

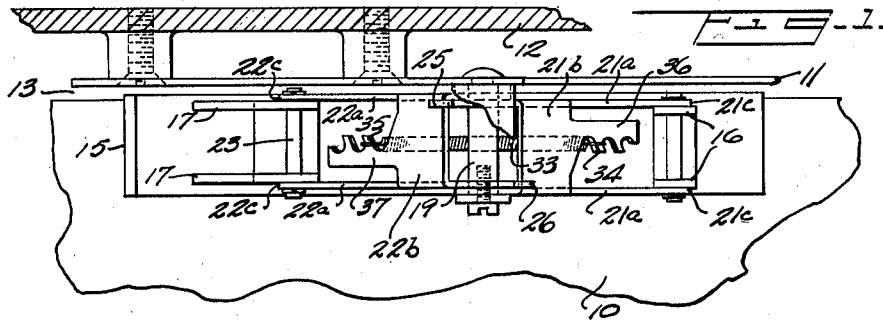
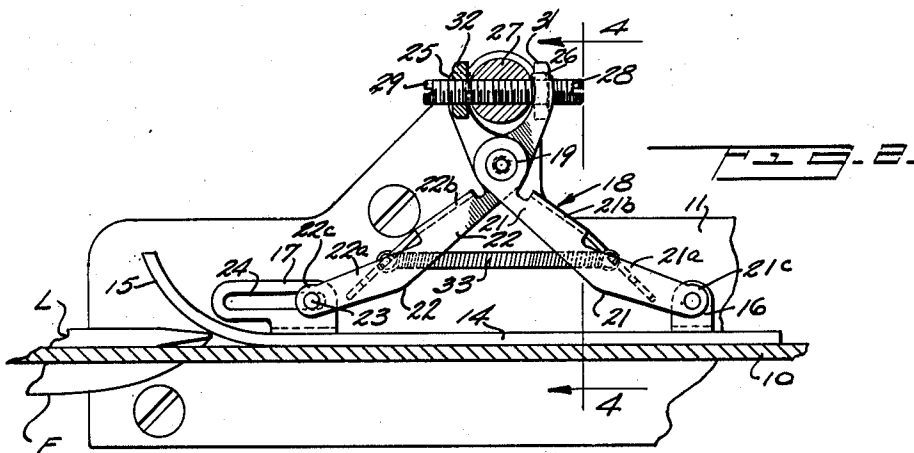
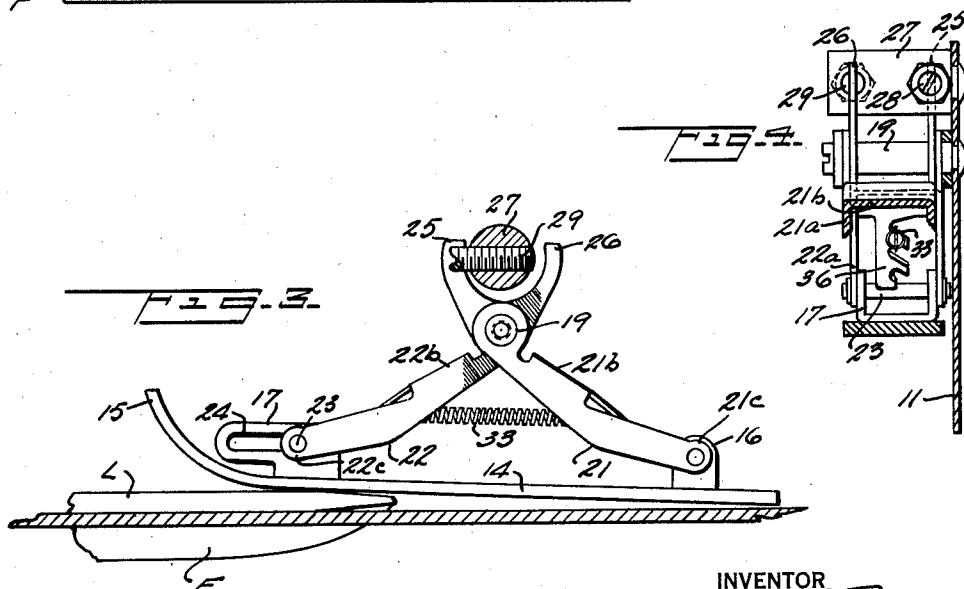
Feb. 17, 1942.

