United States Patent [19]

Venema

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[45] **Sept. 18, 1973**

[54] **GLUELESS ENVELOPE BLANK AND PAD THEREOF**

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[21] Appl. No.: **131,751**

[52] **U.S. Cl.** ..... **206/57 R,** 229/84, 229/87.5

[51] **Int. Cl.** **B65d 82/08,** B65d 27/22

[58] **Field of Search** ..... 220/84, 87.5, 75; 206/57 R

[56] **References Cited**

UNITED STATES PATENTS

1,042,488	10/1912	Shaffer	229/84 X
2,803,338	8/1957	Elliott	206/57 R
1,690,883	11/1928	Ziegler	220/87 A X
461,000	10/1891	Thacher	229/84
1,453,756	5/1923	Dewey	229/87.5
2,520,449	8/1950	Allen	229/71

FOREIGN PATENTS OR APPLICATIONS

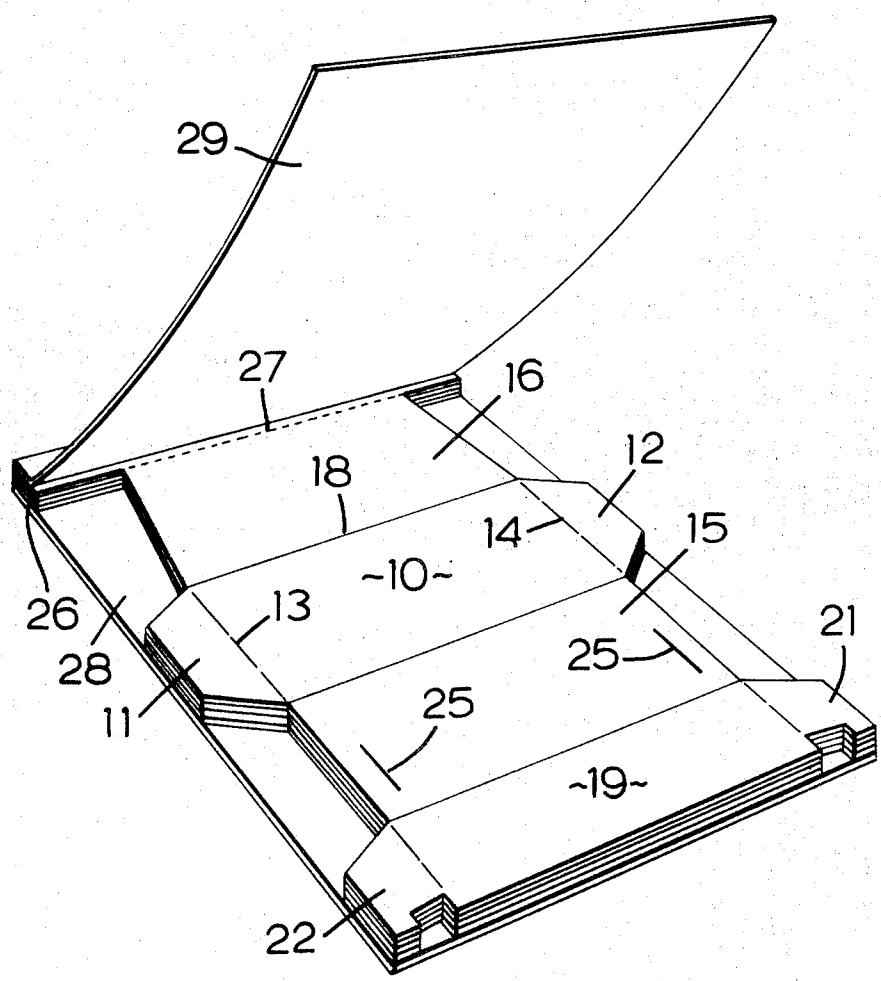
67,594	2/1914	Switzerland	229/87.5

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[57] **ABSTRACT**

A glueless envelope blank comprises a main body panel with side flaps along two opposite edges and two subsidiary panels along two other opposite edges; one of the subsidiary panels has slits therein for co-operation with mechanical interlocking means on another panel joined to one of the subsidiary panels. A pad of such envelope blanks can be formed by providing each blank with a readily separable attachment panel, the attachment panels of a pad of the blanks being fastened to one another and to a backing and facing sheet.

