

April 17, 1956

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2,742,222

ENVELOPES

Filed April 24, 1952

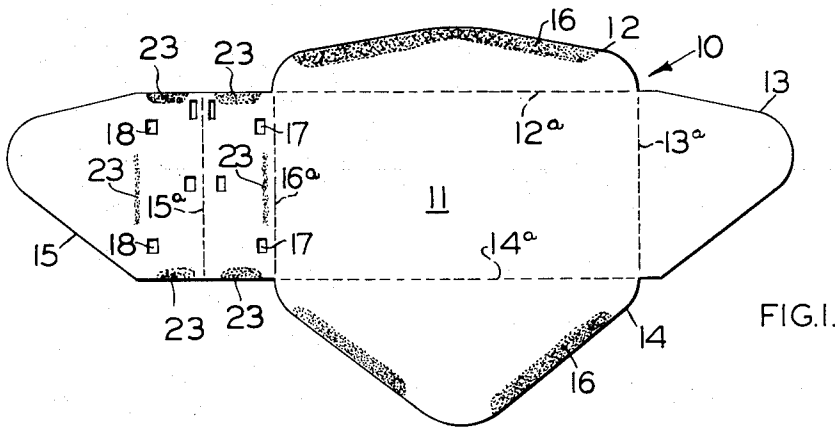


FIG. 1.

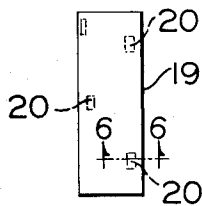


FIG. 2.

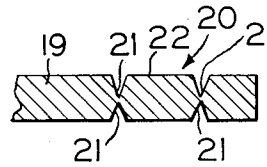


FIG. 6.

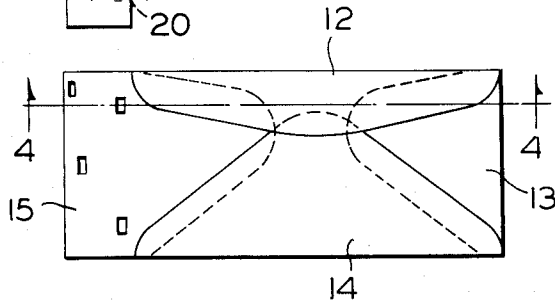


FIG. 3.

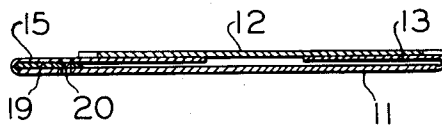


FIG. 4.

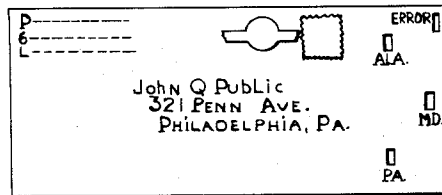


FIG. 5.

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ENVELOPES

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Application April 24, 1952, Serial No. 284,084

2 Claims. (Cl. 229—68)

This invention relates to improvements in envelopes, and more particularly to envelopes adapted for return purposes, such, for instance, as for returning an enclosure or the like to the original sender or to some other indicated addressee.

One of the perplexing and ever present problems encountered in such places as post office sorting rooms and the mail rooms of many large business firms involves the sorting, segregation and distribution of large quantities of envelopes containing mail. Even though this work is usually done by sorting clerks that are highly skilled in such operations, the efficiency thereof is subject to the usual fluctuations resulting from such factors as temperament and fatigue of the operator, particularly after the operator has been engaged in such sorting operations over long periods of time. In order to minimize such fluctuations and thereby increase the efficiency of operations of this character, it has been proposed that the sorting and segregation of envelopes be accomplished by means of suitable conventional mechanical business machines adaptable for the selective segregation and sorting of articles such as cards, envelopes or the like fed therinto. It is a principal object of the present invention, therefore, to provide an envelope of improved construction and having novel destination indicating means thereon, which means is particularly adaptable for facilitating the use of the envelope in an automatically operated sorting and segregating machine.

