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Van Malderghem

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[54] **ENVELOPE ASSEMBLY WITH REMOVABLE TRANSFER SHEETS**

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[52] **U.S. Cl.** ..... **229/69,** 229/85, 282/11.5 A, 282/25

[51] **Int. Cl.** **B65d 27/10**

[58] **Field of Search** ..... 229/69, 85; 282/11.5 R, 282/11.5 A, 22 R, 25

[56] **References Cited**

UNITED STATES PATENTS

3,092,401	6/1963	Steidinger	282/22 R X
3,554,438	1/1971	Van Malderghem	229/69

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[57] **ABSTRACT**

Assembly of stuffed envelopes interconnected along transverse lines of weakening, front and back plies closed on all sides forming each envelope, insert and transfer material within each envelope, the transfer material being attached to a first removable tear strip located at one end of the envelope, the insert material being attached to a portion of the envelope, a second removable tear strip provided for freeing the insert from the envelope, the transfer material being removable upon the removal of the first tear strip following the printing operation, and the envelope being resealed before being sent out to the intended recipient whereupon it may be opened and the insert material freed from the envelope upon removal of the second tear strip.

5 Claims, 5 Drawing Figures

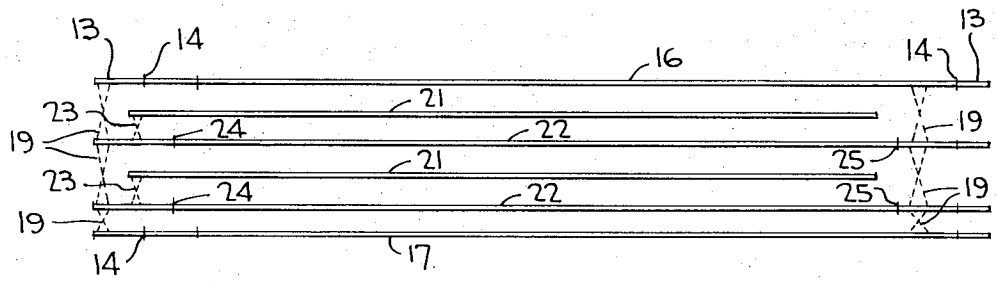


FIG. 1

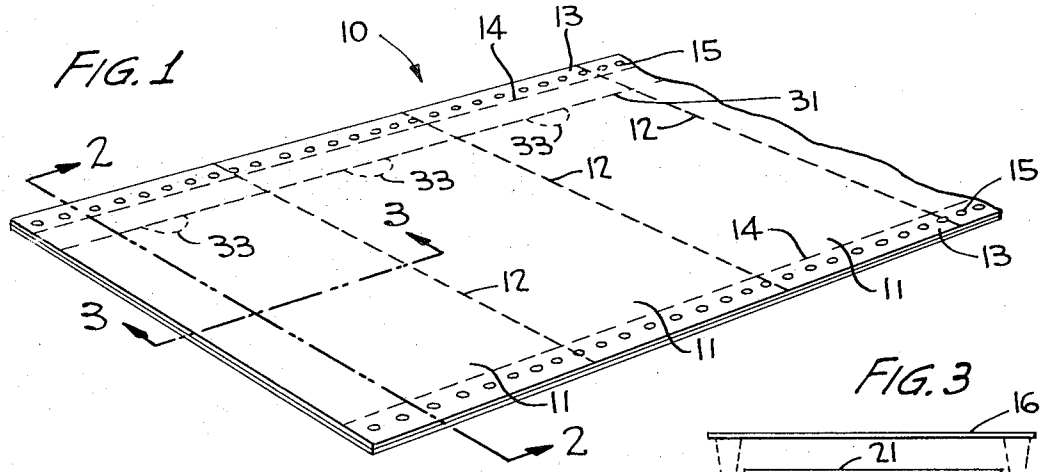