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2,273,289

PRESSER DEVICE

Filed Feb. 8, 1941



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2,273,289

PRESSER DEVICE

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Application February 8, 1941, Serial No. 378,019

6 Claims. (Cl. 271-59)

This invention relates to a presser device which is adapted to bear upon the upper surface of a letter as the letter is fed along a horizontally disposed letter feed plate, such as is the practice in metered mailing machines, the purpose being to prevent the letter from being moved out of its normal path of feed when certain operations are performed on the letter.

It is found for example, that letters upon passing through a metered mailing machine may be deflected out of their normal path when the flap of the letter is being moistened for sealing. Spring fingers have previously been provided to engage the upper surface of a letter for the purpose of maintaining an alignment of the letters as they pass through the machine, but owing to changes in operating conditions with higher speed machines for example, the spring fingers are no longer efficient. The letters upon passing through the moistening devices have a tendency to be forced toward the guide wall to cause double creasing at the fold of the flap, thus resulting in an unfinished or crude looking sealing operation when the letter passes from the machine. To overcome this condition, it is proposed to provide a long flat shoe which is adapted to yield with considerable flexibility, as the letter passes therebeneath, and which will flatten out so that the entire shoe surface will be in engagement with the letter to maintain same in its correct feeding line.

It is the principal object of this invention therefore to provide a yieldable shoe which normally lies flat against or slightly above the feed plate and which is adapted to bear against the surface of the letter over a wide area as the letter passes therebeneath during the feeding of said letter.

It is a further object to provide a presser foot which is pivotally mounted upon the side guide wall and which has a free-moving yieldable connection between the pivot mounting and the shoe to provide a desired flexibility as the letter passes beneath the shoe.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that various changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed without departing from the spirit of the invention.

A preferred embodiment of the invention is illustrated in the accompanying drawing, wherein:

Fig. 1 comprises a plan view of the presser device with parts broken away, and further includes a feed plate and the mounting of the device upon the frame of a metered mailing machine;

Fig. 2 is a front view of the structure shown in Fig. 1, with parts in section, and further includes a letter which is being fed through the machine and is about to engage the presser shoe;

Fig. 3 is a partial detail view of the structure shown in Fig. 2; and further shows the letter advancing beneath the presser shoe; and

Fig. 4 is a vertical end sectional view taken along the line 4-4 of Fig. 2.

Referring to the drawing in detail, a portion of a metered mailing machine is shown, which includes a letter feed or presser plate 10, a side guide 11, and a supporting frame 12 to which the side guide 11 is attached. A letter L is adapted to be fed across the feed plate 10 by any suitable means with the flap portions F thereof passing within the space 13 between the side guide 11 and one edge of the feed plate 10. Upon being fed through the machine, the flap is adapted to come in contact with suitable moistening means whereby the gummed surface is moistened, and is then adapted to have the flap folded to a sealing position as the letter continues to pass through the machine. As the feeding and flap moistening devices form no part of the present invention the same are not included in the drawing.

A presser shoe 14, having a long flat under-surface, normally rests in engagement with or slightly above the surface of the letter feed plate 10. Said shoe is further provided with a flare portion 15 at the leading end thereof, and has a rearwardly disposed anchor member 16 and a forwardly disposed anchor member 17 secured to the upper surface thereof.

A cross-lever structure, generally indicated at 18, is pivotally mounted upon a pin 19 projecting forwardly from the side guide 11. Said lever structure 18 comprises two stamped metal elements 21 and 22, each comprising spaced side arms 21a-21a and 22a-22a which are joined by bridge portions 21b and 22b respectively. The said arms extend angularly downward from the point of pivot and the ends thereof 21c-21c, are joined with the anchor member 16. The ends 22c-22c have a pin 23 therethrough which is

adapted to slide in horizontal slots 24 in said anchor member 17.

