United States Patent [19]

Lyon, Jr.

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[54] **MULTIPLE FOLDING BOOKLETS**

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[73] Assignee: **Kurt H. Volk, Inc.**, Milford, Conn.

[22] Filed: **Feb. 28, 1973**

[21] Appl. No.: **336,453**

Related U.S. Application Data

[63] Continuation of Ser. No. 125,937, March 19, 1971, abandoned.

[52] **U.S. Cl.** **281/16;** 281/5; 281/18; 229/92.1

[51] **Int. Cl.²** **B42D 1/00**

[58] **Field of Search** ..... 281/16, 17, 21 R, 15 R, 281/18.5; 282/11.5 R, 11.5 A, 12 A, 24 R, 24 A, 24 B, 24 C; 270/1.5, 37; 229/92.1

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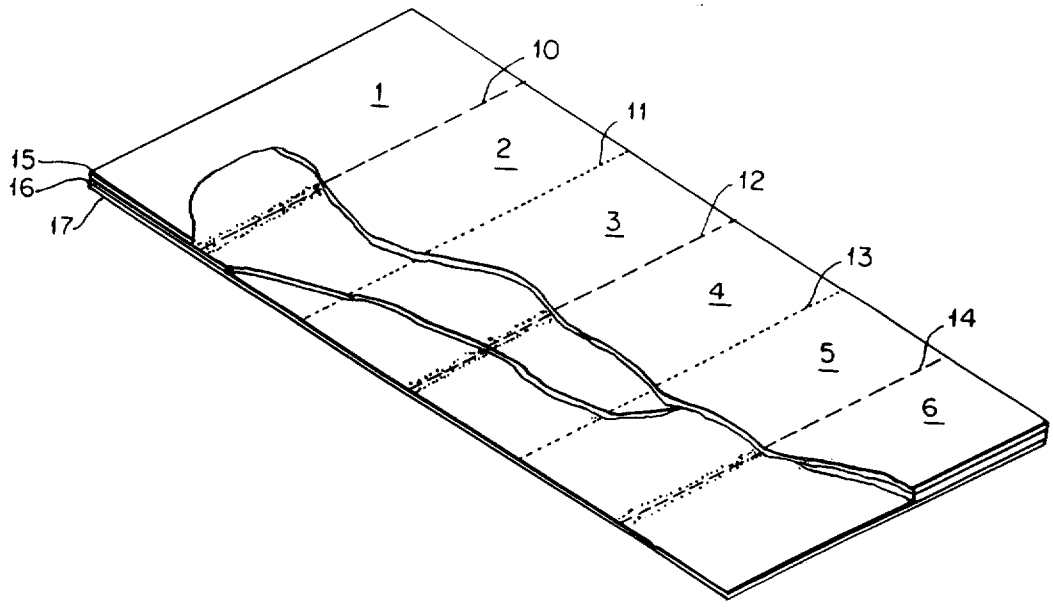
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[57] **ABSTRACT**

Multiple folding bookelts separably joined providing pages uniform in size and equal in number and methods for the use and preparation thereof.

