

Feb. 4, 1930.

H. E. HUBBARD ET AL

1,745,994

ADDRESSING MACHINE

Filed March 16, 1927

2 Sheets-Sheet 1

Fig. 1.

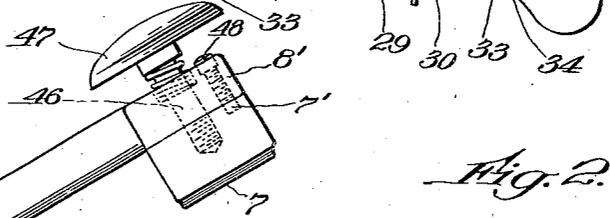
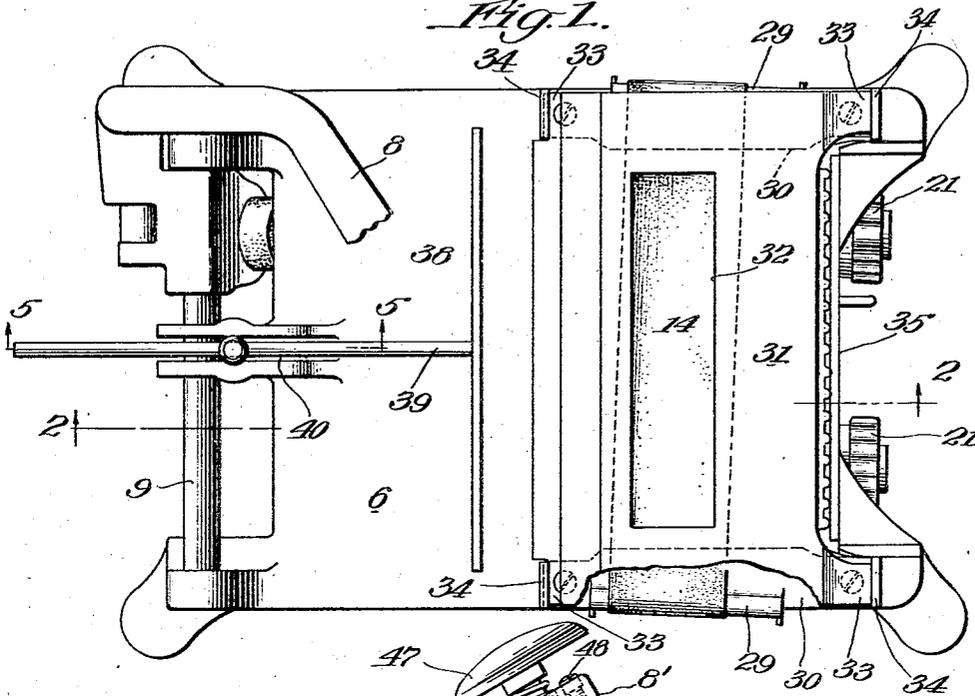
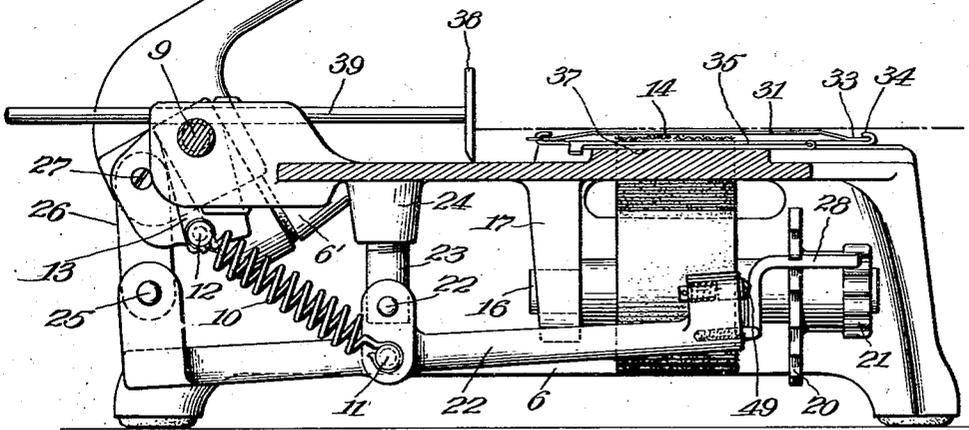


Fig. 2.



