Jan. 12, 1960 L. F. HERMAN 2,920,811

CONTINUOUS FORM

Filed Dec. 31, 1956

FIG. 1

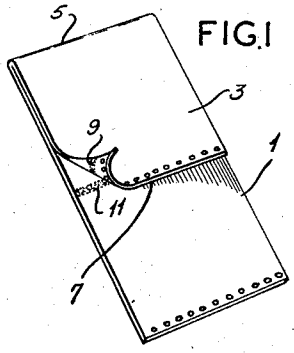


FIG. 3

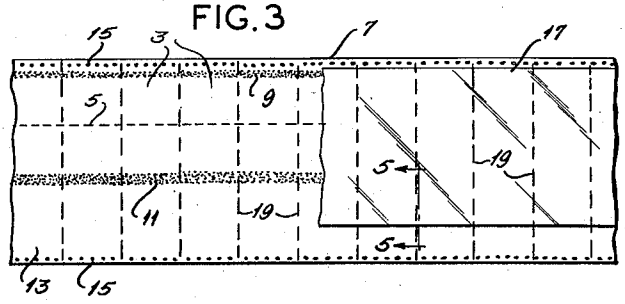


FIG. 2

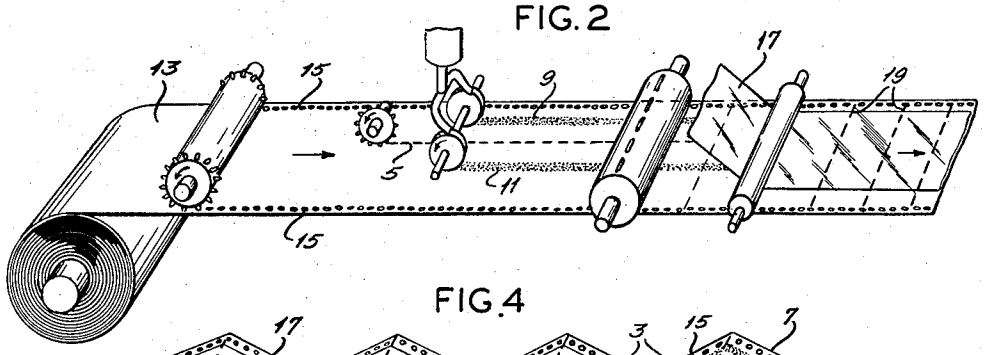


FIG. 4

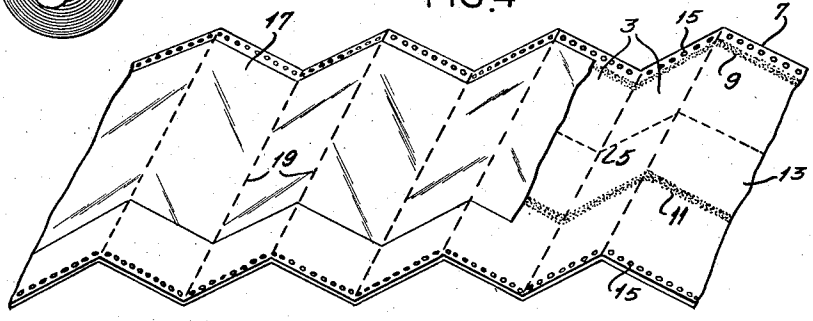


FIG. 5

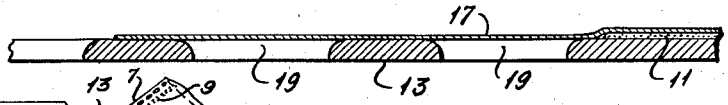
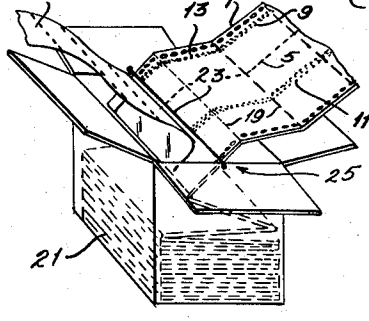


FIG. 6



INVENTOR
LESTER F. HERMAN

By Brumbaugh and Sutherland
ATTORNEYS.

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CONTINUOUS FORM

Lester F. Herman, Webster Groves, Mo., assignor to American Lithofold Corporation, St. Louis, Mo., a corporation of Missouri

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3 Claims. (Cl. 229—69)

This invention relates to mailing cards, and more particularly to the manufacture of a continuous form of foldable mailing cards.

It will be understood that mailing cards are used by utility companies and the like for billing purposes, the necessary information being entered on individual cards by typing, and perhaps also by punched holes. The present disclosure is concerned with a system for processing a continuous web of card stock so as to provide a series of interconnected mail cards which may be conveniently fed to a bookkeeping machine, tabulator, or typewriter.