4 Claims, 7 Drawing Figures



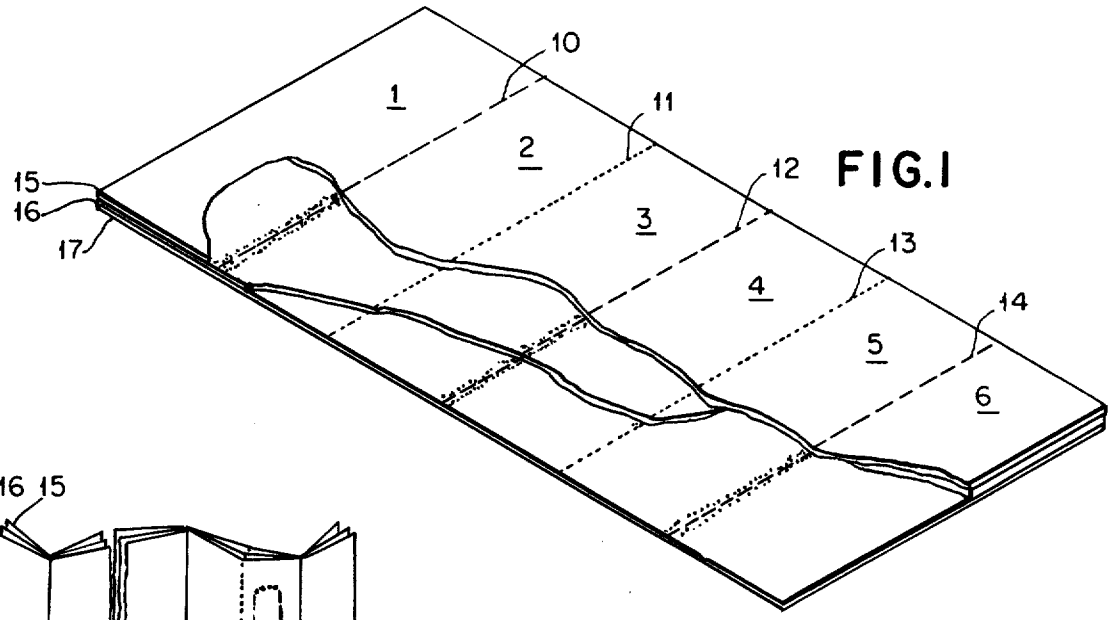


FIG.1

FIG.3

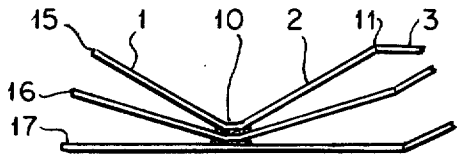


FIG.2

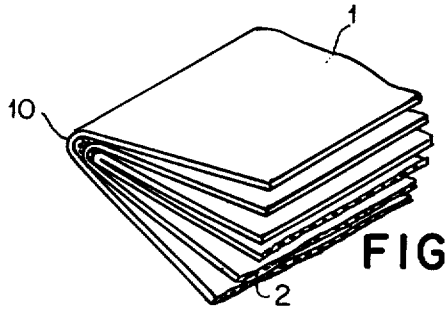


FIG.4

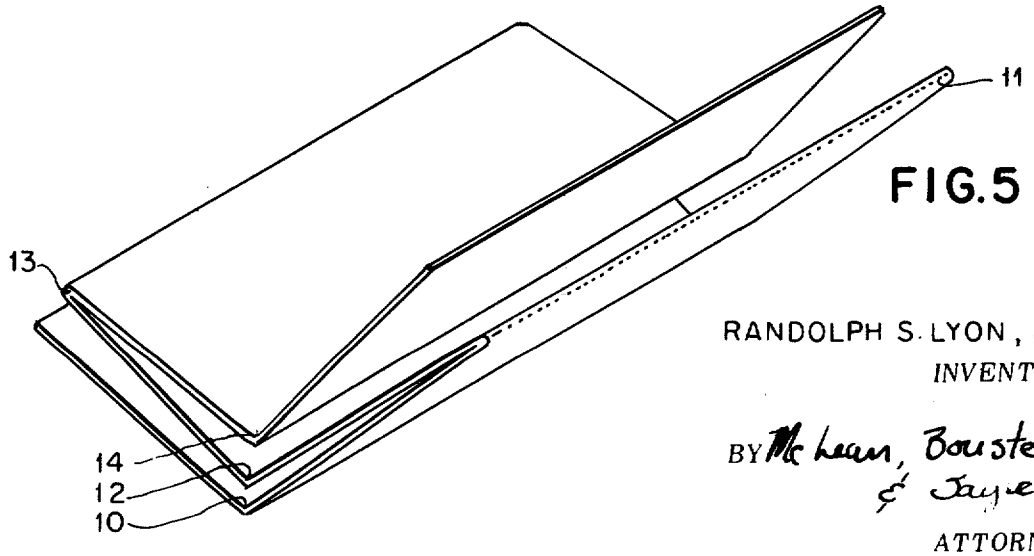


FIG.5

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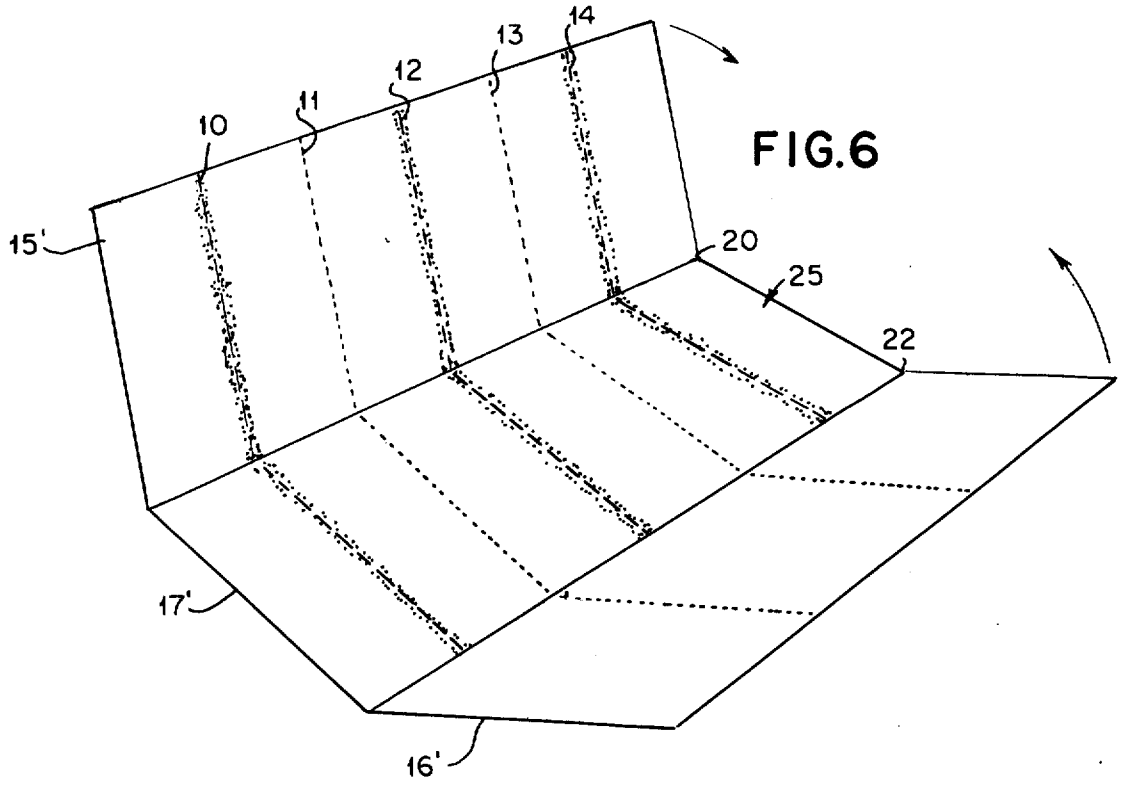


FIG.6

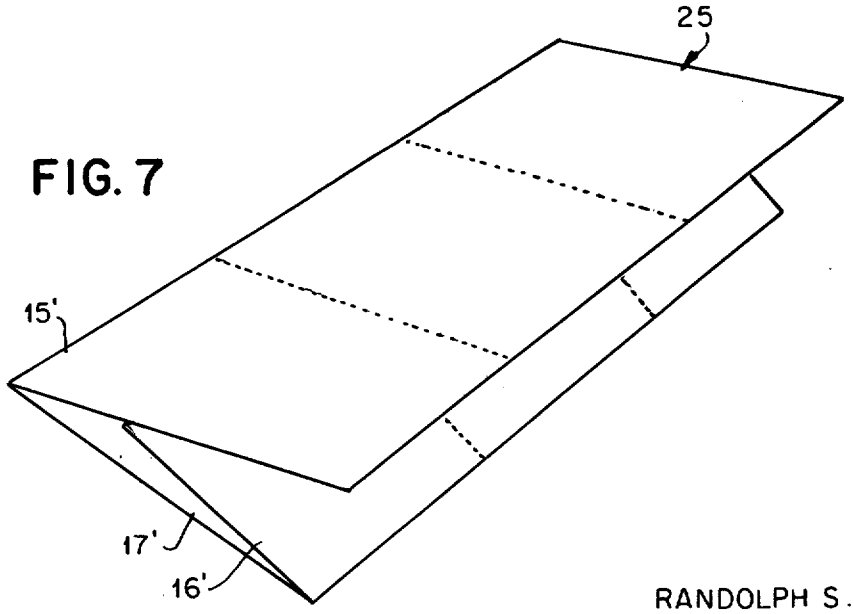


FIG. 7

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MULTIPLE FOLDING BOOKLETS

This is a continuation of application Ser. No. 125,937, filed Mar. 19, 1971, now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to an article containing multiple pages which is capable of being separated into multiple booklets or pamphlets all of which booklets are of the same size and contain the same number of pages. The booklets are made separable by such means as perforations. In one useful form the invention, the booklets are folded in an accordian, or a modified accordian fashion, so that one booklet compactly contains the other booklets securely within its centerfold pages. In this form my invention is readily adaptable for use as a self-mailer, requiring only the printing or affixing of an addressee label, and is capable of withstanding the handling by the post office without mutilation or deterioration. Furthermore, this invention relates to a method of making multiple folding booklets which are independently separably joined.