FIG. 3

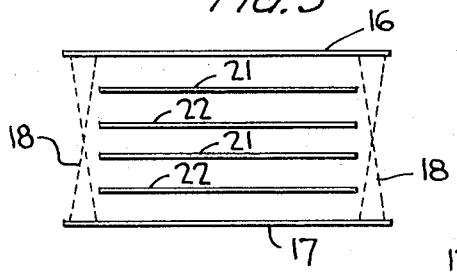


FIG. 2

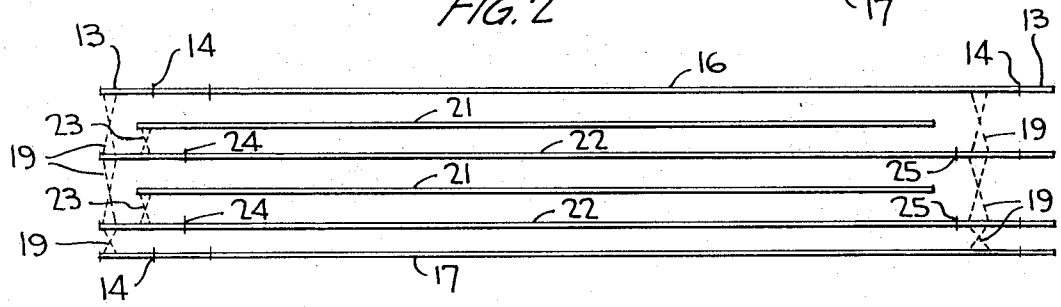


FIG. 4

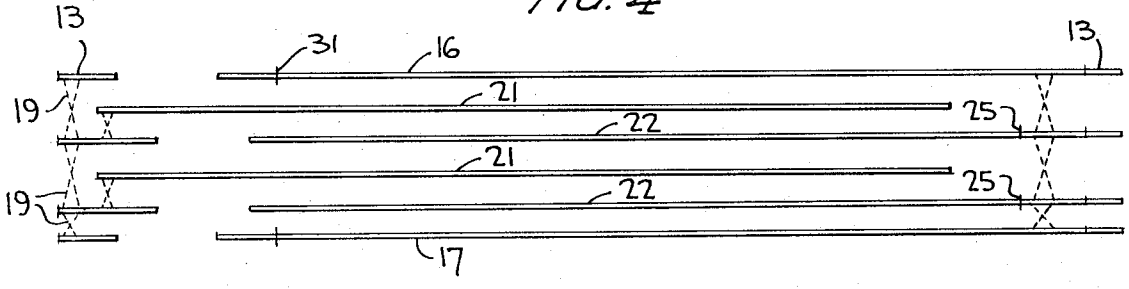
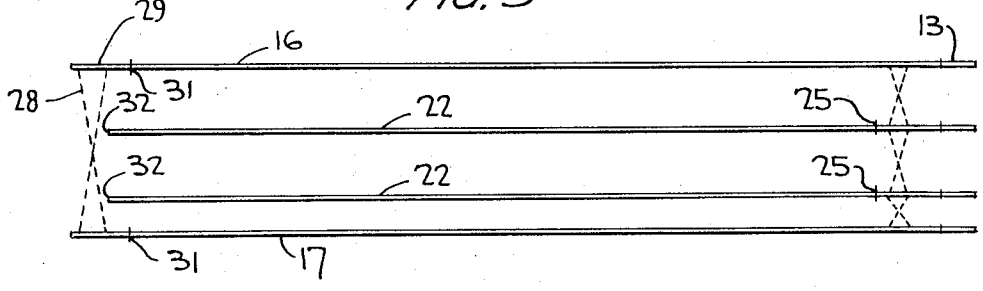


FIG. 5



ENVELOPE ASSEMBLY WITH REMOVABLE TRANSFER SHEETS

This invention relates generally to an assembly of series-connected envelopes and more particularly to such an assembly wherein each envelope contains both insert material and transfer material, the latter being capable of easy removal from its envelope while retaining the insert material therewithin.

In many of the series-connected envelopes stuffed with insert material, spot carbon material is generally provided on the underside of the envelope top ply so that, during the printing operation, indicia may be transferred through the master sheet and the envelope top ply and on to the insert material. For more than one sheet of insert material, a spot of carbon or transfer material is provided at the underside of each insert sheet except for the lowermost one. Alternatively, economic and other factors may dictate the use of sheets of transfer material disposed between each insert sheet and between the envelope top ply and the top insert sheet. Such a construction is not, however, without its drawbacks. When using sheets of transfer material, such sheets along with the inserts must be extracted by the ultimate recipient with the exercise of due care in assuring that the inserts are not smudged during or after extraction.

