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ENVELOPE OPENER

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This invention relates to envelope opening means and aims to provide an improved and more efficient device for cutting envelopes open along one of the fold lines or edges of closed or sealed envelopes.

Accordingly the primary object of the invention is to provide an envelope opening device having a portion adapted to be readily inserted within a corner of the envelope, together with a cutting edge which is, by such inserting action, readily and substantially automatically positioned and guided in a definite diagonal relation to the adjacent edge of the envelope for effecting the cutting action with a shearing stroke as the device is moved longitudinally along said edge of the envelope.

It is also sought to provide a construction which not only insures the positioning of the cutting blade into the most efficient operative or cutting relation, but also serves to shield and protect the contents of the envelope from the cutting action of said blade.

For accomplishing these purposes the construction comprises a finger or guard portion insertable beneath the flap of the envelope and into engagement with the fold line along the adjacent edge of the envelope, and a blade in such fixed relation to said finger as to be automatically positioned in shearing relation to said fold line by the insertion of said finger into proper position for movement in tracking engagement along the fold line in carrying out the envelope cutting and opening operation.

The invention further comprises the object of providing a handy device which is very easy and convenient to handle and operate, as well as a construction enabling the blade or cutting element to be replaced as often as necessary to provide a keen cutting edge; and also to provide means for maintaining a supply of extra blades, and to enable the same to be readily replaced or renewed with a minimum of delay or inconvenience.

With the foregoing general objects in view, the invention will now be described by reference to the accompanying drawing illustrating a form of the device which I have found to be extremely serviceable and efficient, after which those features and combinations deemed to be novel and patentable will be particularly set forth and claimed.

In the drawing—

Figure 1 is a perspective view, illustrating a device constructed in accordance with the present invention;

Figure 2 is also a perspective view, illustrating the mode of use of the device in starting the envelope cutting and opening operation;

Figure 3 is a longitudinal sectional view, on a larger scale, and representing a section taken on the line 3—3 of Figure 4;

Figures 4, 5, 6 and 7 are detail sectional views, representing sections taken on the lines 4—4, 5—5, 6—6 and 7—7, respectively, of Figure 3; and

Figure 8 is a fragmentary detail view further illustrating the mode of positioning the device at the start of the envelope opening operation.

The task of opening mail in most offices, where any volume of first-class mail is received, is very awkward and inconvenient and somewhat of a nuisance when carried out in the usual manner, because of the tearing open of the envelope along uncertain lines, accompanied oftentimes by mutilation of the contents. Such defective operation is largely due to the bluntness of the device usually employed for opening the envelope by more of a tearing than a cutting operation, and also because of the usual absence of any guiding or other means which would serve to confine the cutting action to the edge of the envelope being opened.

In the present case I have succeeded in overcoming the principal defects, of the nature just referred to, by providing an efficient device which employs a sharp cutting edge for neatly cutting the envelope open along one edge, together with inserting means which tracks along said edge and in advance of the blade and at the same time positions the cutting edge of the blade in correct angular relation to said envelope edge for effecting an efficient shearing stroke.

Referring now to the drawing in detail, my improved device is illustrated as made up of a sectional block construction comprising a pair of oblong block sections 11, 12, detachably secured together by means of screws 14, the base of the block structure being rectangular while its opposite longitudinal faces converge upwardly to a flat top face (see Figures 1, 4 and 7). The top face is formed with a shallow dip or recess 16 near one end of the device, as appears in Figures 1 to 3.

The inner face of the block section 11 is formed with an oblique channel 18 open at one end of said section as indicated at 18' (Figure 3), and also open at the top face of the block adjacent to the recess 16. This channel 18 is designed to receive the shank of a blade holding arm 20 which is provided with a screw 22 for detachably

securing one end of said arm in fixed relation in said channel,—the other block section 12 having an opening 24 registering with said screw (Figure 6) and affording access thereto for unscrewing it without separating the block sections 11, 12.

The arm 20 is illustrated as a folded strip of metal adapted to receive and grip a short blade 26 when inserted within the groove or channel 27 formed between the folds of said strip, the edges of which are dressed down to a feather edge as represented in Figure 5. Moreover, the arm terminates in a curved and pointed finger 28 projecting around and past the outer end of the blade 26 and across what may be termed the path of cutting movement of said blade. This finger portion is also formed with a recess or pocket 27' (see Figure 3) into which the outer end of the blade is fitted for retaining engagement when the blade is mounted in the holder arm 20.

As clearly shown in Figure 3, the blade 26, as carried by the outer end portion of the arm 20, projects outwardly over the recess 16, and the cutting edge of the blade forms an acute angle with relation to the adjacent top face of the block 11, and is therefore in shearing relation to any object, such as an envelope edge 30, which is thrust into said angle and along said top face of the block. The finger 28 being projected past the outer end of the blade and terminating adjacent to said top face of the block section 11, provides both an entering point for facilitating insertion beneath the flap 31 of the envelope and also a positioning point or abutment for engagement with and tracking along the envelope edge 30 and thereby maintaining the cutting edge of the blade in correct angular or oblique relation to said edge 30 as hereinafter more fully explained.