2. Description of Prior Art

The use of the mails and bulk mailings by those seeking to transmit information to various segments of the population has greatly increased in the last decade. One of the devices commonly used to convey the particular messages are booklets or pamphlets of various sizes consisting of from eight or 12 to 16 or more pages. The booklets are usually comprised of two, three or more separate preprinted sheets which are scored to form a centerfold, and then bound together along this backbone by staples or suitable adhesives. Thus, a booklet which was formed from three separate sheets, after folding and binding contains six leaves, or twelve printed pages, including the front and back covers.

Typically, the subject matter printed in each these booklets is directed to the same general theme, each booklet containing an individual message or making a particular point within the larger general theme. Use of the printed booklet provides a device for transmitting a message that can be read in a short time, and in a form that may be carried conveniently in a pocket or purse, and then passed along to other interested readers.

In the past, however, in order to most efficiently utilize funds set aside for mailing these booklets it was necessary to include a number of different booklets from the series in a separate envelope, which envelope was then posted to the addressee. This procedure was deemed necessary even where the sender was eligible for bulk rates, since postage must be paid on each piece sent through the mails. The sender of course, desired to transmit the greatest number of messages possible for each postage dollar spent. However, it was also considered undesirable by the sender to provide one addressee with a large number of booklets in any one mailing, since the likelihood that the addressee would read all of the booklets diminished with the greater number that he received at any one time. The optimum number of booklets to be sent in a particular mailing must, therefore, be determined by the sender based upon his knowledge and experience in the area.

There are, of course, additional cost factors associated with the mailing of several booklets in one envelope. Some of these factors are: the cost of the envelopes; the cost of printing the U.S. Postage Permit Number or Bulk Rate Identification symbols on the envelopes; the cost of inserting the several booklets in the envelopes and thereafter sealing the envelopes. Inherent in all of these costs is the additional overhead associated with the manual handling of the numerous separate pieces that comprise the completed article prior to the final step of printing or labeling the envelope to identify the addressee.

These additional costs can constitute a substantial proportion of the overall expense of printing and mailing, especially when the sender's mailing list consists of several thousand addressees. Reduction or elimination of any of these steps has been an important competitive consideration within the industry.

SUMMARY OF THE INVENTION

My invention provides, in a compactly folded form, multiple booklets which are separably joined, and which upon unfolding may readily be separated to provide a number of individual independent booklets of uniform size, each containing the same number of pages. In its folded form my invention is readily adaptable by appropriate printing on one or the other of the exterior cover pages, to provide a self-mailing article. In a preferred embodiment of my invention the folded booklets require no further processing prior to the printing, or affixing of labels to identify the addressees. It has been found that the folded booklets will not open or unfold when subjected to the normal handling associated with transmission by the postal system.

If, however, it is desired to insure that the booklets are not unfolded or tampered with prior to their receipt by the addressee, as a final step, the exterior covers may be sealed by application of a gummed or adhesive wafer seal of a standard type well known in the art.

My invention thus obviates the need for envelopes and the expense and equipment associated with the handling and insertion of numerous individual pieces into the envelopes. It provides the sender with the means of transmitting two or more booklets which may be easily separated for reading by the addressee. Most important from an economic standpoint, the invention in its compactly folded packet form may be considered to be one piece of mail for the purposes of determining the postage required. In some instances, depending upon the size of the booklets and the nature of the printed matter contained therein, the postal rate for the self-mailing booklets will be appreciably lower than that for the same materials enclosed in envelopes.

My invention thus has the advantages of the prior art methods of mailing separate booklets, in that after separation by the recipient, my booklets may be read by several individuals at the same time, or a particular booklet may be read and passed along to another individual while the recipient retains the remaining booklets.