One approach taken in avoiding this problem is set forth in applicant's earlier application, Ser. No. 324,192 filed Jan. 16, 1973, and commonly owned herewith, relating to an envelope assembly wherein the insert sheets only are extracted from the envelope while the transfer material is retained within the envelope.

The present invention offers another approach in avoiding the above-mentioned drawbacks by providing an envelope stuffed with both insert and transfer sheets wherein the envelope is so constructed as to permit removal of only the transfer sheets after the printing operation but before being sent to the ultimate recipient. This is the principal object of the present invention.

Another object is to provide such an assembly of stuffed, sealed envelopes in which the transfer sheets are attached to a first removable tear strip to facilitate extraction of the transfer sheets, while a second removable tear strip is provided on each envelope for freeing the inserts by the ultimate recipient.

Other objects, advantages and novel features of the invention will become apparent from the following detailed description of the invention wherein:

FIG. 1 is a perspective view of an assembly of stuffed, sealed envelopes interconnected along transverse lines of weakening and constructed in accordance with the present invention;

FIGS. 2 and 3 are sectional views of one of the stuffed, sealed envelopes taken respectively along the lines 2—2 and 3—3 of FIG. 1;

FIG. 4 is a view similar to FIG. 2 showing the manner in which the transfer sheets are removed; and

FIG. 5 is a view similar to FIG. 4 showing the first tear strip and transfer sheets completely removed from the envelope, and the envelope resealed before it reaches the ultimate user.

Turning now to the drawings wherein like reference characters refer to like and corresponding parts throughout the several views, there is shown in FIG. 1 an assembly 10 of envelopes 11 serially interconnected along transverse lines of weakening 12. Although FIG. 1 shows a one-wide assembly of interconnected envelopes it should be understood that a two-wide or greater assembly may be likewise provided without departing from the spirit of the present invention.

The assembly is provided with a feed back 13 interconnected at opposite ends of the envelope plies along lines 14 of perforations. Each feed band is, of course, provided with a series of feed holes 15 for cooperating with the pins of a tractor feed or similar feed device in transferring the assembly through the printer, burster, etc.

Each envelope 11 is shown as comprising a front ply 16 and a back ply 17 interconnected along its opposite sides by means of strips of adhesive 18, shown diagrammatically in FIG. 3, and interconnected along opposite ends through inserts 22 by means of adhesive strips 19, shown diagrammatically in FIG. 2. The elements of each envelope are, of course, contiguous although they are illustrated in each of FIGS. 2 to 5 as spaced-apart in the interest of clarity. Sheets 21 of transfer material and insert sheets 22 are disposed alternately within each envelope formed by the interconnected front and back plies.

A front master record ply (not shown) normally overlies and/or underlies the assembly 10. Of course, more than one of such record plies may be provided if desired. The insert material, shown as sheets 22, may also be in the form of a return envelope or card elements without departing from the teachings of the invention. Each insert is removably secured in registry with top ply 16 at one end (shown at the right in FIG. 2) to the front and back plies by means of adhesive strips 19. At the opposite end of the envelope (at the left in FIG. 2) each insert sheet 22 is also secured to plies 16 and 17 by means of adhesive strips 19. A line 24 of perforations is provided in each insert at this opposite end of the envelope, and a line 25 of perforations is provided in each insert at their one end.

Transfer sheets 21 are secured to an insert 22 lying therebelow along strips 23 of adhesive located outwardly of the lines 24 of perforations. Lines 14 and 24 of perforations are designed to present connecting ties which are weaker than the connecting ties presented by lines 25. Accordingly, a first removable tear strip 13 is provided for each envelope which includes the feed band on the plies at the left end and a portion of each insert outwardly of lines 24. The remaining side and end edges of each transfer sheet are free of attachments and lie inwardly of the front and back ply adhesive connections as shown in FIGS. 2 and 3.

