June 25, 1929. R. V. LABARRE 1,718,467

ENVELOPE FEEDER FOR TYPEWRITERS

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Fig. 1.

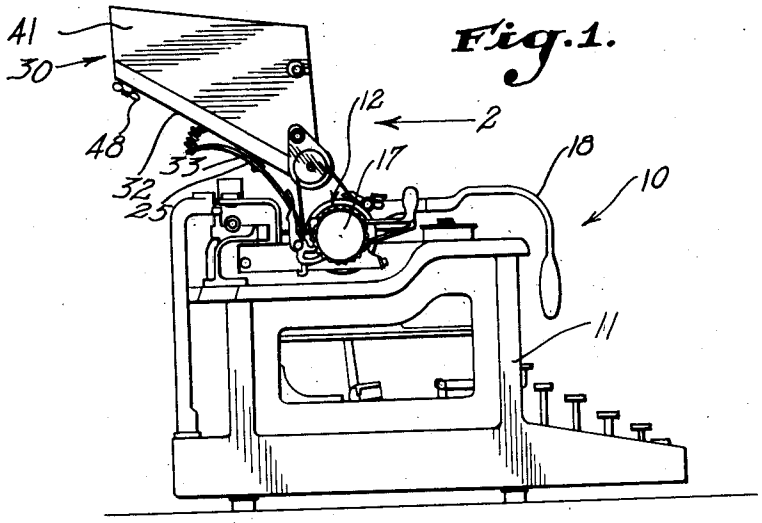
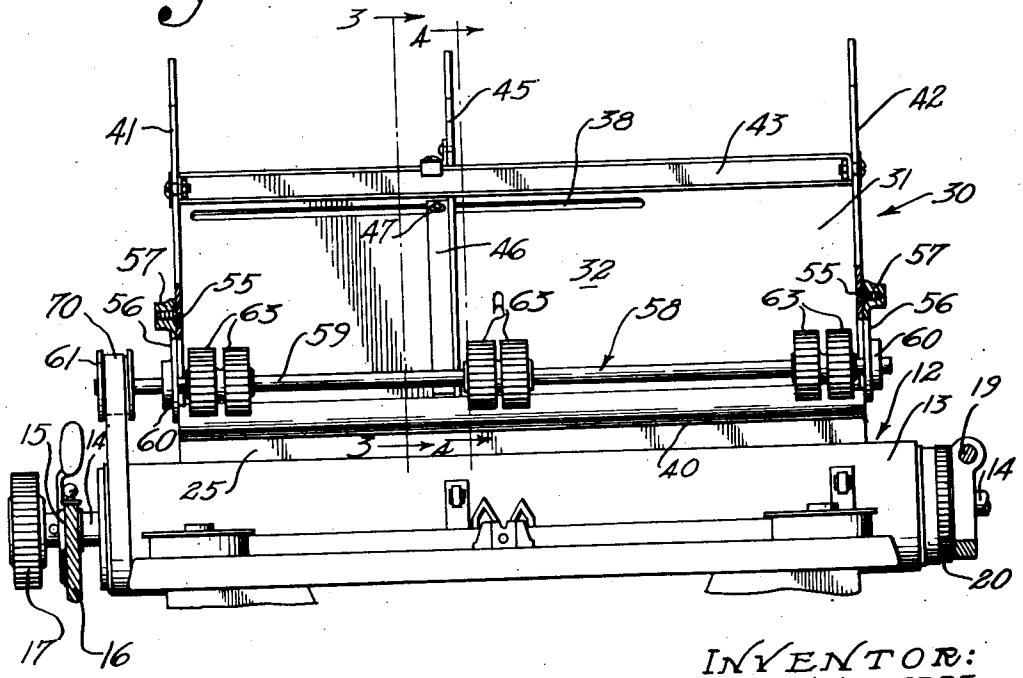


Fig. 2.



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Fig. 3.

