Sept. 24, 1963 D. J. STEIDINGER 3,104,799

ENVELOPE ASSEMBLY

Filed May 29, 1961 3 Sheets-Sheet 1

FIG. 1

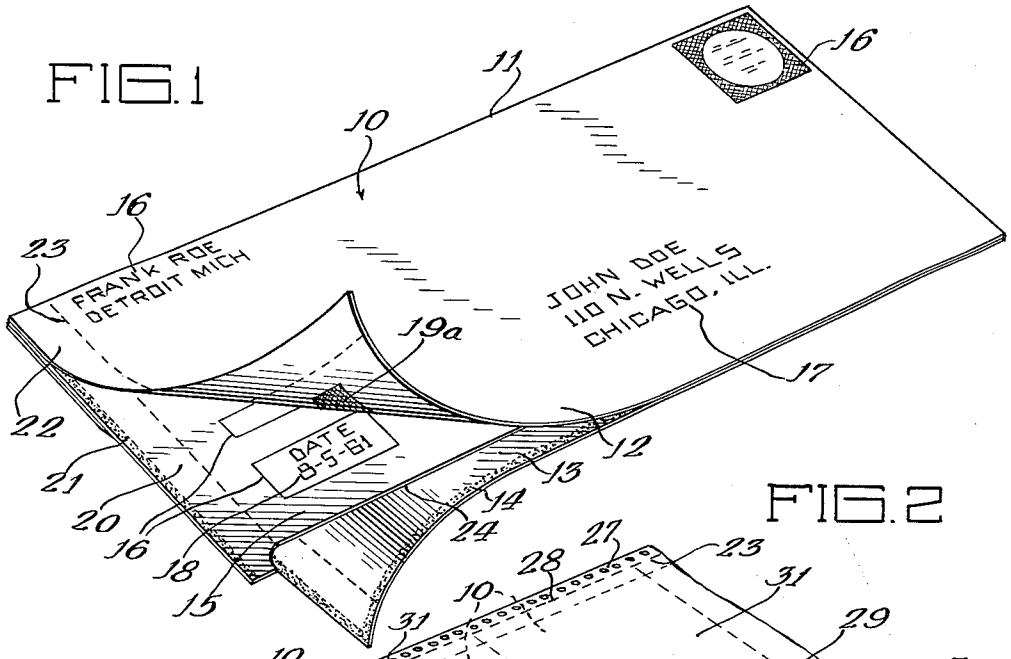


FIG. 2

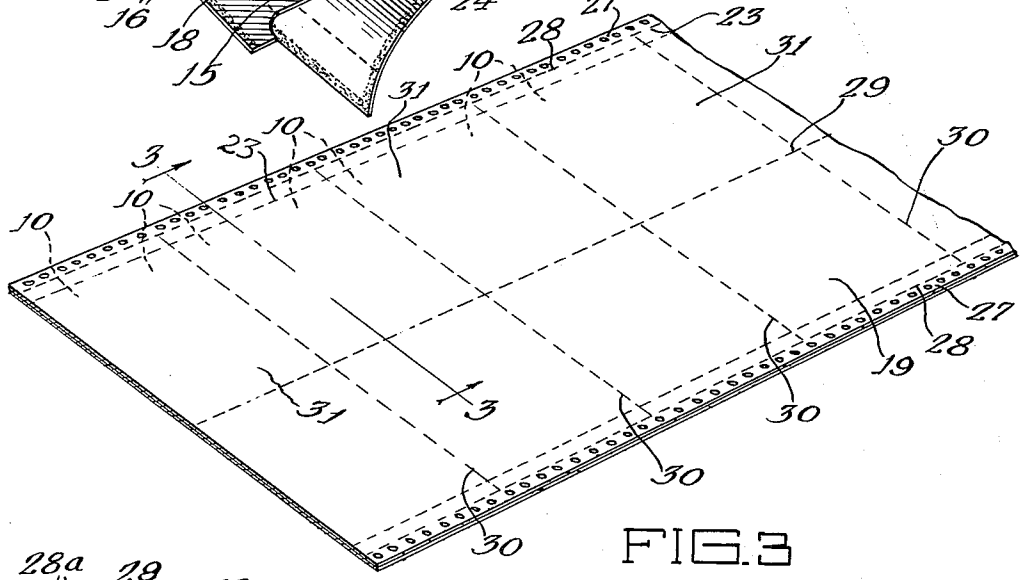
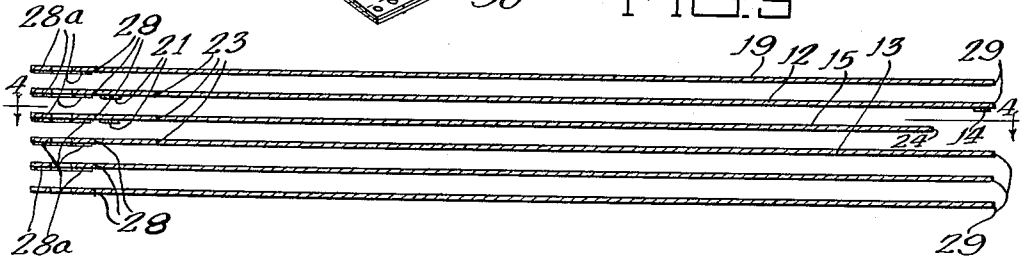