The abutting faces of the block sections 11, 12, may be formed with mating recesses 33 adapted to provide a compartment for the storage of extra or spare blades, and this compartment may be closed by a suitable stopper 35 (Figure 3). In addition said block sections may be formed with mating recesses 36 providing a vertical top opening suitable for mounting a pencil or the like, if desired.

Thumb and finger recesses 15 are formed in the opposite faces of the block sections 11, 12, in line with the screw 14 (see Figure 4) which facilitates the picking up of the device by grasping it as illustrated in Figure 2, with the device pivoting upon the tips of the thumb and forefinger of one hand and thus swinging up into the palm of the hand ready for use.

The start of the operation is illustrated in Figure 2, the device being held in one hand as just stated, and manipulated to insert the finger 28 beneath one end of the flap 31 of an envelope as held by the other hand. It will be observed that while the cutting edge of the blade is in acute angular relation to the top face of the block or handle member, the finger 28 forms substantially an obtuse angle to said blade edge, or is in opposite acute angular relation to said top edge of the block. Hence by inserting the finger 28 and keeping its tip end engaged with the inside of the edge or fold line 30 of the envelope and at the same time holding the envelope with said edge 30 substantially parallel to the top face of the block or handle member, the cutting edge of the blade will engage said edge 30 in the correct angular position for producing a shearing action as the device is moved along the edge of

the envelope from one end to the other. The tip of the finger 28 thus acts as a guide or abutment for engagement with the inside of the fold line or edge 30 in positioning the blade, while the correct angular relation of the blade is maintained by holding the envelope so that its edge 30 is kept substantially parallel with the adjacent top edge of the block or handle member.

By this means the most efficient cutting action is produced for making a clean cut and with one rapid stroke and with the least effort; and at the same time the finger 28 (having the convex side faces as appears in Figure 5) is maintained in such position as to push the contents of the envelope to one side or out of the path of the cutting edge of the blade, and thus guards said contents from being accidentally cut or snagged by the envelope opening operation. It may be pointed out that the dip or recess 16 is designed to afford ample clearance in order to prevent any choking or clogging action as the cutting proceeds towards the lower or heel portion of the blade.

The blade, when dulled, may be readily changed by loosening the screw 22, which permits the blade holding arm 20 to be withdrawn from the channel 18; the blade may then be removed by spreading the groove or channel 27 slightly (as by means of a suitable pointed tool inserted in the open side of said channel), thus releasing the gripping action on the blade and permitting a new blade to be inserted in its place and with one end thereof seated in the pocket 27' and the remainder gripped by the sides of the channel 27, after which the arm 20 is again secured in operative position by means of the screw 22 as illustrated in Figure 3.

It will thus be apparent that I have devised a practical and efficient envelope opening construction for embodying the various improved features and advantages as aforesaid, and that the essence of the improvement is the provision of means for insertion beneath the flap of the envelope and engaging the hinge or fold line of said flap and cooperating therewith to maintain the cutting edge of the blade in the correct angular relation for producing an efficient shearing type of cutting stroke. Therefore while I have illustrated and described what I now regard as the preferred type of construction for the purposes in view, I desire to be understood as reserving the right to make such changes or modifications as may be deemed to fall within the spirit and scope of my invention as defined by the appended claims.

Having thus described my invention, what I claim is:

1. An envelope opening device comprising a handle member having a straight longitudinal edge for movement adjacent to and parallel with one edge of the envelope, and a blade holder secured to said handle and carrying a blade with the cutting edge thereof in acute angular relation to said handle edge, said holder having a finger projection extending from the outer end of said blade and in obtuse angular relation thereto and terminating in proximity to said longitudinal edge of the envelope.

2. An envelope opening device comprising a handle member having a straight longitudinal edge for movement adjacent to and parallel with one edge of the envelope, and a blade holder removably secured to said handle member and formed with a recess for removably mounting a blade with its cutting edge in acute an-

gular relation to said handle edge, said holder being provided with a finger projecting in a substantially opposite acute angular relation to said handle edge and terminating in slightly spaced relation thereto.

3. An envelope opening device comprising a block structure serving as a handle member, and an arm carried by said handle member and provided with a blade having its cutting edge extending in acute angular relation to one of the longitudinal edges of said handle member, said arm terminating in a pointed finger projecting past the outer end of said blade and into a substantially opposite acute angular relation to said handle edge but terminating in slightly spaced relation to said handle edge.

4. An envelope opening device comprising a handle member having a straight longitudinal edge for movement adjacent to and parallel with one edge of the envelope, an arm carried by said handle member and provided with a blade having its cutting edge extending in acute

angular relation to said handle edge, and a guide or abutment finger for insertion underneath the envelope flap, said finger extending from the outer end of said blade across the path of cutting movement thereof and terminating in slightly spaced relation to said handle edge.

5. An envelope opening device comprising a block structure serving as a handle member and having a straight longitudinal edge for movement adjacent to and parallel with one edge of the envelope and also formed with a channel opening on said handle edge and extending diagonally therefrom, an arm detachably secured within said channel and projecting above said handle edge, a blade carried by said arm with its cutting edge extending in acute angular relation to said handle edge, and a finger projecting from the outer end of said blade across the path of cutting movement thereof and into proximity to said handle edge.

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