slidable member is held in position by a clamping wing nut, so that when different lengths of mail matter is sent through the marking machine, the stop on the stacker must be moved or adjusted to accommodate these different lengths of mail matter. So far as we are aware, all the devices of the prior art require the operator to use both hands in making the adjustment of the stacker stop, one hand being used to loosen the holding device and the other to draw out the slidable member carrying the stop. This operation means a loss of time in feeding the mail matter to the machine. On account of the tremendous increase in recent years of mail matter passing through the various post offices, the saving of time or the speeding up of such an operation as the cancelling of the stamps has become extremely important.

It is, therefore, the principal object of our invention to provide means for adjusting the stop on the stacker, such that it may be very easily and rapidly operated by one hand, while the other hand of the operator is used to continue the feeding of the mail matter through the machine, thereby speeding up the handling of mail.

Another object of our invention is to provide an improved mechanism for operating the stacker stop, such that it may be readily applied to existing machines.

These and other objects will be apparent to one skilled in this art after a study of the specification and annexed drawing.

Since our improvement is directed merely to the stacker portion of a mail marking machine, all of the other parts of the machine have been omitted from the drawing and description, only such parts being shown and described as are necessary to make our invention clearly understood.

In the drawings:

Figure 1 is a plan view of the stacker portion of a mail marking machine.

Figure 2 is a side view of Fig. 1, with a part of the front plate broken away to show the mechanism behind it.

Figure 3 is a sectional view on the line 3/3 of Fig. 4, but with certain of the parts in position.

Figure 4 is a part sectional view through our improved stacker stop operating mechanism.

Figure 5 is a view on the line 5/5 of Fig. 4, with some of the parts omitted.

Figure 6 is a fragmentary view of the longitudinally movable member carrying the stacker stop and the supporting means for this member.

Referring now to the details wherein like numbers refer to corresponding parts in the various views, 1 illustrates the table top of the mail marking machine. On the table 1 is mounted a stacker plate 2, which is preferably nickel-plated and polished to provide a very smooth sliding surface for the mail matter onto the bars 4. A housing 3 is mounted on the plate 2 in any suitable manner, as by two screws 31. Within the housing is carried a gear 20 having a stem 23, on the upper end of which is carried an operating knob or handle 12, the same being fastened to the stem 23 in any satisfactory manner as by a set screw 32. The housing 3 has a slot milled across its bottom face and positioned in this slot is a longitudinally movable member in the form of a rack 11, having gear teeth thereon permanently meshed with the teeth of the gear 20. The gear 20 has a counterbore within which is carried a spring 22 and a plunger 21, which rests on the plate 2, acting to hold the gear in the position shown in Fig. 3. The housing 3 directly over the gear has a series of holes 25 and the

gear 20 has a pin 24 fastened thereto so that it may enter any one of the holes 25, and the plunger 21 acts to normally lock the gear 20 in any one of the holes with which the pin 24 chances to engage, on any setting of the gear 20.

The rack 11 has attached thereto, preferably at one end, a mail stop member 19, generally referred to as the stacker stop. The stop member 19 has a plate or blade 18 fastened thereto, which acts as a rest plate for long mail matter when the rack 11 is moved outwardly as indicated by the dotted lines in Fig. 1. On the side of the housing 3 is fastened as by screws, a stacker back plate 5, against which mail matter engages, after leaving the star wheel 7, which is timed in proper synchronism with the usual gears carried within the gear case or trough 29. 6 illustrates a guide plate for the mail matter, which is shown in dotted lines as just leaving the stacker feed rollers 8 and 9. The feed roller 8 has a guard 10 which supports one end of the guard rail 16, the other end of which is fastened to the front plate 26. 13 illustrates the stacker sliding plate which is fastened to the slide bracket 14, which in turn slides down the stacker bars 4 under pressure of the mail matter coming through the stacker. To keep this slide plate 13 from promiscuously sliding down the stacker bar 4, a flat spring 15 is provided, which keeps the bracket 14 at the proper tension. 17 illustrates an arm attached to the top plate 1 for supporting the table carrying the mail matter to be fed through the machine.