FIG. 3



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FIG.4

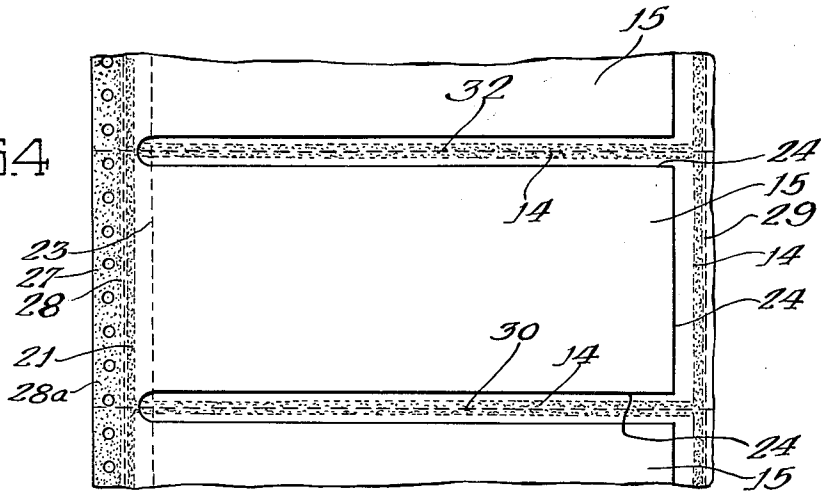


FIG.5

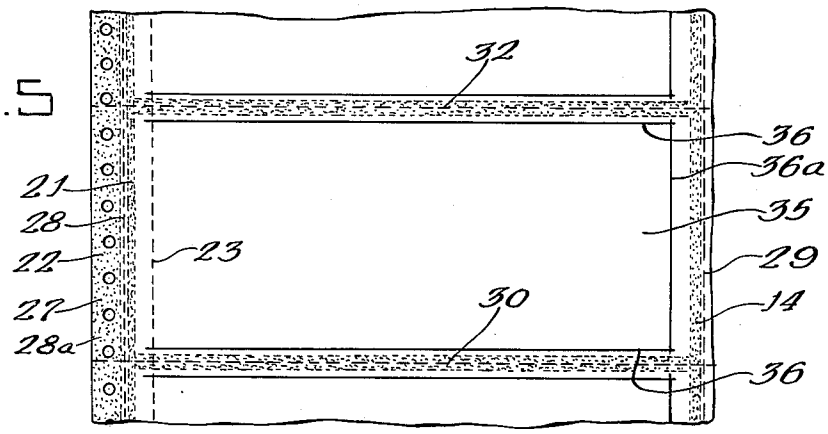
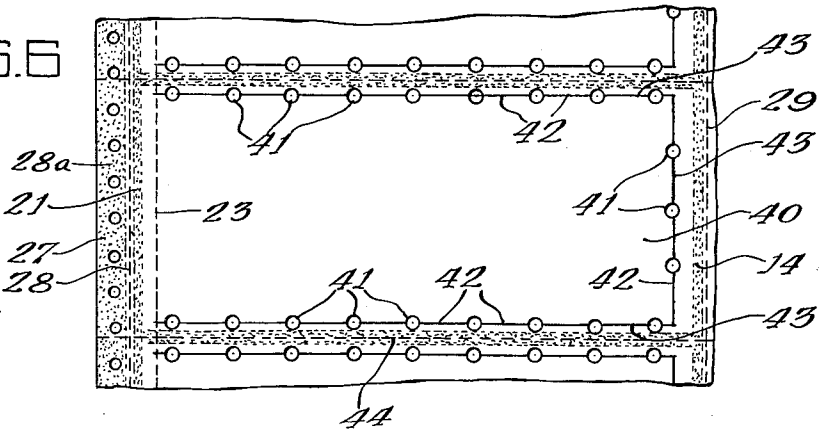