My invention also has the particular advantages of being adaptable to fulfill any desired requirements of page size and/or number of pages in each booklet, and may be practiced utilizing not only the simpler printing, cutting, perforating and folding equipment known in the art, but may also be most efficiently practiced using the most advanced automated equipment which is capable of performing these functions.

In the drawings accompanying and forming part of this specification:

FIG. 1 is a perspective view showing an embodiment of three booklets separably joined in accordance with my invention.

FIG. 2 is a partial end view of the invention of FIG. 1, the pages being separated to more clearly illustrate one embodiment of the invention.

FIG. 3 is a front perspective view of the embodiment as shown in FIG. 1, the pages being separated in a somewhat exaggerated fashion to more clearly illustrate the invention.

FIG. 4 is a partial end perspective view of a separated booklet showing in detail the binding of the pages.

FIG. 5 is a perspective view of the embodiment of FIG. 1 in a partially folded condition.

FIG. 6 is an end perspective view of an integral printed sheet which may be used to produce the embodiment of the invention shown in FIGS. 1, 3 and 5.

FIG. 7 is an end perspective view of the integral sheet shown in FIG. 6 in a partially folded condition.

Referring to the drawings in detail, wherein like references characters designate corresponding or equivalent parts throughout the several figures, 15, 16 and 17 are preprinted sheets with transverse perforation lines 11 and 13, and transverse scoring lines 10, 12 and 14, forming panels 1, 2, 3, 4, 5 and 6. It is understood that characters 1, 2, 3, 4, 5 and 6 are arbitrarily assigned to the respective panels as shown in the drawings merely for the purposes of indentification in this specification. In the practice of the invention the sheets 15, 16 and 17 that will constitute the pages of each booklet will be pre-printed in order to provide consecutive pages after binding and separation. In other words, the multiple booklets formed in accordance with the descriptions in FIGS. 1 and 3 will have the following page relationships to the corresponding panels of sheet 15 in the perspective view of FIG. 1: panels 1 and 2 constitute the centerfold pages of a first separable booklet; panels 3 and 4 constitute the front and back covers of a second separable booklet; and panels 5 and 6 constitute the centerfold pages of a third separable booklet. The invention embodied in FIGS. 1 and 3 comprises three booklets, separably joined along said perforation lines 11 and 13, each booklet consisting of 12 pages, said booklets having bindings 10, 12 and 14, respectively. These bindings may be formed by stapling or use of adhesives. As will be discussed below, hot melt glue can be advantageously used for forming these bindings in practicing the invention.

As shown in FIG. 2, a partial end view of the embodiment of FIG. 1, the sheets 15, 16 and 17 have been bound together using adhesive and scored along line 10. The scoring facilitates the later step of folding. Also as shown in FIG. 2, the adjacent pages joined along their lateral edges at 11 by perforations may still be separated, but it would be only with great difficulty that the material on these intermediate pages could be read without separating the booklets.

FIG. 4 shows the end booklet of FIG. 3 having been folded along binding 10 and separated from the adjacent booklet along perforation line 11. The appearance of the separated booklets is greatly improved if slit type perforations are used. After the folding operation the booklets will tend to assume the closed position when separated, as shown in FIG. 4.

It is obvious that the size and number of the separable multiple booklets is governed by the dimensions selected for the sheets corresponding to 15, 16 and 17 and the number and placement of the transverse scoring and perforation lines correspondong to 10, 12 and 14, 11 and 13, respectively. Similarly, the number of pages contained in each separable booklet may be increased or decreased by varying the number of sheets corresponding to 15, 16 and 17. The only limitations involved in determining the number and size of the pages and the number of separable multiple booklets are those associated with the mechanical equipment available to perform the steps of scoring, perforating and binding described above and the facility with which the booklets may be folded and, if desired, sealed to provide a compact, self-mailing packet.

In the commercial production of my invention, wherein it is anticipated that specialized machines known to those in the art are available to perform the scoring, perforation, binding and folding operations, it is preferred to utilize the appropriately pre-printed integral sheet 25, shown in FIGS. 6 and 7. Such an integral sheet contains longitudinal scoring lines 20 and 22 to facilitate the folding over of sections 15′ and 16′ onto 17′. It is obvious that the number of such longitudinal scoring lines and the subsequent folding and gluing operations employed will determine the number of pages contained in the booklets. Also shown are the location of transverse perforations 11 and 13, the number of such transverse perforation lines obviously being determinative of the number of separable booklets to be produced from the integral sheet.