Another important object is to provide an envelope having improved means for indicating the ultimate destination of the envelope so as to facilitate the handling and sorting of large quantities of similar envelopes.

A further object is to provide an envelope wherein a portion along one edge thereof is provided with destination indicating means in the form of a plurality of labeled punch-outs, any one of which may be punched out by the sender to indicate intended destination of said envelope and thus facilitate the segregation thereof by automatically operated mechanical sorter machine means.

Another primary object is to provide an envelope having improved destination indicating means thereon such as will permit substantial increases in the number of such envelopes that may be sorted and segregated in any given period of time.

Other objects and advantages will be understood and will become more apparent from the following description when read in conjunction with the drawings in which:

Fig. 1 is a rear view of an unfolded envelope blank from which the proposed envelope is fabricated.

Fig. 2 is a plan view of a semi-rigid stub member that may be inserted proximate one end of the envelope.

Fig. 3 is a rear view of the envelope blank after being folded to fashion an envelope.

Fig. 4 is a section taken on line 4—4 of Fig. 3.

Fig. 5 is a front view of the proposed envelope showing the improved destination indicating means along one end thereof.

Fig. 6 is a section, shown in enlarged dimensions, taken

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on line 6—6 of Fig. 2 and depicts one arrangement for fashioning the perforable punch-outs employed with the improved envelope.

Referring now to the drawings, it will be noted there has been depicted, in the form of an envelope having perforable punch-outs in an extension along one short end thereof, a specific and preferred application of the teachings of the present invention. In fashioning an envelope of this character there is initially provided an unfolded paper blank, represented generally by the numeral 10, having a central portion 11 and flaps or tabs 12, 13, 14 and 15 extending, respectively, from the four marginal edges thereof. The side flaps 13 and 15 are adapted for folding, respectively, along the lines 13a and 15a, indicated as broken in Fig. 1, while the top and bottom flaps 12 and 14 may be folded inwardly, respectively, along the broken lines 12a and 14a to produce the form of folded envelope illustrated in the rear view of Fig. 3. A suitable adhesive as indicated at 16 may be applied along the edges of the top and bottom flaps 12 and 14 for sealing purposes in accordance with conventional practices in the fabrication of envelopes. It will be understood, of course, that the flap 12 will not be sealed until the enclosures have been placed within the envelope by the sender.

Now in accordance with the specific teachings of the invention, one of the flaps or tabs, the flap 15 in the instant preferred illustration, is provided with a plurality of perforations 17 disposed on one side of the fold line 15a and a plurality of complementary or mating perforations 18 symmetrically disposed on the opposite side of said fold line. Hence after the flap 15 is folded along the fold line 15a, each of the perforations 18 in the one portion will overlie and register with a corresponding perforation 17 in the other portion of said flap.

A semi-rigid stub-like stiffening member 19 fashioned, preferably, from some suitable fibrous material such as heavy pressed paper or thin cardboard, and dimensioned to correspond with a perforated portion of the flap 15 as indicated, is provided with a plurality of removable punch-outs or knock-outs, represented generally by the numeral 20, which are so arranged that they will register with the perforations 17 and 18 of the flap 15 after said stiffener is interposed between the folded portions of said flap. Said removable punch-outs or knock-outs 20 may each be formed by weakening the fibers of the stiffening member, as indicated by the grooves or notches 21, around a perimeter that circumscribes a slug-like central closure portion 22 to facilitate the removal thereof, as desired, at a subsequent time. The weakening of the fibers around the periphery of the removable central closure portion of said punch-out may be accomplished by any suitable conventional means such, for instance, as by peripherally scoring the opposite surfaces thereof to produce the grooves or notches 21, as shown in the preferred illustration. Since various means for fashioning punch-outs or knock-outs of this character are well known in industry, the particular method employed is not important to the present invention providing a substantially clean opening results after the closure slug is punched or knocked out at a later time. Furthermore, although the perforations and punch-outs have been illustrated as rectangular in shape, it will be appreciated that any other suitable configuration may be employed without deviating from the teachings of the present invention.