FIG.6



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FIG. 7

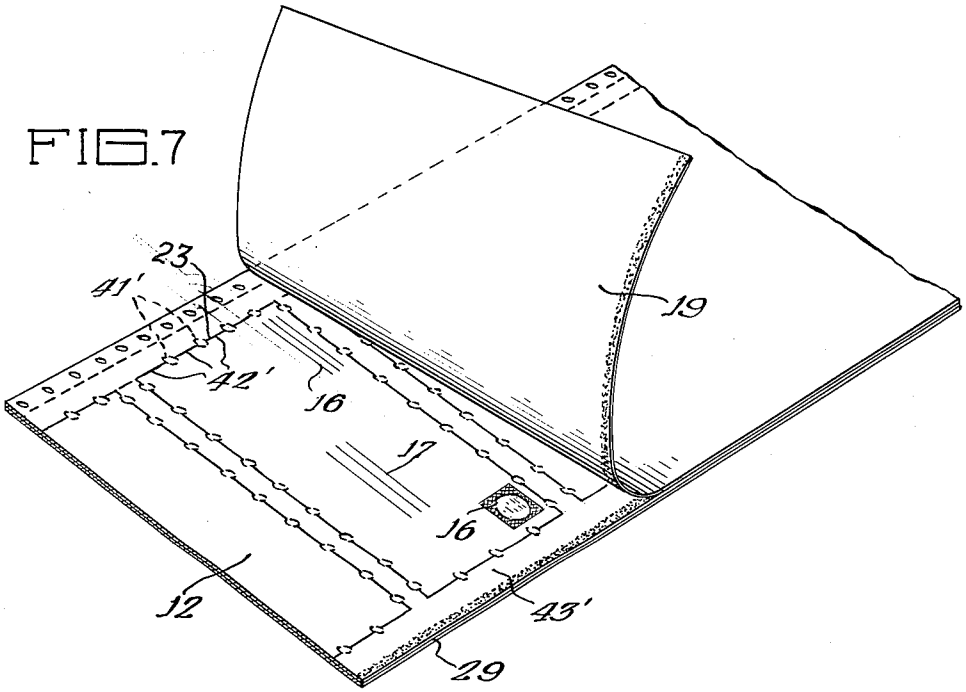
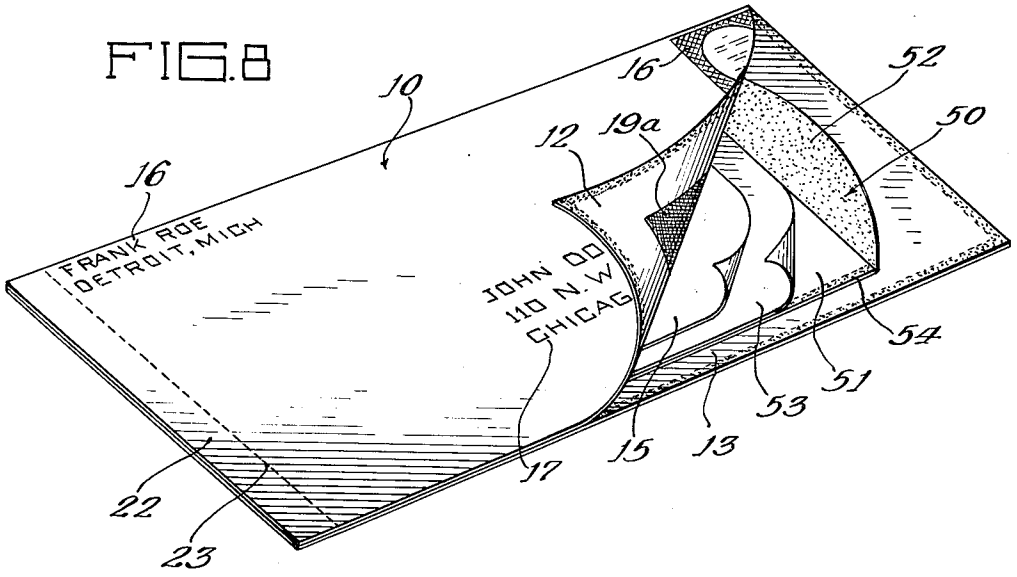