5 Claims, 5 Drawing Figures



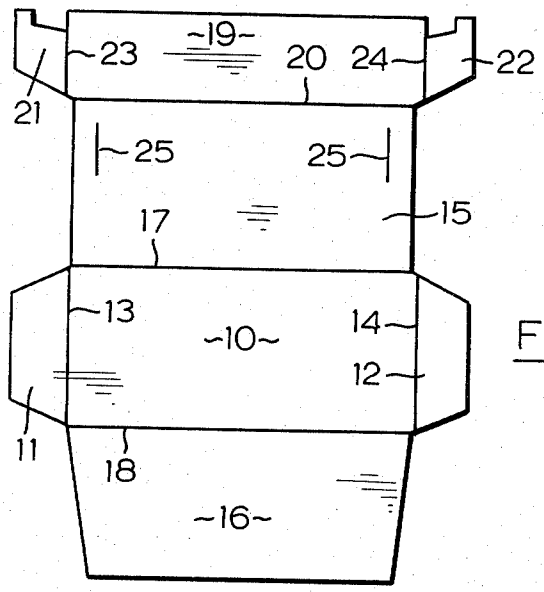


FIG. 2

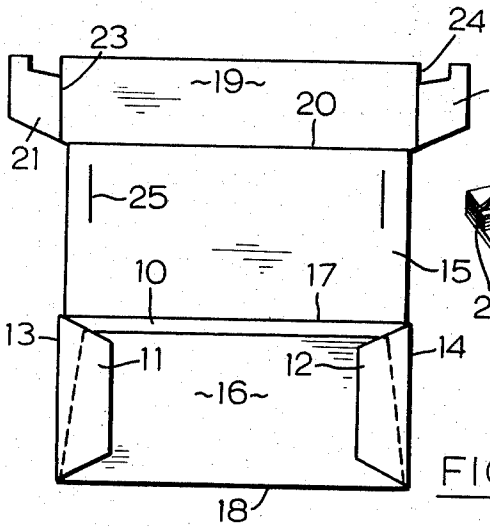


FIG. 3

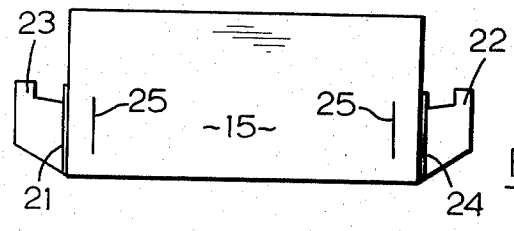


FIG. 4

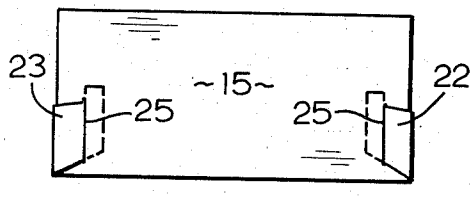


FIG. 5

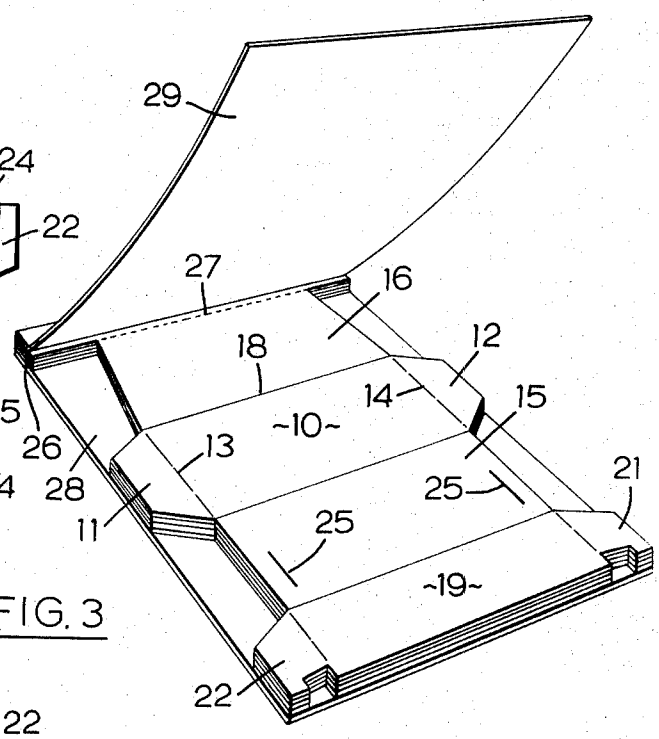


FIG. 1

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GLUELESS ENVELOPE BLANK AND PAD THEREOF

FIELD OF THE INVENTION

This invention is concerned with improvements in or relating to envelope blanks.

REVIEW OF THE PRIOR ART

Many different forms of envelope blank have been proposed hitherto to perform various specific purposes. An early example is disclosed in U.S. Pat. Ser. No. 649,768, issued 15th May, 1900 to T.M. Sherriff having the form of an envelope with two closure flaps that are alternatively uppermost so that it can be used for two separate mailings; the resultant envelope does not provide positive retention of the contents (e.g. for heavy objects such as coins), and it is only intended to enclose written materials. U.S. Pat. Ser. No. 2,520,449, issued 29th Aug. 1950 to A. F. Allen shows a form of transparent enclosure envelope which is folded from a blank; the various side flaps of the blank are secured to the body panels by cement, and there is no provision for its functioning as a glueless envelope. U.S. Pat. Ser. No. 3,482,765, issued 9th Dec. 1969 and assigned to Postal Church Inc., shows various forms of contribution envelope blanks wherein the contents can be seen through apertures provided therein.

There are special problems involved in the provision of church envelopes intended for periodic contributions, in that they should be made as inexpensively as possible, and yet be able to retain coins safely. Another problem arises in the provision of a return envelope in an item such as a mailing catalogue; advantageously, it should be possible to incorporate such an envelope easily into the catalogue during its assembly and binding. A glueless envelope will avoid the problem of the blank adhering to an adjacent page. The general consumer would also appreciate an inexpensive envelope that could be stored in pad form.