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Fig. 3.

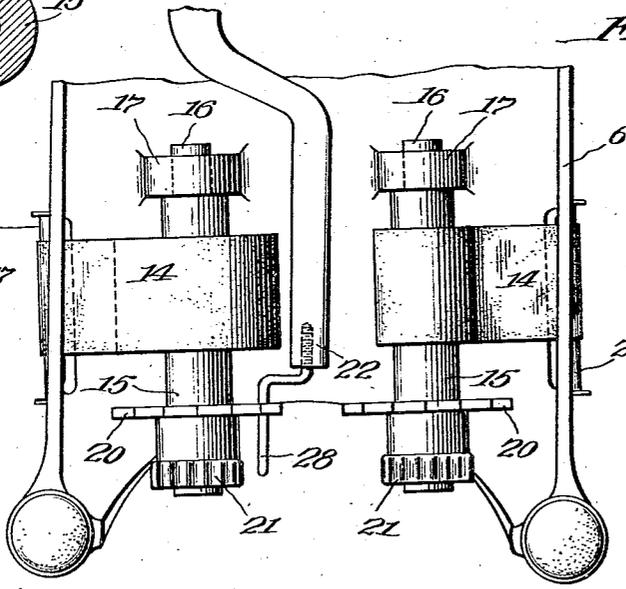
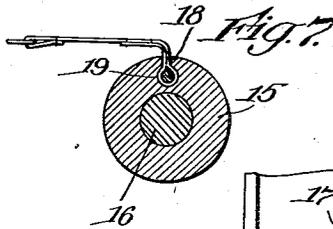
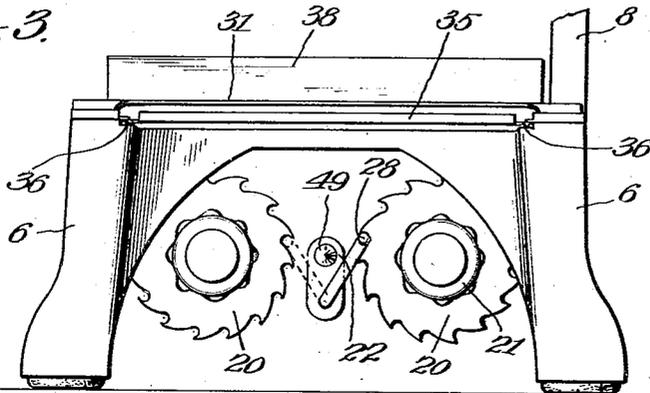


Fig. 4.

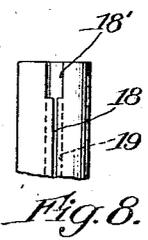
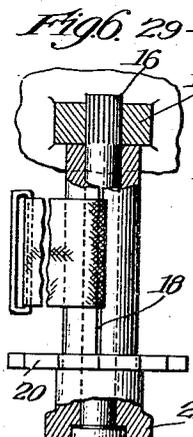


Fig. 8.

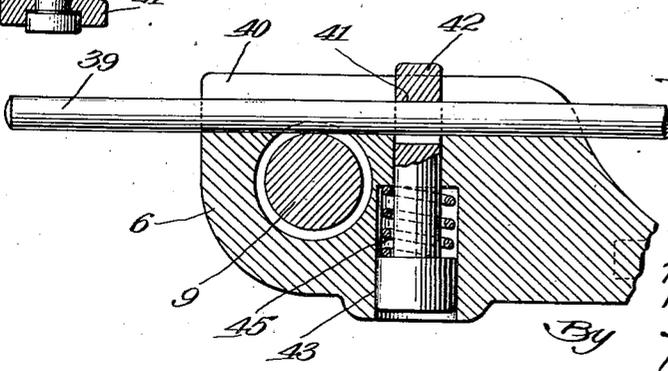


Fig. 5.