The semi-rigid stub 19 which, in the preferred embodiment, is adapted for positioning on the flap 15 prior to the folding thereof, is arranged, preferably, so that the punch-outs 20 therein will register with the perforations 17, and, after folding of said flap, also with the perforations 18. A suitable adhesive 23 may be applied along opposite edges and transverse portions of the flap 15 for fixedly positioning the stiffening stub 19 and thus

prevent its accidental removal after said flap has been folded and the envelope fashioned. With said stiffener 19 fixed in position and with all the flaps folded over the envelope will provide a clear space for enclosures within the area delimited by the broken lines 12a, 13a, 14a, and 16a, as best seen in Fig. 1, without allowing said enclosure to interfere with the punch-outs in said stiffener.

On the outside face of the envelope adjacent each individual perforation and its associated perforable punch-out there is printed matter to indicate the ultimate destination associated with that perforation. In the specific application of the invention selected for illustration and description herein, the abbreviations of the States of the Union are indicated, one adjacent each such perforation, and although only a few such examples are shown in the drawing, it will be understood that one such perforable indication may be provided for each State in the Union. Likewise when some different employment of the envelope is contemplated, such as inter-departmental use in a large business firm or in a bank clearing house, other printed matter may appear opposite each of said perforable indicators to indicate a plurality of available destinations, to any one of which said envelope may be forwarded. In the envelope illustrated in Fig. 5, since the ultimate destination is in the State of Pennsylvania, the perforable indicator or perforation adjacent PA would, of course, be punched out by the sender prior to mailing thus leaving a clear and clean opening through the envelope at this particular indicator location. If desired, of course, the printed matter designations may be printed directly on the upper surface of the punch-out rather than on the envelope face adjacent the punch-out as indicated in the drawing herein.

It will be appreciated, also, that the side flap 15 need not be folded around the stiffening member 19 as indicated but instead said stiffener may be positioned with one edge thereof between the front face and rear face of an envelope and be affixed along that edge while the remainder of said stiffener containing the perforable punch-outs projects therefrom.

With only one perforation punched out, that is the one corresponding with the ultimate destination desired, the envelope may be transmitted along with many others to a central reception station where it is then fed into an automatically operated sorting machine which subsequently proceeds to select and segregate each individual envelope in accordance with the particular perforable indicator or perforation previously punched out on each envelope. The machines which may be employed for such sorting operations are of the automatically operated punch-card selector type known commercially as electronic sorters and are marketed, among others, by the International Business Machines Corporation. Since machines adaptable for such operations are more or less conventional and are well understood, it is felt no detailed description thereof is necessary. Suffice it to say, however, that machines of this general character may utilize either a photo-electric selenium cell type of selector or a multiple pin-like selector unit each of which may be arranged to cooperate with the perforations or openings in the envelopes for actuating and setting into motion a series or sequence of mechanisms which subsequently direct all envelopes having similar perforations punched out into the same collecting receptacle. With the envelopes so segregated it becomes a simple matter for the machine operator to subsequently transmit the envelopes in groups to their respectively indicated destinations.

In the event the sender should inadvertently punch-out the wrong perforable indicator, it will not be necessary to discard this envelope because of such mistake. To circumvent a mistake of this character there is provided a perforable indicator labeled Error disposed, in the preferred embodiment illustrated, in the upper right-hand corner of the envelope which is punched out only

in case of error such as when the wrong perforation was originally punched out. After this has been done the envelope may be forwarded on its way with two perforations punched therethrough. The Error perforation has been so positioned that it is closer to the leading edge of the envelope than any of the other perforations; hence when the erroneously punched envelope is fed into the sorting machine the perforation labeled Error will almost immediately encounter a selector that will start into motion a sequence of operations for directing that envelope to a collecting receptacle separate and apart from all others. The contents of this latter receptacle may then later be manually sorted by the operator in order to get all such erroneously punched envelopes directed to other proper destinations.

