Jan. 5, 1937. W. E. SWIFT 2,066,495

ENVELOPE

Filed July 17, 1935

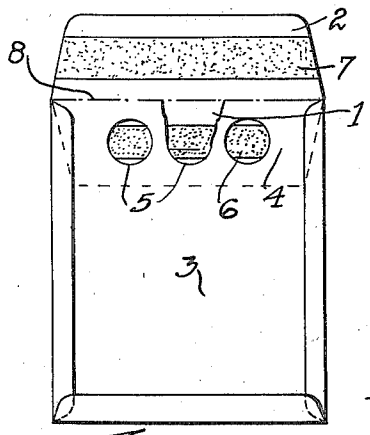


Fig. 1.

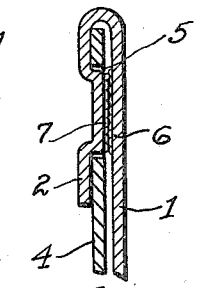


Fig. 3.

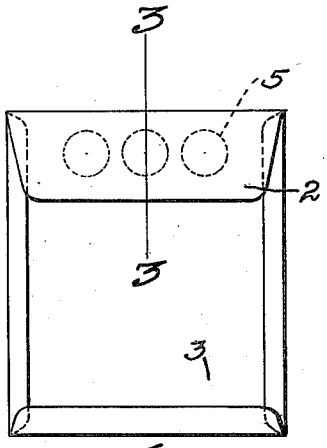


Fig. 2.

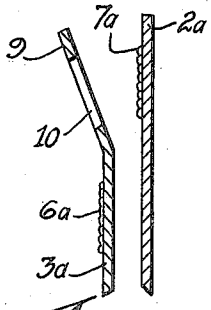


Fig. 5.

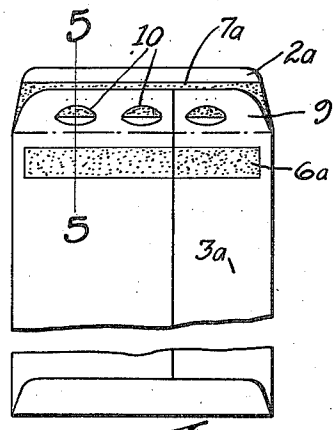


Fig. 4.

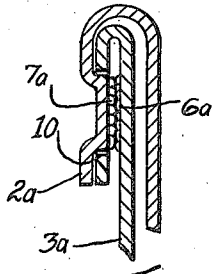


Fig. 6.

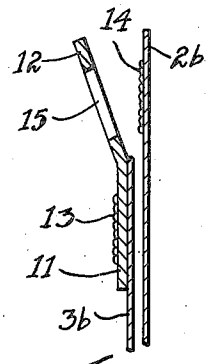


Fig. 8.

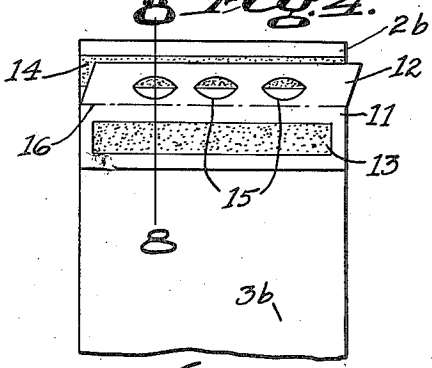


Fig. 7.

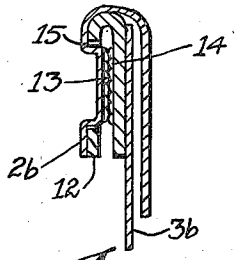


Fig. 9.

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2,066,495

UNITED STATES PATENT OFFICE

2,066,495

ENVELOPE

Willard E. Swift, Worcester, Mass., assignor to United States Envelope Company, Springfield, Mass., a corporation of Maine

Application July 17, 1935, Serial No. 31,849

10 Claims. (Cl. 229—80)

The present invention relates to envelopes, and particularly to envelopes of the dry-sealing type in which corresponding areas of portions of the envelope that are adapted to be disposed in overlying relation are coated with an adhesive having the property of sticking to itself upon non-moistened contact.

In the construction of certain types of dry-sealing envelopes, it has been necessary to prevent premature engagement between the dry-sealing adhesive areas, for the purpose of packing, by either interleaving the adhesive areas, or by special folding operations on the envelope blanks. Obviously, either of the above mentioned expedients add to the cost of the envelopes, or require the use of special envelope machinery, as well as the performance of unusual folding operations by the users of the envelopes.

According to the present invention, there is provided an improved envelope of the above indicated character so constructed that its dry-sealing adhesive areas are normally maintained out of engagement, for packing and handling, by an integral portion of the envelope which also permits engagement of these areas to effect self sealing upon merely folding over and pressing down a conventional seal flap. Envelopes embodying the invention are adapted to be constructed on standard envelope machines, and do not require any unconventional manipulation on the part of the users, such as the removal of interleaves or special folding. The above and other advantageous features of the invention will hereinafter more fully appear from the following description with reference to the accompanying drawing, in which:—

Fig. 1 is a rear view of an open envelope constructed in accordance with the invention, with a portion of the rear envelope wall broken away.