DEFINITION OF THE INVENTION

It is an object of the present invention to provide a glueless envelope blank that can be folded to provide a secure envelope.

It is another object of the invention to provide a glueless envelope pad blank such that a plurality thereof can readily be formed into a pad thereof.

In accordance with the present invention there is provided a glueless envelope blank comprising a main body panel forming one side of the resultant envelope and having joined thereto two oppositely-extending subsidiary body panels each foldable about a respective fold junction to be parallel to the main body panel, the main body panel also having joined thereto tow oppositely-extending side flaps foldable about a respective fold junction to be parallel to the main body panel so as to over-lay the respective edges of a first-folded subsidiary panel and to be over-laid by the second-folded subsidiary panel, the subsidiary body panel constituting the said second-folded subsidiary panel having slits or slots therein and having joined thereto extending oppositely from the main panel a locking panel having two oppositely-extending side flaps foldable about respective fold junctions to embrace the respective edges of the body panels and the junctions of the side flaps with the main body panel and shaped to mechanically interlock in respective slits or slots in the said second-folded subsidiary panel to oppose sideways opening movement of the side flaps as well as holding the panels in closed relationship.

An envelope pad blank may comprise an attachment panel joined to the envelope blank along a readily separable junction for detachment of the envelope-forming blank from the attachment panel. A plurality of such envelope pad blanks provided with attachment panels can be gathered into a pad and secured e.g. by staples, to suitable backing and facing sheets.