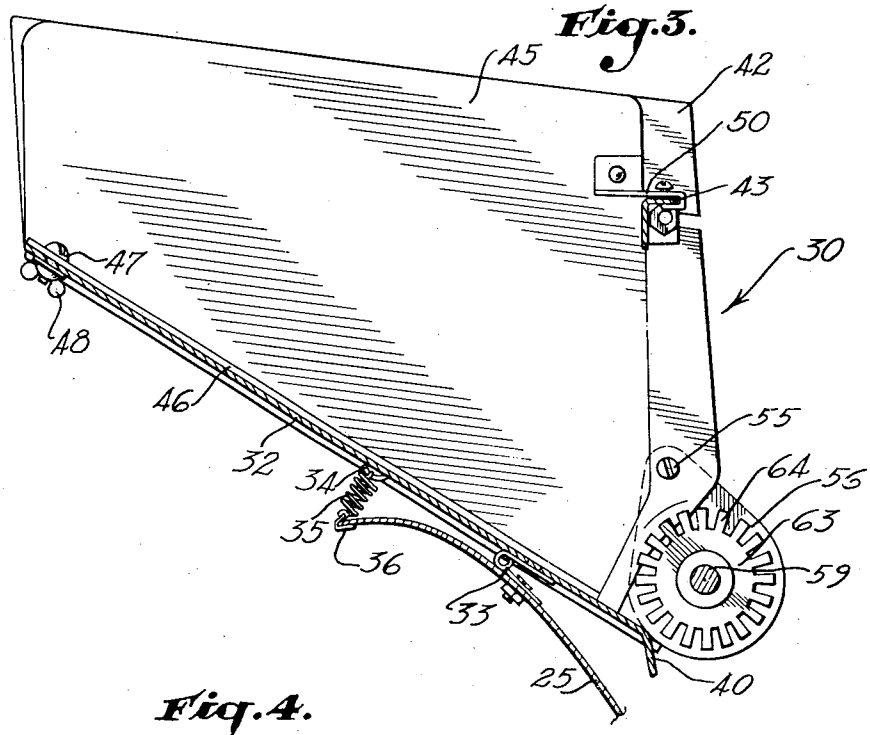
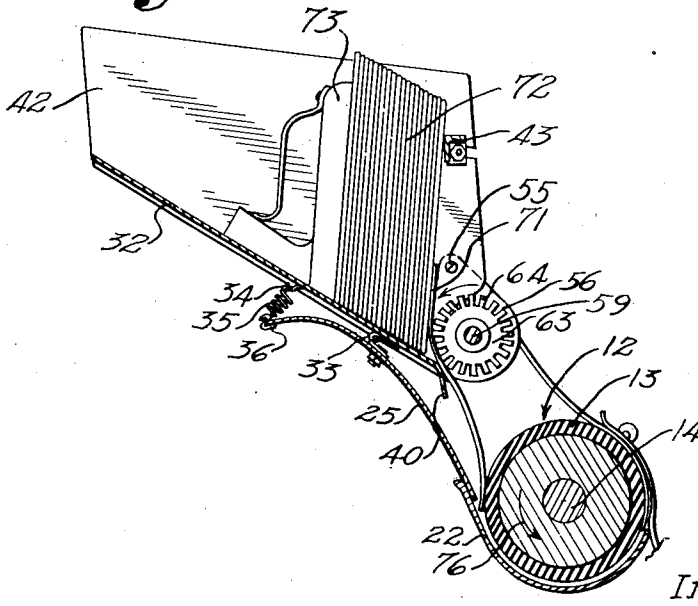


Fig. 4.



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Patented June 25, 1929. 1,718,467

UNITED STATES PATENT OFFICE.

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ENVELOPE FEEDER FOR TYPEWRITERS.

Application filed November 21, 1927. Serial No. 234,697.

My invention relates to feeding devices and more particularly to devices for feeding articles such as envelopes, one at a time.

In stenographic work where a large number of pamphlets, folders, envelopes and the like, are to be addressed, a considerable amount of time is lost in manually inserting each article into the typewriter preparatory to writing an address upon it.

It is an object of my invention to provide a device for automatically feeding articles to be addressed one at a time into a typewriter.

After an article for mailing, such as an envelope, has been addressed, it must be removed from the machine by rotating the platen thereof.