FIG. 8



United States Patent Office 3,104,799 Patented Sept. 24, 1963

3,104,799

ENVELOPE ASSEMBLY

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Filed May 29, 1961, Ser. No. 113,314
18 Claims. (Cl. 229—69)

This invention relates to envelope assemblies, and more particularly to continuous form stationery having superimposed plies incorporating stuffed sealed envelopes.

The processing of office forms is becoming increasingly acute for many businesses. Continuous form stationery, such as manifold assemblies having a plurality of continuous, superimposed, printed plies of stationery are commercially available. Such manifold assemblies are fed through suitable office equipment, such as a typewriter or tabulating machine, for simultaneously imprinting all plies of a set of forms. Personalized imprinting on the various plies, for example, the recipient's name and address, a due date and amount, and so forth, is usually imprinted in its entirety on a front master ply and is selectively imprinted on underlying plies by means such as spot carbon on rear faces of the plies, or separate sheets of spot carbon in the manifold assembly. Manifold assemblies usually have suitably positioned longitudinal and cross lines of weakening for dividing the assembly into sets of office forms in suitable bursting and deleaving machines.

Manufacture of continuous form stationery, its imprinting in office equipment, deleaving and bursting, are a highly developed and commercialized field. However, subsequent operations such as stuffing envelopes with collected forms, and sealing and stamping the envelopes remains a time-consuming and relatively inefficient operation.

Particularly for matter being sent through the mails to the general public, the envelopes must be easy and simple to open for ready access to the material inserted in the envelope. Proper stuffing of envelopes is further complicated when a return envelope is to be enclosed, not only because of the increased material to be handled, but also because of the possibility of damaging the return envelope upon opening the outer carrier envelope. In addition, when envelopes are being stuffed there is always the hazard that an intended enclosure will be omitted or that an improper enclosure will be inserted in the carrier envelope.

The primary object of this invention is to provide new and improved continuous form stationery.

Another object of this invention is to provide new and improved continuous form stationery including sealed envelopes containing properly registered inserts to be imprinted within the envelopes. A related object is provision for simple and easy opening of the sealed envelope and removal of its contents.

A further object of the invention is to provision of a new and improved manifold assembly including sealed envelopes containing inserts, and means for imprinting the inserts concurrently with imprinting of the remainder of the manifold assembly, the envelopes being generally rectangular and the inserts being maintained in accurate registration for imprinting and being removable from the envelope upon opening only one edge portion of the envelope.

An important object of this invention is to provide a new and improved sealed envelope containing inserts to be imprinted while within the sealed envelopes. A related object is provision for easy opening of the sealed envelopes and removal of the inserts.

Other objects, features and advantages of the present invention will be apparent from the following description of preferred embodiments illustrated in the accompanying drawings, in which:

FIGURE 1 is a perspective view of a sealed envelope with an insert imprinted while within the sealed envelope, in accordance with the invention, with portions of the envelope folded back for clearer illustration;

FIGURE 2 is a fragmentary perspective view, to a reduced scale, of a continuous form stationery assembly having stuffed sealed envelopes of the type shown in FIGURE 1;

FIGURE 3 is a fragmentary, enlarged and exploded sectional view taken generally along the line 3—3 of FIGURE 2;

FIGURE 4 is a fragmentary sectional view, to a reduced scale, taken generally along the line 4—4 of FIGURE 3;

FIGURE 5 is a fragmentary sectional view, similar to FIGURE 4, but illustrating another embodiment of the invention;

FIGURE 6 is a fragmentary sectional view generally similar to FIGURES 4 and 5, but illustrating still another embodiment of the invention;

FIGURE 7 is a fragmentary perspective view similar to FIGURE 6, of still another embodiment, with a ply folded back for clearer illustration; and

FIGURE 8 is a perspective view similar to FIGURE 1 of another embodiment of a sealed envelope, in accordance with the invention.