BRIEF DESCRIPTION OF THE DRAWINGS

Particular preferred embodiments of the invention will now be described, by way of example, with reference to the accompanying diagrammatic drawings, wherein:

FIG. 1 is a perspective view from above and to one side of a complete pad of glueless envelope pad blanks in accordance with this invention, and

FIGS. 2 to 5 show progressively the steps in folding a glueless envelope blank in accordance with the invention to form a closed envelope.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

A glueless envelope blank in accordance with the invention comprises a main body panel **10** of rectangular shape and having joined thereto along its two shorter edges, by being integral therewith, two oppositely-extending side flaps **11** and **12**, the respective junctions **13** and **14** between the main panel and the side flaps being scored for ease of subsequent folding. Each of the side flaps is somewhat tapered so that it decreases in length as it extends away from its junction with the main body panel. The main body panel also has joined thereto along its two longer edges, by being integral therewith, two oppositely-extending first and second subsidiary body panels **15** and **16**, each having respective scored junctions **17** and **18** with the main panel edges. The subsidiary panel **16** is of slightly tapered form, decreasing in width away from its junction **18**. The subsidiary panel **15** has joined thereto, and extending oppositely from the main panel, a locking panel **19** foldable relatively to the panel **15** about a junction **20**, the locking panel in turn having joined thereto tow oppositely-extending side flaps **21** and **22** foldable about respective scored fold junctions **23** and **24**.

The panel **15** is provided adjacent its respective side edges with two parallel longitudinal slits **25**, which cooperate with the side flaps **21** and **22** to constitute mechanical interlocking means for holding the envelope securely closed. Thus, in this particular embodiment the outer edge portions of the flaps **21** and **22** are of greater length than the slits **25**, while each said outer edge portion is connected to the remainder of the respective side flap by another portion of length just shorter than the length of the slits **25**. Slots may of course be used in place of slits.

Each glueless envelope blank preferably is provided with an attachment panel **26** (see FIG. 1) to constitute an envelope pad blank. In this embodiment, the attachment panel is joined to the envelope blank by being integral with the subsidiary body panel **16**, being connected thereto along a readily-separable junction **27**, such as a perforated tear line, to permit ready detachment of the envelope-forming blank from its attachment panel. A plurality of such envelope pad blanks are

gathered into a pad provided with a stiff rectangular backing sheet **28** (e.g. of cardboard) of size and shape corresponding to that of the envelope pad blanks. The pad is also provided with a face sheet **29**, which is of the same size as the backing sheet, but will generally be of thinner material. The pad of envelope blanks is thus enclosed between the facing and backing sheets with its edges protected.

It is a particular advantage of envelope blanks of the present invention that a pad thereof may be produced on conventional printing, cutting/scoring and padding machines such as are found in an average well-equipped printing shop, and do not require special envelope-making machines. For example, the envelope blanks are cut from rectangular sheets, the slits **25** being formed simultaneously therein. The various score lines **13, 14, 17, 18, 20, 23** and **24** may be formed simultaneously, or at some other station of the machine. The sheets may be preprinted with information required thereon, depending upon their particular application, such as a return address, a Church name, an account number, a date for payment, etc. A gathered pad of the envelope pad blanks is applied to a stiff cardboard backing sheet **28**, the cover sheet **29** is applied thereover, and the whole is fastened together by a glue line, or an edge tape, or staples or some other convenient means. The cover sheet conveniently is printed with instructions for folding the envelopes into the required from and spaces for desired information, such as a diary for recording offerings in the case of a church envelope.

It is found that by this use of conventional printing and padding machines for the production of these envelope blanks, they can be made very inexpensively and, for example, supplied to Churches in pad form at lower cost than has been possible hitherto for conventional types of offering envelopes. Moreover it is possible to incorporate envelopes into printed matter such as catalogues much more inexpensively than has been possible hitherto.

