

Jan. 15, 1935.

C. D. RYAN

1,987,803

ADJUSTABLE MAGAZINE

Filed July 28, 1934



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UNITED STATES PATENT OFFICE

1,987,803

ADJUSTABLE MAGAZINE

Commodore D. Ryan, Los Angeles, Calif., assignor
to National Postal Meter Company, Los Angeles,
Calif., a corporation of California

Application July 28, 1934, Serial No. 737,410

4 Claims. (Cl. 271—61)

This invention relates to an adjustable magazine for an article feeding machine, whereby the magazine may be easily and correctly adjusted to suit the size of each lot of articles to be fed.

A form of the invention which is particularly suited for use in envelope sealing and postage printing machines has been chosen for the purpose of illustration and description. Such a sealing and printing machine is fully disclosed in the Finrock, et al. application for United States Letters Patent Serial No. 723,094, filed April 30, 1934.

The magazine of the stated Finrock application is provided with an adjustable side wall and means for adjusting the wall to suit the size of the mail matter under treatment. This arrangement has proven quite satisfactory, providing the operative when adjusting the side wall to suit a particular size of envelope takes sufficient care to properly space the wall a short distance from the mail matter placed in the magazine, to prevent clamping this matter and thus interfering with the feeding operation.

It is one of the principal objects of this invention to remove the necessity for care on the part of the operative when adjusting the side wall of the magazine and to thereby remove one of the sources of needless trouble arising from the improper use of the machine by providing a magazine side wall adjusting means which will automatically space this wall a predetermined distance from the placed mail matter when adjusted into engagement therewith. In other words, by the use of this invention, the judgment and care of the operative while adjusting the magazine is done away with and thus an annoying source of needless trouble eliminated.

A further object is to provide such an automatic spacing means for the magazine, which will be simple in operation and rugged in construction.

The manner in which the foregoing objects are attained, as well as further objects and advantages, will be apparent from the following description made in connection with the accompanying drawing, in which:

Figure 1 illustrates a plan view of the adjustable magazine of this invention as applied to a sealing and printing machine. Only a small portion of the machine has been shown.

Figure 2 illustrates a fragmental sectional view taken substantially in the plane of line 2—2 of Fig. 1 and shows the magazine in the process of being adjusted.

Figure 3 illustrates a view similar to Fig. 2 but showing the magazine after adjustment.

Figure 4 illustrates a fragmental view taken substantially in the plane of line 4—4 of Fig. 2; and

Figure 5 illustrates a bottom plan view of Fig. 4. In Figure 1 the adjustable magazine 10 is shown as mounted upon the lower front corner of a sealing and postage printing machine 11.

The magazine 10 may include a rear wall 12, an end wall 13 and a bottom plate 14. The lower end of the wall 13 and the adjacent portion of the bottom plate 14 may be sufficiently cut away to permit the envelopes 15 to be fed or withdrawn therethrough by a suitable conveyer means, not shown. Slidably mounted upon the bottom plate is a rider 16 having an inclined surface 17 for feathering the envelopes in the usual manner. The rider 16 is adjustable to accommodate envelopes of different lengths. Thus far described the magazine is of conventional design.

Adjustable side wall

The side wall 18 is made adjustable to enable the magazine to successfully handle envelopes of different widths. For this purpose the side or adjustable wall 18 may be suitably fastened to the upturned end 19 of a supporting guide member 20, while the horizontal portion 21 of this member may be slidably mounted upon the under surface of the bottom plate 14. To slidably mount the horizontal portion 21 of member 20 upon the magazine bottom plate, a formed bearing plate 22 may be mounted to the under surface of the plate 14 as by means of posts 23. A flat spring 24 may be fastened to the bottom of plate 14 as by rivets 25 and may act between the bottom surface of the plate 14 and the upper surface of the horizontal portion 21 of the guide member 20 to set up sufficient resistance to sliding movement of the member to yieldingly retain the side wall 18 at its adjusted position. To limit the outward movement of wall 18, a stop pin 26 may be fastened to the rear end of the horizontal portion 21 of the guide member 20 and adapted to engage the rear edge of the bearing plate 22 when the wall has been pulled out to the limit of its travel.

By so mounting the adjustable wall 18, it may be freely moved to any position within the extreme limits of its travel and will be yieldingly held at any of its adjusted positions due to the action of spring 24.

The adjustment of wall 18 to suit the size of a particular lot of envelopes may be made as follows. Envelopes of a selected size may be placed in the magazine as indicated at 15 and wall 18

moved until the inner face thereof will engage the adjacent edges of the placed envelopes, whereupon to free the envelopes for proper feeding the wall 18 will have to be moved outwardly a sufficient distance so as to avoid clamping the envelopes in the magazine. If the adjustable wall 18 is not moved outwardly to free the envelopes, the feed mechanism will not act reliably to remove the envelopes from the magazine. It is, therefore, important to provide means which will automatically move the adjustable wall 18 outwardly a predetermined distance after having been brought into engagement with the adjacent edges of the placed envelopes.