The present invention is, in brief, directed to continuous form stationery generally referred to as a manifold assembly, and to sealed envelopes thereof containing inserts to be imprinted while within the sealed envelopes as the manifold assembly passes through a suitable office imprinting machine such as a typewriter or tabulating machine. One or more inserts may be included within each sealed envelope. For example, an inner envelope, such as a return envelope, may be enclosed. Other inserts, such as sheets might take the form of premium notices, advertising, a bill, or an invoice, with or without a return envelope. The inserts are detachably held by the sealed envelope in proper registration with a front master record sheet or ply of the manifold assembly for selective, individualized imprinting concurrently with the master record ply. Standard indicia may be printed on the sealed envelope and one or more inserts along with printing of the other plies during manufacture of the manifold assembly. After the manifold assembly has been individually imprinted in suitable office equipment the sealed envelopes and their inserts are burst and deleaved from the manifold assembly. To open a sealed envelope and remove the inserts it is then merely necessary to detach a tear strip along an edge of the sealed envelope.

Referring to the drawings, FIGURE 1 shows a sealed stuffed envelope assembly having sealed outer envelope **10** removed from a manifold assembly illustrated in FIGURE 2. Envelope **10** is generally rectangular and has a front **12** and a back **13** sealed along a strip coextensive with three of the peripheral edges, in any suitable manner as by a strip of adhesive **14**. For purposes of clearer illustration, front **12** and back **13** are folded outwardly at the lower left-hand corner of the envelope, but this corner is actually sealed. Insert material, in the present illustration a single sheet **15**, is sealed within the envelope **10**.

Inserts and sealed outer envelope fronts **12** and backs **13** are preferably printed with standard indicia **16** during manufacture of the manifold assembly **11**. Such standard indicia is here shown as including a date box on the sheet **15**, and a return address and printed stamp on the front **12** of the sealed outer envelope **10**. Vari-

able indicia, such as delivery address 17 on sealed envelope front 12 may or may not be imprinted on the insert, and date 18 may be selectively imprinted only on sheet 15. Such variable indicia may be imprinted in an office machine in any suitable manner simultaneously with, and responsive to, conventional imprinting of the variable indicia on a front master record ply 19 of the manifold assembly 11, as the assembly is threaded through an office typewriter or tabulating machine. Suitable spot transfer material 19*a*, as the spot of carbon on the rear face of front 12 provides for selective imprinting. Pressure senstitive insert stock may be used, if desired.

The inserts are releasably maintained in proper registration with the front master record ply 19, and are freed from the sealed outer envelope by an attaching portion 20 of the inserts which are suitably secured, by an adhesive strip 21, between the sealed outer envelope front 12 and back 13. It should be noted that insert 15 is secured to the sealed outer envelope 10 only along attaching portion 20 and that the remainder of the insert has marginal edges 24 spaced from the periphery of the sealed outer envelope 10 and from the adjacent adhesive strip 14. Attaching portion 20 forms part of a tear strip 22 which is delimited by a line of weakening 23, such as perforations, extending through the envelope front 12 and back 13 and insert 15, along one edge of the sealed envelope assembly. Adhesive strip 21 is spaced outwardly from tear line of weakening 23, and upon severing the tear strip 22 along tear line 23 to open the sealed outer envelope 10, insert 15 is free of the envelope.

With particular reference to FIGURES 2 and 3, the manifold assembly includes a plurality of superimposed plies of continuous form stationery printed with standard indicia, as previously described. The plies are assembled with the printed indicia of the various plies maintained in proper registration by feed bands 27 on opposite sides of the plies. The feed bands are delimited by longitudinal lines of weakening 28 in the plies. In the illustrated embodiment feed bands 27 are perforated for cooperating with feed mechanism of the manufacturing apparatus as well as the office imprinting equipment. Feed bands 27 of the various plies are suitably secured to each other as by adhesive 28*a* in the complete manifold assembly. The illustrated manifold assembly is further provided with a central longitudinal line of weakening 29 providing two parallel rows across the continuous form. Cross lines of weakening 30 divide each row of forms into individual sets of forms, as sets 31 in the left-hand row. This row has a series of sealed outer envelope assemblies.