Projecting substantially vertically upward from one arm 21a is a stop finger 25, and projecting upward from one arm 22a is a stop finger 26. Between said stop fingers 25 and 26 is a stop block 27, which block is fixed to the side guide 11. Within said block 27 are two adjusting screws 28 and 29, the ends of which are adapted to be engaged by fingers 25 and 26 respectively. Lock nuts 31 and 32 are provided for each of the screws 28 and 29 respectively to lock same.

To provide for a suitable spring tension for the purpose of urging the shoe 14 against the feed plate 10, a spring 33 is stretched between prongs 34—35 on extensions 36—37, projecting from the bridge portions 21b and 22b. By the provision of a plurality of prongs, it is possible to vary the spring tension.

The tension of the spring 33 will draw the lower arms together to force the shoe 14 downwardly against the feed plate 10, and the fingers 25 and 26 against the stop screws 28 and 29 respectively. By means of the said stop screws 28 and 29, the shoe 14 may be adjusted to any desired spaced relation with the feed plate 10.

The structure as described provides a very flexible unit which responds quickly, when engaged by a letter, to cause the shoe to rise and ride over the upper surface of the letter, and to become settled thereon without any binding or harsh action. When the letter passes beneath the shoe, a firm frictional pressure is maintained in a most practical manner, each letter having a clean sharp fold at the flap end as it passes from the machine.

Having described the invention, what is claimed is:

1. In a device of the character described, a shoe, arms having adjacent ends connected with said shoe and being crossed intermediate the ends thereof, a pivotal mounting for said arms at the point of intersection, stop means engageable by the opposite ends of said arms, and means to urge the latter ends against said stop means.

2. In a device of the character described, a shoe, arms having adjacent ends connected with said shoe and being crossed intermediate the ends thereof, a pivotal mounting for said arms at the point of intersection, adjustable stop means engageable by the opposite ends of said arms, and an adjustable spring stretched between the arms to urge the latter ends against said stop means.

3. In a device of the character described, a

presser plate, a shoe, arms having adjacent ends connected with said shoe and being crossed intermediate the ends thereof, a pivotal mounting for said arms at the point of intersection, stop means engageable by the opposite ends of said arms, a plurality of pronged portions on the arms adjoining the shoe, and a spring stretched between one pair of prongs to draw the arms together and urge the shoe toward the presser plate.

4. In a device of the character described, a presser plate, a shoe, a pair of vertically disposed arms crossed intermediate the ends thereof, a pivotal mounting for said arms at the point of intersection, stop means engageable by the upper ends of said arms, one of the lower ends of the arms being pivotally engageable with said shoe, the other lower end being slidably engageable with the shoe, and a spring stretched between the lower ends of the arms, whereby the shoe is adapted to be yieldably urged toward the presser plate.

5. The combination with a letter feed plate, and a guide wall adjacent said feed plate; of means to prevent the edge of a moving letter from climbing up the guide wall, comprising a shoe, a crossed lever structure pivotally mounted on said guide wall and having one pair of ends thereof engaging the shoe, adjustable stop means engaged by the opposite ends of said lever structure, means to urge the latter ends against the stop means and effect a pressure upon the shoe, said shoe being adapted to rock about the pivot mounting when a letter passes beneath one end of the shoe and being adapted to flatten out under pressure over the entire surface of the letter as the letter passes thereunder to thereby exert a pressure over a wide area.

6. The combination with a letter feed plate, and a guide wall adjacent said feed plate; of means to prevent the edge of a moving letter from climbing up the guide wall, comprising a shoe, a crossed-lever structure pivotally mounted on said guide wall and having one pair of ends thereof engaging the shoe, means to urge said ends together to effect a pressure upon the shoe, said shoe being adapted to rock about the pivot mounting when a letter passes beneath one end of the shoe and being adapted to flatten out under pressure over the entire surface of the letter as the letter passes thereunder to thereby exert a pressure over a wide area.

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