To eliminate any play or lost motion in the rack 11, a plate 27 is provided which extends substantially the full width of the housing 3 and is resiliently mounted by the spring 28, which rests on the plate 2. The support plate 27 is prevented from moving out of the slot in the housing by the screw 30, which has one end engaging a groove in the side of the plate 27.

In the operation of our device, it is to be understood that the table which is supported by the arm 17 carries mail matter of different lengths, it being customary to make some rough assortment of this as it is placed on the table. Assuming that as the end of the short mail matter is reached, it is desired to set the stacker stop to accommodate the longer mail matter, the operator takes hold of the handle or knob 12 and pushes down thereon, which slidably moves the stem 23 and the gear 20 to break the lock caused by the pins 24 engaging the holes 25 in the housing, and then by turning the knob the rack is carried outwardly to the desired position, as may be indicated by the dotted lines in Fig. 1, and on releasing the knob 12, the plunger 21 carries the gear and stem upward, causing the gear to be automatically locked in its set position. As another batch of different length mail comes along or is delivered to the table for feeding through the marking machine, the stacker stop may be easily and quickly set to the desired position by manipulating the gear 20 as just described. It will be observed that the member 18 acts as an extension of the plate 5, when the rack 11 is moved outwardly, since the member 18 passes between the U-shaped cut-out portion in the plate 5 as shown in Fig. 2.

While we have shown and described a very practical form of our improvement to a mail marking machine, it will be appreciated that our improvement is susceptible to various alterations with respect to the details, without departing from the spirit of our invention and the scope of the appended claims.

Having thus described our invention, what we claim is:

1. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member, and another member having first a sliding motion and then a rotary motion for moving said longitudinally slidable member and said stop member.

2. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member, a rotatable member in engagement with said slidable member but normally locked against movement, means for releasing said rotatable member from its locked position and for applying a rotary movement thereto for the purpose described.

3. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member, a rotatable member in operative engagement with said slidable member with means to rotate said rotatable member to move the slidable member, and means associated with the rotatable member for locking it in any one of a number of positions as described.

4. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member, a rotatable member in engagement with said slidable member but normally locked against movement, means for giving said rotatable member first a sliding movement to unlock it and then a rotary motion to move said slidable member.

5. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member, a rotatable member in engagement with said slidable member but normally locked against movement, means for releasing said rotatable member from its locked position and for applying a rotary

movement thereto, and automatic means for restoring said rotatable member to locked position after the operating means has been released.

6. In a stacker mechanism for a mail marking machine, a mail stop member, a longitudinally slidable member carrying said stop member and having gear teeth on one side thereof, a gear wheel in mesh with the teeth on said slidable member, said gear wheel having a stem with an operating handle thereon, a support for the stem, locking means common to the gear wheel and support for locking the gear wheel in any one of a number of positions, said handle on the stem serving to actuate the stem to break the lock and to rotate the gear, and means for auomatically restoring the gear to locked position after the handle is released.

7. In a stacker mechanism for a mail marking machine, a stacker plate, a housing attached to said plate, a longitudinally movable member passing through said housing and carrying a mail stop member, a resiliently supported member held within the housing on said plate and supporting said longitudinally movable member, a rotatable member in engagement with and capable of moving said longitudinally movable member, said rotatable member having a stem supported by a part of said housing, locking means cooperating between the housing and said rotatable member for locking the rotatable member in any one of a number of positions, operating means carried by the stem serving to actuate the stem to break the lock and to move the rotatable member, and resilient means associated with a plunger for restoring said rotatable member to locked position on release of said operating means.

8. In a stacker mechanism for a mail marking machine, a rack member having gear teeth in one side and carrying a mail stop and a rest plate, a gear wheel in mesh with the teeth on said rack, a stem for the gear wheel, a housing for the gear wheel acting also as a bearing for said stem, locking means cooperating between the housing and the gear wheel for locking said wheel in any one of a number of positions, a handle on the stem serving to slide the stem and gear in the housing to break the lock and also to apply rotary motion to the gear to move the rack, and automatic means for restoring the gear to locked position when said handle is released.

In witness whereof we have hereunto affixed our signatures.

JOHN A. MITCHELL.
LAWRENCE J. ZAHN.