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UNITED STATES PATENT OFFICE

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ADDRESSING MACHINE

Application filed March 16, 1927. Serial No. 175,762.

The object of this invention is to provide a small and efficient printing machine in which printing devices bearing address or other forms are fed one at a time manually into printing position for printing through a ribbon to address envelopes, cards and doing similar work.

Other objects of the invention are to provide novel means which can be easily adjusted for feeding and reversing the feed of the ribbon; to guide the ribbon in a diagonal direction through printing position; to provide a novel work gauge which can be easily adjusted as required for envelopes, cards and other work of different sizes; and generally to provide a machine of novel and simple but strong and substantial construction, which can be operated without special skill and which is designed for use by those having relatively small mailing lists or where a machine of limited capacity is sufficient to meet the requirements of a business.

In the accompanying drawings we have illustrated a selected embodiment of the invention and referring thereto:

Fig. 1 is a top plan view of the machine.

Fig. 2 is a longitudinal sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a front elevation of the machine, with the platen arm broken away.

Fig. 4 is a bottom plan view of a portion of the machine showing the ribbon spools and reversing device.

Fig. 5 is a sectional view on the line 5—5 of Fig. 1.

Fig. 6 is a detailed view partly broken away and in section, showing a ribbon spool and its mounting.

Fig. 7 is a transverse sectional view through the ribbon spool.

Fig. 8 is a detail end view of the ribbon spool.

Referring to the drawings the machine comprises a main frame 6, a platen 7 carried by a platen arm 8 which is mounted to swing

on the transverse shaft 9 supported in the frame, and a spring 10 fastened at one end 11 to the lever 22 and at the other end 12 to a projection 13 on the platen arm, which normally holds the platen arm in elevated position, Fig. 2, with projection 13 engaging stop 6'. An ink ribbon 14 is secured at its ends to spools 15, 15 which are mounted to revolve freely on rods 16, 16 rigidly secured at their inner ends in lugs 17 on the under side of the frame. Each of these spools is provided in its periphery with an elongated longitudinal slot 18 which communicates with a bore 19, of larger diameter than the width of the slot. A wire is arranged in a loop at each end of the ribbon and is inserted in the bore with the ribbon passing through the slot, the slot being enlarged at its inner end 18' to the width of the bore to facilitate inserting the pin enclosed in the folded ribbon. By this simple means the ribbon is secured at each end to a spool. Each spool has a ratchet wheel 20 for automatic feed and a knurled finger piece 21 for hand adjustment. A lever 22 is pivoted at 22' on a stud 23 which is adjustably mounted in a projection 24 on the under side of the frame and the rear end of this lever is pivotally connected at 25 with one end of a link 26 which is pivotally connected at its other end to the platen arm 8 at 27, Fig. 2. A pawl 28 is carried on the front end of the lever 22 and it is arranged to be swung manually into engagement with one or the other ratchet wheels 20.

Operation of the platen arm causes the lever to swing on its pivot and feed the spool with the ratchet wheel with which the pawl 28 is engaged until the ribbon has been completely wound upon this spool whereupon the pawl is thrown manually into operative engagement with the other ratchet wheel to reverse the ribbon feed.

The ribbon spools are arranged in parallel relation with each other, but in an inclined position to the longitudinal center of the

machine and the ribbon travels over rounded guides 29 formed on strips 30 secured to the frame of the machines at the sides thereof. These guides are parallel with each other, but are inclined like the spools to the longitudinal center of the machine. Thus the ribbon is caused to travel in a diagonal direction through impression position and this prevents the ribbon from stretching and wearing unevenly or in lines and thereby prolongs the life of the ribbon and maintains uniform printing impressions. A work support 31 having an opening 32 at impression position is detachably mounted on the machine being provided with projections 33 which engage lips 34 on the ends of the strips 30. The work is arranged in proper position on the work support and the platen arm is depressed manually to force the envelop or card or whatever the work may be through the opening 32 and in contact with the ribbon 14 to force the ribbon against the type characters on a printing device 35 which is arranged beneath the ribbon. The printing device is inserted in and removed from the machine manually and it is held in guides 36, in printing position upon the bed 37 by the strips 30 which overlap the guides 36 and form ways in which the ends of the printing device travel when the printing device is inserted and removed from the machine.