In other embodiments of the invention the attachment panel may, for example, be connected to the free edges of the side flaps **11** and **21** or to the corresponding edges of the side flaps **12** and **22**, and thus be incorporated into a bound volume such as a catalogue, where the connection into the volume must be along the longer edge. Any number of such blanks can be included in the bound volume and, in the absence of any glue, there is absolutely no possibility that the envelope blanks will stick to one another, or to the adjacent pages, despite the conditions under which the pads or volumes are stored.

In forming an envelope from an envelope pad blank in accordance with the invention, the envelope blank is separated from the attachment panel by careful tearing and then has the appearance illustrated by FIG. **2**. The items to be enclosed within the envelope are laid on the main body panel **10** and the subsidiary panel **16**, comprising a first-folded subsidiary panel, is folded about the junction **18** until it is parallel with and overlies the main panel **10**. The two side flaps **11** and **12** are now folded inwards about their junctions until they are also parallel to the main panel and overlie and embrace the subsidiary panel **16**; the blank now has the appearance shown in FIG. **3**. The subsidiary panel **15** comprises the second-folded subsidiary panel and is now folded parallel to the main panel **10**; thereafter the locking panel **19** is folded about its junction **20** until it also is parallel to the main panel **10**. The panel **15** now overlies the panel **16** and the side flaps **11** and **12** are interposed between them. The locking flaps **21** and **22** are then inserted in their respective slits **25**. Since the side flaps **11** and **12** are over-laid by the locking flaps, there is no possibility that they will break out from the envelope, and the contents spilling, unless the force applied thereto is sufficient to mechanically tear the locking flaps from the slits **25**. The paper from which the blank is formed will of course be made sufficiently strong in the case of a coin envelope to ensure that this does not happen except under exceptional circumstances.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A glueless envelope blank comprising a main body panel forming one side of the resultant envelope and having joined thereto two oppositely-extending subsidiary body panels each foldable about a respective fold junction to be parallel to the main panel, the main body panel also having joined thereto two oppositely-extending side flaps foldable about respective fold junctions to be parallel to the main body panel so as to overlie the respective edges of a first-folded subsidiary panel and to be over-laid by the second-folded subsidiary panel, the subsidiary body panel constituting the second-folded subsidiary panel having slits or slots therein and having joined thereto extending oppositely from the main panel a locking panel having two oppositely-extending side flaps foldable about respective fold junctions to embrace the respective edges of the body panels and the junctions of the side flaps with the main body panel and shaped to mechanically interlock in respective slits or slots in the said second-folded subsidiary panel to oppose sideways opening movement of the side flaps as well as holding the panels in closed relationship.

2. The invention as claimed in claim **1**, wherein the said subsidiary body panels are of shorter width parallel to their fold junctions with the main panel than the main and locking panels.

3. The invention as claimed in claim **1**, wherein the subsidiary panel constituting the first-folded such panel is tapered in width from its fold junction with the main panel to its opposite edge.

4. The invention as claimed in claim **1**, wherein the said slits or slots in the second-folded subsidiary panel extend parallel to the sides thereof and the said side flaps of the locking panel have their outer edge portions of greater length than the slits, each said outer edge portions being connected to the remainder of the respective side flap by a portion of length just shorter than the length of the slits or slots.

5. The invention as claimed in claim **1**, wherein the envelope blank includes an attachment panel joined thereto along a separable junction to constitute therewith an envelope pad blank, the said separable junction permitting detachment of the envelope blank from the attachment panel, and comprising a plurality of such envelope blanks disposed in register with one another, a face sheet of size corresponding to the outer dimensions of said envelope blanks, a stiff backing sheet of size corresponding to the outer dimension of said envelope blanks, and means fastening together the attachment panels of the said plurality of envelope blanks and fastening the face sheet and the backing sheet to the said attachment panels.

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