A further object of my invention is to provide a device for feeding an article into a typewriter, when a member thereof is moved to remove another such article from said typewriter.

It is another object of my invention to provide such a device which may be attached to a standard typewriter.

Further objects and advantages of my invention will be made apparent in the following description and accompanying drawings in which a preferred embodiment thereof is illustrated. In the drawings:

Fig. 1 is a side elevational view of a typewriter equipped with my invention.

Fig. 2 is a fragmentary front elevation taken in the direction of the arrow 2 of Fig. 1.

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 2.

Fig. 4 is a vertical sectional view taken on the line 4—4 of Fig. 2 and showing the device in operation.

Referring specifically to the drawings, the typewriter 10 includes a frame 11 on which is mounted a platen 12. The platen 12 includes a rubber roller 13 mounted on a shaft 14, journalled in bearings 15 of a carriage 16 which is transversely slidable on the frame 11, and fluted nobs or hand wheels 17 provided on the ends of the shaft 14. The platen 12 may be rotated either by manually engaging one of the nobs 17 or by twisting a carriage return arm 18 which is pivotally mounted on the carriage 16 as at 19 and is provided with suitable ratchet mechanism for engaging a ratchet wheel 20 provided on one end of the platen 12. Mounted on the carriage 16 so as to be yieldably urged against the rubber roller 13 is a plurality of semi-circular springs 22 which extend substantially half way around the roller, as clearly shown in Fig. 4. Also mounted on the carriage 16 is a rigid guide plate 25 upon which anything to be written upon by the typewriter 10 is placed so as to be guided downward between the rear end of the springs 22 and the roller 13.

The structure described so far is a part of all standard typewriters and an explanation of its operation is therefore believed to be unnecessary.

Mounted upon the carriage 16 is the envelope feeder 30 of my invention. While this device is capable of feeding any objects of a flat character, such as envelopes, cards or pamphlets into the typewriter 10, it is named and will be described, for the purposes of simplicity, with reference to its use as an envelope feeder. The feeder 30 includes a magazine 31 having a bottom plate 32 which is secured by a pair of hinges 33 to the rigid guide plate 25. Outstruck downward from a central part of the bottom plate 32 is a hook 34 to which a tension spring 35 is secured. The spring 35 has a hook 36 at its opposite end which is adapted to engage the rear end of the plate 25 so that the spring 35 is under tension and tends to draw the plate 32 rearward upon the pivot hinges 33. Formed in the rear edge of the bottom plate 32 is a slot 38, for a purpose to be described later. The front end of the bottom plate 32 is bent downward to form a lip 40. Extending upward from the side edges of the bottom plate 32 are side walls 41 and 42, the front edges of which are connected by a bar 43.

Disposed within the magazine 31 is an intermediate wall 45 which has a lower flange 46 resting against the bottom plate 32 and through the rear end of which a bolt 47 extends so as to pass through the slot 38 and receive a wing 48 on its lower end. The forward half of the intermediate wall 45 is adjustably secured to the bar 43 by a bracket 50. The intermediate wall 45 is adjustable transversely in the magazine 31 by loosening the wing nut 48 and the bracket 50 so that the space between the intermediate wall 45 and side wall 42 may be made to actively ac-

commodate envelopes of any desired length.

Provided in the lower forward portions of the side walls 41 and 42 are suitable apertures through which flat headed screws 55 extend. Disposed in contact with the outer face of the side walls 41 and 42 are bearing plates 56 which have bosses 57 formed at their upper ends which are provided with suitable threaded apertures for receiving the screws 55 so that by screwing these up tightly, the bearing plates 56 may be rigidly held in different positions upon the side walls 41 and 42.