Fig. 2 shows the envelope of Fig. 1 after being sealed.

Fig. 3 is an enlarged vertical sectional view along the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 1, showing a modified form of envelope.

Fig. 5 is an enlarged vertical sectional view along the line 5—5 of Fig. 4.

Fig. 6 is an enlarged sectional view showing the envelope of Fig. 5 in sealed condition.

Fig. 7 is a perspective view of an envelope embodying a further modification of the invention.

Fig. 8 is an enlarged vertical sectional view along the line 8—8 of Fig. 7.

Fig. 9 is an enlarged vertical sectional view showing the envelope of Fig. 8 in sealed condition.

Like reference characters refer to like parts in the different figures.

Referring first to Figs. 1, 2 and 3, the envelope utilized for the purpose of embodying the invention is shown as being of the side seam type, with a front wall 1, seal flap 2, and a rear wall 3 constituted by side and bottom flaps folded over and adhesively secured together in overlying relation. Preferably, the bottom flap 4 extends substantially the full width of the rear wall 3 and the upper portion of this flap 4 provides a number of spaced apertures 5, 5 extending across the rear wall 3 just below the mouth of the envelope pocket.

Prior to the completion of the envelope of Fig. 1, portions of the blank which constitute the inner surfaces of the front wall 1 and extended seal flap 2 are coated with correspondingly shaped areas of adhesive 6 and 7 respectively, it being noted that the adhesive coated areas are symmetrically disposed with respect to the score line 8 between the flap 2 and the front wall 1. The adhesive 6 and 7 is of such a character that it will adhere to itself upon non-moistened contact, although it will not adhere to the material of which the envelope is made. Preferably the adhesive 6 and 7 is applied in the form of a dispersed rubber solution, or as a natural or compounded latex, the invention also contemplating the use of other similar dry-sealing adhesives in the form of thermoplastics, such as arclor resins or galyptols, either alone or in combination.

In the completed envelope of Fig. 1, the apertures 5 in the flap 4 of the rear wall 3 only partially expose the adhesive 6 on the underlying surface of the front wall 1, the spacing and size of the apertures 5 being such that at least 50% of the adhesive 6 is covered. Therefore, should the seal flap 2 be folded down, as indicated in dotted lines, without the application of pressure, the dry-sealing adhesive areas 6 and 7 are maintained out of engagement by the portions of the rear wall 3 between the apertures 5, and the envelope may be packed and handled in the usual manner without premature sealing. Preferably the envelope blank of Fig. 1 is of appreciable thickness, so that the unperforated portions of the rear wall flap 4 serve to hold the seal flap adhesive 7 away from the front wall adhesive 6 when the seal flap 2 is folded over, without being pressed down.

When it is desired to seal the envelope of Fig. 1 after loading, it is only necessary to fold over the seal flap 2, as shown in Fig. 2, and apply pressure to the overlying areas of the flap and rear wall. When such pressure is applied, considerable areas

of the adhesive 7 are forced through the apertures 5 into engagement with the adhesive 6, thereby effectively securing the seal flap 2 to portions of the front wall 1 defined by the apertures 5, as indicated in Fig. 3. While the envelope of Figs. 2 and 3 is not completely sealed, the tenacious bond between the engaged areas of dry-sealing adhesive 6 and 7 is sufficient to hold the seal flap down for all practical purposes.

Referring now to Figs. 4, 5 and 6, there is shown a modification of the invention, wherein the seal flap 2*a* and rear wall 3*a* are provided with correspondingly shaped areas of dry-sealing adhesive 7*a* and 6*a*. The rear wall 3*a* is also provided with an auxiliary flap 9 substantially corresponding in area to the seal flap 2, which flap 9 provides a number of spaced apertures 10, 10. When the seal flap 2 is folded down upon the rear wall 3 without pressure, the unperforated portions of the flap 9 serve to maintain the adhesive areas 6*a* and 7*a* out of premature engagement, thereby permitting the envelope of Fig. 4 to be packed and handled in the same manner as the envelope of Fig. 1.

When it is desired to seal the envelope of Fig. 4, the flap 2*a* is folded over, with the application of pressure, to force portions of the flap through the apertures 10 and thereby adhesion between the dry-sealing adhesive coated areas defined by the apertures 10. While the flap 9 does, in effect, serve as an interleaf between the areas of dry-sealing adhesive 6*a* and 7*a*, it is to be noted that the flap 9 forms an integral part of the envelope and does not have to be removed in order to permit sealing of the envelope after loading.

Referring now to Figs. 7, 8 and 9, there is shown a still further modification of the invention wherein the upper portion of the rear wall 3*b* of an envelope carries a strip 11 providing a loose flap 12 extending beyond the mouth of the envelope pocket, in somewhat the same manner as does the flap 9 in Fig. 4. That portion of the strip 11 attached to the rear wall 3*b* provides an area of dry-sealing adhesive 13, and the seal flap 2*b* carries a corresponding area of dry-sealing adhesive 14.