The plies forming the sealed outer envelope as well as its interior sheets may be made in any size desired. It is ordinarily preferred to make the envelope length in the direction of the continuous strip, the same length as the form length of the individual tickets.

In the embodiment illustrated in FIGURES 1–4, the ply of sheet 15 is die cut on three sides to form a U-shaped slot, as illustrated in FIGURE 4, and providing marginal edges 24. The strip of adhesive 14 secures sealed outer envelope front 12 directly to back 13 with insert sheet marginal edges 24 spaced inwardly from this strip. As previously discussed, tear line 23 includes lines of weakening in front 12, back 13 and insert 15 along one edge of the sealed outer envelope 10. The die cuts in the ply forming insert sheets 15 intersect the tear line in insert sheet 15, and adhesive 21 of the tear strip is spaced from this line of weakening, so that upon opening the envelope at the tear line the sheet 15 is entirely free of the envelope 10. As shown by the two bottom plies in FIGURE 3, the continuous form may include additional plies in a conventional manner.

The modification of FIGURE 5 is substantially the same as the foregoing, but insert sheet 35 is provided with marginal edges formed by parallel cross slits 36 and longitudinal slit 36*a* forming a generally U-shaped slit spaced from the adjacent peripheral edges 11 of the envelope and the adhesive. Slits 36 cross the tear line 23 so that upon removing tear strip 22 the sheet is free of envelope 10 as previously described. In this embodiment envelope 10 is sealed with the ply of sheet 35 adhesively secured between envelope front 12 and back 13.

The embodiments of FIGURES 6 and 7 are similar to the previously described embodiments, but as shown in FIGURE 6, prior to incorporation into the manifold assembly insert sheet 40 is provided with a plurality of spaced apart perforations 41 in a generally U-shaped series. After assembly the envelope front 12 and back 13, and sheet 40 are simultaneously perforated as by slits 42, thus connecting adjacent perforations 41 and defining insert marginal edge 43 which is again spaced from the adhesive 44 securing the adjacent peripheral edges of the envelope. As in the immediately preceding embodiment, the ply forming sheet 40 also is received and adhesively secured between envelope front 12 and back 13. Marginal edge 43 extends across tear line 23, as in the foregoing embodiments, so that upon opening sealed envelope 10 insert 40 is free of the envelope and may be easily removed.

As shown in FIGURE 7, a continuous marginal edge 43′ may extend around the entire insert. The edge is formed by a continuous line of perforations 41′, and a continuous line of slits 42′, similar to those in conjunction with FIGURE 6. The insert is maintained in proper registration for imprinting while within the sealed envelope by close spacing with the strip sealing the sealed outer envelope 10.

Referring now to FIGURE 8, the inserts within sealed outer envelope 10 include the previously described sheet 15, and also a rectangular return envelope 50. Return envelope 50 has a front 51 with a dry adhesive coated tab 52 for sealing the envelope, and a back 53. Three sides of the return inner envelope are sealed in any suitable manner as by adhesive 54 between the front and back. Again, suitable spot transfer material 19*a* is applied to the plies for selectively imprinting the various inserts along with imprinting of front master record ply 19. As previously described, all inserts are maintained in proper registration within the sealed envelope and connection thereto by the attaching portion 20 of the tear strip 22. The return envelope insert is equally applicable to any of the other embodiments as will be obvious to one skilled in the art, and various combinations of inserts may be contained in sealed envelopes 10.

The various portions of the plies which are secured to each other by adhesive may equally well be secured by other suitable means well understood in the art. Sealed envelopes 10 may be directly connected to each other in the manifold assembly, to form a continuous series of stuffed sealed envelopes. Unattached envelope assemblies of this type may be imprinted separately from a manifold assembly.

The foregoing detailed description is given for clearness of understanding only, and no unnecessary limitations should be understood therefrom for some modifications will be obvious to those skilled in the art.

I claim:

1. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies including, a front master record ply and other plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly; an attaching portion connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges free of the sealed envelope; feed bands on opposite sides of said

plies for maintaining said plies properly registered and assembled and for feeding of said plies through equipment for imprinting the plies; spot carbon between said plies for selectively imprinting said sealed envelope and said insert material while within said sealed envelope responsive to imprinting said master record ply; and a substantially straight tear strip on each sealed envelope and including said attaching portion for opening the sealed envelope and freeing said insert material from the envelope.

2. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies including, a front master record ply and other plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly, the front and back of each sealed envelope being secured to each other along a substantially continuous strip coextensive with the periphery of the sealed envelope; an attaching portion connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges inward of said strip and free of the sealed envelope; said attaching portion being substantially straight and connected with the insert material by a substantially straight line of weakening intersecting portions of said marginal edges; feed bands on opposite sides of said plies for maintaining said plies properly registered and assembled and for feeding of said plies through equipment for imprinting the plies, said feed bands being connected with said plies by lines of weakening for detaching the feed bands from the plies; spot carbon betweeen said plies for selectively imprinting said sealed envelope and said insert material while within said sealed envelope responsive to imprinting said master record ply; and a substantially straight tear strip on each sealed envelope and including said attaching portion, said tear strip being delimited in the sealed envelope front and back by substantially straight lines of weakening cooperating with the attaching portion line of weakening, for opening the sealed envelope and freeing said insert material from the envelope.

3. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly; attaching means connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges free of the sealed envelope; means for feeding said plies properly registered and assembled through equipment for imprinting said plies; means for imprinting said insert material while within said sealed envelopes; and means comprising a substantially straight portion of each sealed envelope for opening the sealed envelope and freeing said insert material from the envelope.

4. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed envelopes and insert material within each envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly; an attaching portion connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges free of the sealed envelope, said attaching portion being substantially straight and connected with the insert material by a substantially straight line of weakening; means for feeding said plies properly registered and assembled through equipment for imprinting said plies; means for imprinting said insert material while within said sealed envelopes; and a substantally straight tear strip on each sealed envelope and including said attaching portion, said tear strip being delimited in the sealed envelope front and back by substantially straight lines of weakening cooperating with the attaching portion line of weakening, for opening the sealed envelope and freeing said insert material from the envelope.

5. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly; attaching means connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges free of the sealed envelope; and means for opening the sealed envelope and freeing said insert material from the envelope.

6. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly, the front and back of each sealed envelope being secured to each other along a substantially continuous strip coextensive with the periphery of the sealed envelope; and attaching portion connecting a portion of the insert material in each sealed envelope with the sealed envelope and the remaining portion of said insert material having marginal edges inward of said strip and free of the sealed envelope, said attaching portion being substantially straight and connected with the insert material by a substantially straight line of weakening intersecting portions of said marginal edges; and a substantially straight tear strip on each sealed envelope and including said attaching portion, said tear strip being delimited in the sealed envelope front and back by substantially straight lines of weakening cooperating with the attaching portion line of weakening, for opening the sealed envelope and freeing said insert material from the envelope.

7. The assembly of claim 6 wherein each strip adjacent the marginal edges secures the sealed envelope front and back directly to each other.

8. The assembly of claim 6 wherein the insert material ply has slits defining said marginal edges, and each strip secures the sealed envelope front and back to each other with portions of the insert material ply therebetween.

9. The assembly of claim 6 wherein the insert material ply within each sealed envelope has first perforations, and said sealed envelope front and back and insert material ply have second perforations, said second perforations in the insert material ply connecting adjacent first perforations thereby defining said marginal edges, and said strip secures the sealed envelope front and back to each other with portions of the insert material ply therebetween.

10. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed outer envelopes and an inner envelope within each sealed outer envelope, said sealed outer envelopes being delimited by lines of weakening in the plies for separating the sealed outer envelopes from the assembly; means connecting a portion of the inner envelope in each sealed outer envelope with the sealed outer envelope and the remaining portion of said inner envelope having marginal edges free of the sealed envelope; and means for opening the sealed outer envelope and freeing said inner envelope from the outer envelope.

11. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed outer envelopes and a front and back of an inner envelope within each sealed outer envelope, said sealed outer envelopes being delimited by lines of weakening in the plies for separating the sealed outer envelopes from the assembly; an attaching portion connecting a portion of the inner envelope in each sealed outer envelope with the sealed outer envelope and the remaining portion of said inner envelope having marginal edges free of the

sealed envelopes; and means comprising a substantially straight portion of each sealed outer envelope and including said attaching portion for opening the sealed outer envelope and freeing said inner envelope from the outer envelope.

12. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed outer envelopes and a front and back of an inner envelope within each sealed outer envelope, said sealed outer envelopes being delimited by lines of weakening in the plies for separating the sealed outer envelopes from the assembly, the front and back of each sealed outer envelope being secured to each other along a substantially continuous strip coextensive with the periphery of the sealed outer envelope; an attaching portion connecting a portion of the inner envelope in each sealed outer envelope with the sealed outer envelope and the remaining portion of said inner envelope having marginal edges inward of said strip and free of the sealed envelope, said attaching portion being substantially straight and connected with the inner envelope by a substantially straight line of weakening intersecting portions of said marginal edges, and at least portions of adjacent front and back marginal edges being secured to each other; and a substantially straight tear strip on each sealed outer envelope and including said attaching portion, said tear strip being delimited in the sealed outer envelope front and back by substantially straight lines of weakening cooperating with the attaching portion line of weakening, for opening the sealed outer envelope and freeing said inner envelope from the outer envelope.

13. A stuffed sealed envelope assembly comprising: a sealed envelope having a front and back; insert material within said sealed envelope; an attaching portion connecting a portion of the insert material with the sealed envelope and the remaining portion of said insert material having marginal edges free of the sealed envelope, said attaching portion being substantially straight and connected with the insert material by a substantially straight line of weakening intersecting portions of said marginal edges; and a substantially straight tear strip on said sealed envelope and including said attaching portion, said tear strip being delimited in the sealed envelope front and back by substantially straight lines of weakening cooperating with the attaching portion line of weakening, for opening the sealed envelope and freeing said insert material from the envelope.

14. The assembly of claim 13 wherein the sealed envelope front and back are secured directly to each other adjacent the marginal edges.

15. The assembly of claim 13 wherein the insert material has slits defining said marginal edges, and the sealed envelope front and back are secured to each other with portions of the insert material adjacent said marginal edges therebetween.

16. The assembly of claim 13 wherein the insert material has first perforations, and said sealed envelope front and back and insert material have second perforations, said second perforations in the insert material connecting adjacent first perforations thereby defining said marginal edges, and the sealed envelope front and back are secured to each other with portions of the insert material adjacent said marginal edge therebetween.

17. An assembly having a series of stuffed sealed envelopes, comprising: superimposed plies defining fronts and backs of sealed envelopes and insert material within each sealed envelope, said sealed envelopes being delimited by lines of weakening in the plies for separating the sealed envelopes from the assembly, the front and back of each sealed envelope and the insert material ply being secured to each other along a substantially continuous strip coextensive with the periphery of the sealed envelope; the insert material ply within each sealed envelope having a continuous line of first perforations, and said sealed envelope front and back and insert material ply have second perforations, said second perforations in the insert material ply connecting adjacent first perforations and defining a continuous marginal edge free of said sealed envelope and freeing the insert material from said sealed envelope, said marginal edges being close to said strip to maintain said insert material properly registered; and a tear strip on each sealed envelope delimited in the sealed envelope front and back by lines of weakening for opening the sealed envelope.

18. An assembly including a stuffed sealed envelope for manifolding, comprising: superimposed plies including a record ply and other plies defining a front, a back of a sealed envelope and insert material within the sealed envelope, said plies forming said front and back having lines of weakening for securing said envelope in said assembly; an attaching portion connecting a portion of the insert material in the envelope with one margin of the envelope and the remaining portion of the insert material having marginal edges free of the sealed envelope margins; transfer means within the assembly and envelope for selective imprinting of the envelope and said insert material; and a substantially straight tear strip on the envelope extending across said attaching portion of the insert material permitting opening the envelope and freeing the insert material upon severance of the plies along said tear strip.

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Disclaimer

3,104,799.—*Donald J. Steidinger*, Clarendon Hills, Ill. ENVELOPE ASSEMBLY. Patent dated Sept. 24, 1963. Disclaimer filed Apr. 26, 1971, by the assignee, *Uarco Incorporated.*

Hereby enters this disclaimer to claim 13 of said patent.

[*Official Gazette August 31, 1971.*]