A gauge bar 38 projects transversely across the machine back of the work support and the envelop or card is arranged with its upper edge in engagement with this gauge to properly position it for the printing impression. The gauge bar is carried by a rod 39 which is arranged to slide in a groove 40 in the frame, and it also passes through an enlarged opening 41 in a detent 42 which is seated in a bore 43 in the frame and is tensioned by a spring 45. The spring exerts sufficient tension on the detent to hold the rod 39 in any position to which the gauge may be adjusted, but at the same time it permits the gauge to be adjusted readily by moving the bar lengthwise. Thus the gauge may be quickly adjusted to receive envelopes, cards or other work varying in size. The platen 7 is secured to the platen arm by a screw 46 which is provided with a knob 47 to receive the blow from the operator's hand for depressing the platen arm. The screw is located centrally of the platen 7 and platen head 8' and adjusting screws 48 are arranged on opposite sides of the screw 46 and between said screw 46 and the front of the platen and platen head. The screw 46 is threaded in the platen 7 and a spring 46' is arranged thereon between the platen head 8' and the knob 47; the screws 48 are threaded in the platen head 8' and their lower ends engage unthreaded sockets 7' in the platen for adjusting the platen transversely.

The invention comprises a strong and sub-

stantial compact addressing machine of small size which is efficient in operation and will produce work comparable with larger and more expensive machines. The essential parts of an addressing machine are made in a simple but substantial form to perform their several operations in an efficient manner and produce uniform impressions from the printing devices. The ribbon feed and reverse mechanism is of extreme simplicity and the pawl 28 and the ratchets 20 are located at the front of the machine where the pawl can be easily shifted from one ratchet to the other, but at the same time they are in a position within the frame where they do not interfere with the operator in feeding printing devices and envelopes or cards to the machine. A spring pressed pin 49 is mounted in the lever 22 and is adapted to hold the pawl in either of its adjusted positions during the normal operation of the machine.

We are aware that changes in the form, construction and arrangement of parts of the invention may be made without departing from the spirit or sacrificing the advantages thereof and we reserve the right to make all such changes as fairly fall within the scope of the following claims:

We claim:

1. In an addressing machine, the combination of a frame, a pair of ribbon spools revolvably mounted in the frame, a ratchet wheel for each ribbon spool, said ratchet wheels being arranged in substantial alignment spaced apart across the frame at the front part thereof, a platen arm pivotally mounted at the rear part of the frame, and a lever having an adjustable pivot between the ratchet wheels and the platen arm, said lever being connected at one end with the platen arm to be operated thereby, and a pawl adjustably mounted on the other end of the lever between said wheels and adapted to be engaged with either of said wheels for operating a wheel intermittently.

2. In an addressing machine, the combination of a frame, a pair of revoluble ribbon spools mounted in the frame, aligned ratchet wheels for operating said spools aligned in the same plane and spaced apart, a platen arm, a lever pivoted intermediate its ends in the frame and extending at right angles to the plane of the ratchet wheels and adapted to be operated by said platen arm, and a gravity pawl pivotally mounted on the end of said lever and bent upward and forward between said wheels to engage either of said ratchet wheels for turning the ratchet wheel a step in each operation of the platen.

3. In an addressing machine, the combination of a frame, a pair of revoluble ribbon spools mounted in the frame, ratchet wheels for operating said spools arranged in plane alignment and spaced apart, a platen arm, a

5 lever pivoted intermediate its ends in the
frame and having a link connection at its rear
end with said platen arm and having its other
end extending to the space between the
wheels, and a pawl adjustably mounted on the
said other end of said lever between the
ratchet wheels and adapted to be swung into
engagement with either of said wheels for
operating a wheel intermittently.

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