The flap 12 of the strip 11 provides a series of apertures 15, 15 in line with the adhesive areas 13 and 14 when the flap 2*b* is folded over without pressure, with the unperforated portions of the flap 12 serving to prevent contact between the dry-sealing adhesive. Thus, the flap 12 permits the envelope of Fig. 7 to be packed and handled in the same manner as the envelope of Fig. 1, without danger of premature contact between the areas of dry-sealing adhesive. The strip 11, provided with a band of adhesive 13 and apertures 15 on opposite sides of its central score line 16 may readily be applied to the otherwise completed envelope of Fig. 7, each strip being cut from a continuous web to suit the width of an envelope. By making the strip 11 of material having a greater thickness than the blank from which the envelope is made, as indicated in Fig. 8, it is possible to apply the present invention to envelopes made from relatively thin paper, as compared to the material from which the envelopes of Figs. 1 and 4 are made.

When it is desired to seal the envelope of Fig. 7, the flap 2*b* is folded over, with the application of pressure, to force portions of the flap 2*b* through the apertures 15 in the strip 11, thereby securing engagement of dry-sealing adhesive coated areas 13 and 14 defined by the apertures 15, as indicated in Fig. 9. Since the apertured strip flap 12 is of thicker material than the seal flap 2*b*, and is not adhered to the rear wall 3*b*, it may be readily seized along with the seal flap in opening the envelope, so as to separate the engaged dry-sealing adhesive areas, without destroying the seal flap.

Another feature inherent in the envelope constructions of Figs. 4 and 7 resides in the fact that after the seal flap 2*a*, or 2*b*, has been turned back to open the loaded envelope by pulling apart the adhered areas of adhesive, either the flap 9 or the flap 12 can then be torn off and the envelope effectively re-sealed by engagement of those areas of dry-sealing adhesive that have been previously separated by unperforated portions of the flaps 9 and 12, respectively. Thus, envelopes constructed as shown in Figs. 4 and 7 are particularly well adapted for remailing purposes.

From the foregoing, it is apparent that by the present invention there is provided an improved envelope of the dry-sealing type that is adapted to be made on standard envelope machinery, and packed in the usual manner, without possibility of areas of the dry-sealing adhesive coming into engagement until pressure is actually applied to these overlying areas for the purposes of sealing the envelope.

I claim,

1. An envelope having correspondingly shaped areas of its seal flap and body coated with a dry-sealing adhesive, with an apertured portion of the envelope body disposed between said adhesive areas to maintain said adhesive areas out of engagement.

2. An envelope having correspondingly shaped areas of its seal flap and body coated with a dry-sealing adhesive, with an apertured portion of the envelope body disposed between said adhesive areas to maintain said adhesive areas out of engagement, sealing of the envelope being effected by pressing portions of said adhesive areas into contact through said apertured portion.

3. An envelope having correspondingly shaped areas of its seal flap and body coated with a dry-sealing adhesive, with an apertured portion of the envelope body disposed between said adhesive areas to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope.

4. An envelope having correspondingly shaped areas of its seal flap and body coated with a dry-sealing adhesive, with an apertured portion of the envelope body disposed between said adhesive areas to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope, sealing of the envelope being effected by applying pressure to the seal flap to force portions of said adhesive areas into contact through the apertured portion.

5. An envelope having correspondingly shaped areas of its seal flap and rear wall coated with a dry-sealing adhesive, with an apertured extension of the rear wall serving to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope.

6. An envelope having correspondingly shaped areas of its seal flap and rear wall coated with a dry-sealing adhesive, with an apertured extension of the rear wall serving to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope, sealing of the envelope being effected by applying pressure to the seal flap to force portions of said adhesive areas into contact through said apertured extension.

7. An envelope having correspondingly shaped

areas of its seal flap and rear wall coated with a dry-sealing adhesive, with the rear wall providing an apertured extension, initial sealing of the envelope being effected by applying pressure to the seal flap to force portions of said adhesive areas into contact through said apertured extension, with removal of said extension serving to permit re-sealing of the envelope through contact of previously unengaged adhesive areas.

8. An envelope having correspondingly shaped areas of its seal flap and of a strip applied to its rear wall coated with a dry-sealing adhesive, with said strip providing an apertured extension to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope.

9. An envelope having correspondingly shaped areas of its seal flap and of a strip applied to its rear wall coated with a dry-sealing adhesive, with said strip providing an apertured extension tc maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope, sealing of the envelope being effected by applying pressure to the seal flap to force portions of said adhesive areas into contact through said apertured strip extension.

10. An envelope having correspondingly shaped areas of its seal flap and of a strip applied to its rear wall coated with a dry-sealing adhesive, with said strip providing an apertured extension to maintain said adhesive areas out of engagement when the seal flap is folded over for packing the envelope, said strip being made of material thicker than the material of the envelope.

WILLARD E. SWIFT.