As clearly shown in FIG. 4, the keen or weak connecting ties along lines 14 and 24 of perforations are broken as a force is exerted on first tear strip 13 in a direction away from the remainder of the envelope. Transfer sheets 21, interconnected along strips 23 of adhesive, are therefore extracted from the envelope as tear strip 13 is removed. Removal of this tear strip may be effected by means of, for example, a deleaver apparatus or the like. Separation of tear strip 13 and removal of transfer sheets 21 normally takes place after the printing operation at a time when further use of transfer material is not required for the envelopes. As the assembly of interconnected envelopes proceeds along the deleaver or similar apparatus, it passes through a re-sealing element which reseals the open

end of each envelope so that the front and back plies are accordingly sealed as at **28** shown in FIG. **5.**

A second removable tear strip **29** is provided on each envelope as defined by lines **31** of perforations on both the front and back plies thereof. The second tear strip may be further defined by a thumb tab **33** provided in the front and back ply. The free end edges **32** of each insert sheet **22,** resulting upon removal of tear strip **13,** extend within the second tear strip **29.** Accordingly, by grasping tear strip **29** with one hand over the thumb tabs and the opposite end of the envelope outwardly of perforations **25** with the other hand, and exerting an outward snapping force in opposite directions, tear strip **29** is removed and insert sheets **22** are freed from the envelope as the ties along perforations **25** are broken. This arrangement and operation is similar to that described in U.S. Pat. No. 3,554,438, issued Jan. 12, 1971 and commonly owned herewith.

From the foregoing, it can be seen that a simple yet highly effective form construction has been provided wherein sheets of transfer material may be easily removed from each envelope after the printing operation and before being resealed. Thereafter, each envelope **11** may be burst or separated from the assembly and sent out to its intended recipient minus any transfer material, either in the form of sheets or transfer material or spots of transfer material on the undersides of any ply or insert. Any smudges or accidental transfer of carbon or similar material before or after extraction of inserts **22** is therefore substantially avoided.

Obviously, many modifications and variations of the present invention are possible in the light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the invention can be practiced otherwise than as specifically described.

What is claimed is:

1. An assembly of stuffed envelopes interconnected along transverse lines of weakening, front and back plies closed on all sides forming each envelope, insert material and transfer material within each envelope, a first removable tear strip at one end of said envelope including a portion of said insert material, said transfer material being attached to said portion of said insert material, said insert material being removably connected to a portion of said envelope whereby, upon removal of said first tear strip, said transfer material is extracted from said envelope while said insert material remains within said envelope, a second removable tear strip on said envelope, said plies being sealable together at said second strip, said insert material having an edge defined upon the removal of said first tear strip, and said insert material edge extending into and lying within said second tear strip so that, upon movement of said second tear strip including said insert material edge away from the remainder of said envelope, said insert material is freed from said envelope.

2. The assembly according to claim **1** wherein said second tear strip includes a thumb tab provided on said plies to facilitate easier freeing of said insert material from said envelope.

3. An assembly of stuffed envelopes interconnected along transverse lines of weakening, front and back plies closed on all sides forming each envelope, insert material and transfer material within each envelope, a first removable tear strip at one end of said envelope delimited by first lines of weakening in said plies at one end of said envelope, said insert material being connected to said first tear strip and being removable therefrom along a perforated line, said transfer material being connected to said insert material outwardly of said perforated line, and said insert material being removably connected to a portion of said envelope so that, upon removal of said first tear strip, said transfer material is extracted from said envelope while said insert material remains within said envelope, a second removable tear strip on said envelope delimited by further lines of weakening in said plies lying inwardly of said first lines of weakening, said plies being sealable together at said second tear strip, said insert material having an edge defined upon the removal of said first tear strip, and said insert material edge lying between said first and second lines of weakening so that, upon movement of said second tear strip including said insert material edge away from the remainder of said envelope, said insert material is freed from said envelope.

4. The assembly according to claim **3** wherein said first lines of weakening present connecting ties which are keener than connecting ties presented by said further lines of weakening to facilitate easy removal of said first tear strip independent of removal of said second tear strip.

5. The assembly according to claim **4** wherein said second tear strip is further delimited by a thumb tab provided on said plies to facilitate easier freeing of said insert material from said envelope.

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