Automatic retracting means for the adjustable wall

The automatic retracting means for the adjustable wall 18 may include an actuating member 27 which is slidably mounted upon the under surface of the magazine bottom plate 14 and for this purpose a bearing plate 28 may be formed to freely engage at its outer edges the corresponding bearing plate 22, leaving a guideway 29 through which the actuating member 27 may be slidably mounted. The bearing plate 28 may be supported from the posts 23 by a suitable spring means 30. The spring means 30 is designed to act against the bearing member 28 and to force this member into contact with the actuating member 27 so that the bearing member 28 will act as a braking surface against the actuating member 27 to yieldingly retain the actuating member in any position to which it may be adjusted. The outer forward end of the actuating member 27 may be bent upwardly, as at 31, and the portion 31 provided at its upper end with a finger grip 32. The adjustable wall 18 and the upturned portion 31 of the actuating member 27 may be connected by a limited motion means 33 which, in this instance, may include a flanged stud 37 riveted to the adjustable wall 18 and projecting therefrom through a suitable bore formed in the finger grip 32 and carrying at its outer end a push button 34. The bore of the finger grip piece 32 may be counterbored as at 35 to receive a suitable compression spring 36 and the inner end of the push button 34. By this arrangement, the spring means 36 will normally act to maintain shoulder 38 of the flanged stud in engagement with the inner face of the finger grip 32 but may be compressed by pressing upon the push button 34 whereby the wall 18 may be moved inwardly a distance equal to the length of travel of the push button before the head thereof engages the outer end of the finger grip piece 32. The length of travel permitted by the limited motion means is governed by the shoulder 38 engaging one face of the finger piece 32 and the head of the push button moving into engagement with the other face of the finger piece, and is arranged to move the adjustable wall a predetermined distance from the envelopes.

The limited motion means acts to permit the adjustable wall 18 to be moved a predetermined distance back and forth with respect to its actuating member 27 whereby, during the adjustment of the wall, it will be moved this predetermined distance toward the envelopes and when released after having been moved into engagement with the adjacent edges of the envelopes will be automatically retracted due to the action of spring 36 to space the wall this predetermined distance as governed by the limited motion means to free the envelopes for feeding.

It will be understood that the sliding resistance

of the actuating member 27 caused by its bearing plate 28 and spring means 30 is greater than the yielding resistance caused by the spring means 24 acting against the horizontal portion 21 of the guide member 20; while the tension of spring 36, when compressed, will be sufficiently strong to easily move the guard member but will be unable to move the actuating member 27. It is due to this relation that the adjustable wall 18 will be retracted upon release of the push button while the actuating member remains in its adjusted position.

Operation

In the operation of the sealing and postage printing machine, envelopes, or other matter to be treated, are segregated as to length and width and when envelopes of a certain width are to be treated the operative may, by means of the finger grip 32, shift the adjustable wall 18 outwardly a sufficient distance to receive the selected matter. Whereupon the operative, by gripping the finger piece 32 between the index and middle fingers, as illustrated in Figure 2, and pressing upon the push button 34 with the thumb may first shift the adjustable wall 18 inwardly toward the mail matter the predetermined distance governed by the limited motion means and by continued pressure upon the thumb piece 34 may slide the entire assembly until the adjustable wall 18 is brought into contact with the adjacent edges of the placed mail matter. The operative may, thereafter, release these means, whereupon, due to the action of spring 36, the adjusting wall 18 will be shifted outwardly until the shoulder 38 of the flanged stud is again brought into engagement with the inner face of the finger grip. This last motion of the adjustable wall 18 is automatic and will act accurately and positively to retract the wall a predetermined distance from the adjacent edges of the placed envelopes to permit the same to be freely withdrawn from the magazine.

Having fully described the invention, it is to be understood that it is not to be limited to the details herein set forth but the invention is of the full scope of the appended claims.

I claim:

1. In an adjustable magazine, an adjustable wall for the magazine, an actuating member for said wall, means for yieldingly resisting movement of said member, and spring weighted means operatively connecting said wall and member and operable for actuating the same for adjusting the wall into engagement with articles placed in the magazine and when released automatically operable for retracting the wall a predetermined distance from the articles for freeing the articles for dispensation from the magazine.

2. In an adjustable magazine, an adjustable wall for the magazine, an actuating member, means for yieldingly resisting movement of said member, a limited motion means operatively connecting said wall and member, and a spring means associated with said limited motion means for yieldingly maintaining the wall in its retracted position and having insufficient strength to move the actuating member against its resisting means.

3. In an adjustable magazine, an adjustable wall for the magazine, an actuating member, means for yieldingly resisting movement of said member, a limited motion means operatively connecting said wall and member, a spring means operatively associated with said motion means and of less tension than the force necessary to move the member, and means operable for actuating

the limited motion means against the action of said spring means for displacing the adjustable wall a predetermined distance toward such articles as are placed in the magazine and then
5 operable for moving the actuating member to bring said wall into engagement with the placed articles and finally upon release thereof operable through the limited motion spring means for
10 automatically withdrawing the wall a predetermined distance from the placed articles.

4. In an adjustable magazine, an adjustable wall, a slidably mounted supporting guide means for said wall, means for yieldingly resisting move-

ment of said guide means, a slidably mounted actuating member, means for yieldingly resisting movement of said actuating member to a greater degree than the corresponding means for said
5 guide means, a limited motion means operatively connecting said guide means and actuating member, and a spring means operatively associated with said limited motion means having sufficient strength to actuate the guide means against its
10 resisting means but having insufficient strength to move the actuating member against its resisting means.

COMMODORE D. RYAN.