The bearing plates 56 are adapted to support a feeding element 58 of the envelope feeder 30. The feeding element 58 includes a shaft 59 which is journalled in bearings 60, provided on the bearing plates 56, and extends outwardly beyond one of these bearings to receive a driven pulley 61. Rigidly mounted on the shaft 59 between the plates 56 are envelope feeder wheels 63 which, in the present embodiment, are mounted in three pairs, one of which pairs is disposed at each end of the space between the side walls 41 and 42, and another pair being disposed in the middle thereof. The feed wheels 63 are preferably formed of soft rubber and have a number of fingers 64 extending radially from the periphery thereof, as clearly shown in Figs. 3 and 4. The feeding element 58 is so positioned that the ends of the fingers 64 sweep within a short distance of the lip 40 of the magazine bottom plate 32 when the shaft 59 is rotated. Extending around the pulley 61 and the adjacent end of the roller 13 is an endless belt 70.

By pivotally mounting the entire magazine on the typewriter by means of the hinges 33 and providing the yielding spring means 35 rearwardly of the hinge pivot, a constant tilting tension is exerted tending to urge the driving pulley 61 away from the platen 12, thus the magazine functions as a belt tightener which will maintain the belt at a proper operating tension.

The operation of my invention is as follows: The intermediate plate 45 having been adjusted to accommodate the size of envelopes 71 which it is desired to address, a body 72 of these envelopes is placed in the magazine 31 between the intermediate plate 45 and the side plate 42, and a follower plug 73 is allowed to rest on the rearmost envelope so as to maintain the body 72 of envelopes in compact formation, so that the foremost envelope 71 rests against the cross bar 43 at its upper end, and at its lower end against the adjustable feeder wheel 63. In order to feed this foremost envelope 71 from the body of envelopes 72 into the typewriter 10, the platen 12 is rotated in the direction of the arrow 76 as by manually turning one of the nobs 17. When the platen is rotated, the shaft 59 is also rotated in the same direction by the belt 70 causing the feed wheels 63 to feed the foremost envelope 71 downward, as clearly shown in Fig. 4. By continued rotation of the platen 12, this envelope arrives in proper position for addressing. The typewriter 10 is operated so as to address the envelope and the platen 12 is again rotated so as to remove the addressed envelope from the typewriter. The rotation of the platen for this purpose concurrently introduces another envelope into the typewriter as the addressed envelope is being removed. Thus, a single movement removes an addressed envelope from the typewriter and inserts another envelope in the proper position for addressing.

Wherever in the claims it is specified that the feeder is rotated by a belt passing around the platen, it is to be understood that this includes a belt which might pass around either the rubber roller 13 or any pulley or other suitable device for receiving a belt which might be provided on the platen 12.

I claim as my invention:

1. An envelope feeder for a typewriter comprising: an envelope magazine pivotally mounted on said typewriter; a feeding wheel carried by said magazine; a belt for driving said feeding wheel from the platen of said typewriter; and yielding means functioning to tilt said magazine to maintain said belt at a proper operating tension.

2. An envelope feeder for a typewriter comprising: an envelope magazine mounted on said typewriter; a feeding wheel carried by said magazine; and a belt for driving said feeding wheel from the platen of said typewriter, said magazine being pivotally mounted in a manner to function as a tightening means for said belt.

3. An envelope feeder for a typewriter comprising: an envelope magazine pivotally mounted on said typewriter and having a mouth disposed adjacent the intake side of the platen of said typewriter; a shaft rotatably mounted on said magazine opposite said mouth; a feed wheel mounted on said shaft; a driven pulley mounted on said shaft; a belt passing around said pulley and said platen whereby said feed wheel is driven by said platen to feed an envelope from said magazine to the intake side of said platen; and yielding means functioning to tilt said magazine to maintain said belt at a proper operating tension.

4. An envelope feeder for a typewriter comprising: an envelope magazine pivotally mounted on said typewriter and having a mouth disposed adjacent the intake side of the platen of said typewriter; a shaft rotatably mounted on said magazine opposite said mouth; means for adjusting the position of said shaft relative to said mouth;

a feed wheel mounted on said shaft; a driven pulley mounted on said shaft; a belt passing around said pulley and said platen whereby said feed wheel is driven by said platen to feed an envelope from said magazine to the intake side of said platen; and yielding means functioning to tilt said magazine to maintain said belt at a proper operating tension.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 14th day of November, 1927.

ROBERT V. LABARRE.