It is contemplated that envelopes incorporating the present invention may be advantageously used with an automatic sorting machine that has been additionally combined, coupled, or at least coordinated, with a conventional postage or stamp cancelling machine thereby accomplishing the dual operations of cancelling and sorting substantially simultaneously. This, of course, would be particularly advantageous in post office installations where such cancelling operations are presently accomplished by machine but the sorting operations are still handled manually.

The foregoing example is, of course, illustrative of one of the advantageous uses to which the present invention may be applied but is not otherwise intended to limit the use thereof to the specific application illustrated and described. Its possible uses are numerous but it is particularly adaptable for speeding up and facilitating sorting operations where large quantities of mail addressed to many different destinations are handled regularly.

From the above it will be appreciated there has been provided an improved envelope having unique destination indicating means and which is particularly adaptable for use with an automatic sorting machine. The use of an envelope of this character greatly facilitates and speeds up the sorting operations and readily overcomes the drawbacks and disadvantages heretofore experienced with manual sortings. The improved envelope is relatively inexpensive and simple to fabricate. Furthermore, its use requires no particular skill or adaptation but the use thereof will appreciably reduce handling costs of sorting and the savings thus effected will increase with increased quantities sorted.

The manner of achieving these objects and attaining these advantageous features is believed to be clear from the foregoing detailed description. Other objects and features will undoubtedly occur to those skilled in the art. Likewise certain modifications and alterations in the preferred construction disclosed may occur, all of which may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

What is claimed is:

1. A mailing envelope of the character adapted for sorting in a selector-type of automatically operated sorting device, including: a sheet of flexible material folded to provide a back side and a face side thereof; said face side being fashioned to provide a sealing-flap and oppositely extending side flaps that fold over to meet said back side; said back side having gummed edges adapted for affixing said back side to said side flaps; one of said side flaps having a plurality of perforations therein; said face side being provided with a plurality of perforations disposed proximate the end portion thereof that adjoins the perforated side flap, and having the perforations in said face side in registering alignment with corresponding perforations in said side flaps; an independently fashioned member interposed between the perforated portion of said face side and said perforated side flap; adhesive means fixedly positioning said member between said face side and said side flap; said member having a

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plurality of perforable punch-outs therein any one of which may be punched out by the user to provide a clean opening through said member; said member being further disposed so that each of the punch-out areas therein is in registering alignment with a perforation in said face side and said side flap; error-correcting means which includes having one perforation in the face side together with its aligned punch-out in the said member and its aligned perforation in said side flap disposed closer to the end edge of said envelope than all of said remaining perforations; and destination indicating means on said face side in the vicinity of each perforation to indicate intended destination when the punch-out aligned therewith is punched out by the user.

2. A return mail envelope of the character adapted for sorting in a selector-type of automatically operated sorting device, including: a sheet of paper folded to provide a back side and a face side thereof; said face side being provided with a sealing flap, a long side flap, and a short side flap all of which are foldable to meet said back side; said back side having gummed edges adapted for affixing said back side to said side flaps when said side flaps are folded over to provide a pocket for receiving enclosures; said long side flap having a portion thereof which folds back upon itself, and which portion is provided with a plurality of complementary arranged perforations which are in registering alignment with one another when said portion is folded back upon itself; said perforations being disposed beyond the boundary of the enclosure pocket; a separately fashioned semi-rigid member having a plurality of perforable punch-outs

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therein, any one of which may be punched-out by the user to provide an unobstructed opening through said member; adhesive means fixedly positioning said semi-rigid member interposed between the folds of the portion of said long side flap that is folded back upon itself, and having said member so disposed that one edge thereof delimits one edge boundary of the enclosure pocket; said semi-rigid member being further disposed so that each of the punch-out areas therein is in registering alignment with aligned perforations in each fold of said long side flap portion when said portion is folded back upon itself; punch-out error-correcting means which includes having one of the perforations in said long side flap and its respective perforable punch-out in said semi-rigid member disposed in closer proximity to the proximate end edge of the envelope than any of the others of said perforations; and destination indicating means imprinted on the face side of said long side flap proximate each perforation to indicate intended destination when the respective punch-out is punched out by the user.

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