Hot melt glue may be advantageously utilized to bind the pages of the booklets when appropriate equipment is available. As shown in FIG. 6, an application of the glue has been made to sections 15′ and 17′ only, along lines which will correspond to the location of transverse scoring lines 10, 12 and 14, respectively. Use of hot melt glue simplifies the overall preparation of my invention in that the bindings are provided when sheet 16′ comes into folded contact with sheet 17′, and when sheet 15′ comes into folded contact with sheet 16′, which preparatory steps are shown in FIG. 7.

Subsequent to the combined folding-binding operation, the article comprising sheets 15′, 16′ and 17′ is passed through a device which scores said sheets along lines 10, 12 and 14, and perforates said sheets along lines 11 and 13. The folded sheets are then guillotine trimmed at the head and foot of each booklet.

The scored lines 10, 12 and 14 facilitate the final folding operation, which is shown as partially completed in FIG. 5. (It should be noted in connection with FIG. 5 that the individual pages of each separably joined booklet are not shown.) It has been found that when the multiple booklets are folded along perforation lines 11 and 13 with the bindings along lines 10, 12 and 14 in touching alignment, a packet is formed which requires no external sealing, and which can be subjected to repeated handling without unfolding or tearing apart.

As will be appreciated by one familiar with the art, the various steps of trimming, perforating, scoring and folding may be performed in an alternative sequence, and by mechanical or hand-operated devices other than those indicated. It should also be apparent to one skilled in the printing art that the pre-printed stock which comprises panels 1 through 6 may be prepared in multiplicate so that additional booklets may be prepared by the additional operation of longitudinally cutting across sheets 15, 16 and 17.

It should be obvious that instead of joining the booklets at the lateral edges of the pages as I have described above, multiple booklets may be provided in accordance with my invention that are separably joined along the top and bottom pages of adjacent booklets.

Moreover, multiple booklets could be separably joined along both lateral and top and bottom page edges and compactly folded in accordance with the above description of my invention.

I claim:

1. As an article of manufacture, a plurality of folding booklets forming a self-mailable unit consisting of

a. an elongated web of printable material comprising a plurality of layers,

b. said web being sub-divided along lines of perforations transverse of the web into a plurality of booklet panels each being of the same size,

c. each layer of each panel being detachably connected to a layer of each adjacent booklet panel along the line of perforations,

d. each booklet panel being folded at its center along a line transverse to the longitudinal axis of the web to define fields for printed matter in said panels adjacent to a centerfold line,

e. the direction of folding of each panel along its centerfold line being in a direction opposite the direction of folding of each adjacent panel,

f. each layer being permanently bound to each subadjacent layer along the centerfold line of each panel, so that upon detachment of said booklet panels from adjacent booklet panels a plurality of independent booklets is provided each having a number of pages which are permanently bound together along the centerfold line of the panels,

g. the web being folded along said centerfold lines and said lines of perforations, the direction of folding of each of said panels along said lines of perforations being in a direction opposite the direction of folding of the next adjacent line of perforations, the order of folding of the web being first along said lines of perforations to bring said centerfold lines into alignment with each other and then along said centerfold lines, to bring said panels into a securely nested relationship.

2. As an article of manufacture, a plurality of folding booklets forming a self-mailable unit consisting of:

a. an elongated web of printable material comprising a plurality of layers,

b. said web being sub-divided by two lines of perforations transverse of the web into three booklet panels each being of the same size,

c. each layer of each panel being detachably connected to a layer of each adjacent booklet panel along the line of perforations,

d. the panels so defined being folded along said lines of perforations, the direction of folding of each of said panels along said lines of perforations being in a direction opposite to the direction of folding of the panels along the next adjacent line of perforations to bring said panels into a superposed relationship,

e. all of said superposed panels being folded transverse of the web along their common centerline to define fields of printed matter adjacent the centerfold line, said booklet panels being in a securely nested relationship,

f. the sub-adjacent layers of each panel being permanently bound to each other along the folded centerline of each panel, so that upon detachment of said booklet panels from adjacent booklet panels a plurality of independent booklets are provided each booklet having a number of pages which are permanently bound together along the centerfold line of the panel.

3. The article of claim 2 wherein the perforations are slit perforations.

4. The article of claim 3 wherein the adjacent layers are bound together along the centerlines of the booklet panels using hot melt glue.

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