Briefly, a strip of cardboard is provided in a width somewhat greater than that of the conventional card, and a fold line is formed longitudinally of the strip, as by scoring, partial cutting or perforating, this longitudinal fold line being offset from the center. The margins of the strip are formed with uniformly spaced holes or perforations for feeding purposes, both during the process of manufacture and in a subsequent printing operation when the billing information is added. Otherwise, the strip is formed with a plurality of uniformly spaced transverse fold lines, which may again be made by scoring, partial cutting or perforations, the spacing therebetween or in a longitudinal direction being equal to the height of the mail card. Such a strip may be preprinted with some of the information to be provided on the card. The marginal feed perforations serve to locate the initial printing in proper relationship with respect to top and bottom edges of the cards. As a final step in the process of manufacture, the strip is folded accordion fashion, and in some cases, it is preferable that the pleats or folds encompass several mailing cards. In other words, the accordion folds may be at every third or fourth transverse fold line. As such, the accordion folded continuous form may be conveniently packed in an ordinary box and fed therefrom to a tabulating machine. In practice, the cards would then be detached from one another, folded along the aforementioned longitudinal score so as to conceal some of the billing information, and secured in such folded condition.

Although the folded cards may be sealed by means of staples or separate stickers, the information further contemplates the provision of an adhesive, which may be either of a heat-sealing type or pressure sensitive in character, such adhesive being applied in the process of manufacturing the continuous form. Where a pressure-sensitive adhesive is employed, a continuous separator strip, such as wax paper, is interleaved with the accordion folded card stock, so as to prevent undesired adhesion at the accordion folds. Necessarily, there would be two stripes of pressure-sensitve adhesive equally spaced on opposite sides of the longitudinal fold so as to register with one another when a card is folded on itself. The wax paper would be arranged to overlie the two stripes of pressure-sensitive adhesive, and it may be conveniently separated at the storage box, as by means of a string or other divider extending across the top thereof.

Other features of the invention will be in part apparent from and in part pointed out in the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view illustrating a single mailing card in its folded and secured adhered condition;

Fig. 2 is a diagrammatic perspective view illustrating the several steps in the process of manufacturing the form of this invention;

Fig. 3 is a plan view illustrating certain details of the form;

Fig. 4 is a perspective view of the completed accordion form, parts being broken away;

Fig. 5 is an enlarged detail cross section of the transverse perforations; and

Fig. 6 is a perspective view showing how the wax paper is readily separated from the forms when withdrawn from a package.

Referring now to Fig. 1 of the drawings, there is shown a single mailing card comprising a main body portion 1 and a flap 3 hinged at one end of the body along a fold line 5, which is defined by scoring or the like. The flap 3 is adapted to be folded over the main body 1 with its free end 7 secured thereto. It will be understood that such a flap may have several purposes, one of which would be to conceal information on the card. One of the problems in making such a folded mail card is in securing the flap in folded position.

The cards should be supplied as a continuous form, which can be fed through a tabulating machine for printing of desired information, the flap being folded and secured afterwards. It is not generally economically feasible to fold and secure such blanks by manual processes, and although conventional folding machines are available at a reasonable cost, they are not readily adapted for applying adhesive to the form. Accordingly, the present invention in part contemplates the use of pressure-sensitive adhesive, which is conveniently applied in two stripes when the continuous form is first manufactured well prior to its use on a tabulating machine. When the stripes of pressure-sensitive adhesive are registered upon folding, as by a conventional folding machine, a satisfactory seal is obtained automatically.

Accordingly, the free end margin 7 of the flap 3 is coated with a first spot or stripe 9 of pressure-sensitive adhesive, and with a second spot or stripe 11 of the same adhesive across the body portion in spaced relationship from the fold 5, so that the two stripes register when the flap is folded over. A slight pressure is then sufficient to seal the form. It will be understood that areas of such pressure-sensitive adhesive, which may be of the latex base, cohere with another but do not adhere to other surfaces.

Referring now to Figs. 2–4, a continuous form of foldable mail cards is made up from a strip 13 of card stock, which is of a width equal to the length of the unfolded card. The strip is marginally perforated at 15 for cooperation with feed sprockets of the processing equipment and later with the tabulating machine. The strip of card stock is scored or otherwise weakened along the longitudinal line 5, so as to define the fold of the flap, and the two stripes 9 and 11 of pressure-sensitive adhesive are shown applied to the same surface of the card. The stripe 9 is adjacent the free end of the flap but slightly inward from the marginal perforations and the stripe 11 is equally spaced on the other side of fold line 5.

In addition to the above, the process contemplates that transverse tear lines 19 are formed across the assembly so as to facilitate detachment of individual mailing cards from the continuous form. The tear lines 19 may be formed by perforations, and they are so located as to determine the top and bottom edges of individual cards.

Where pressure-sensitive adhesive is applied, it is desirable to interleave a strip **17** of paper to cover both stripes **9** and **11** of adhesive. Finally, the form is accordion folded. While the form is shown to be folded at every transverse line **19**, the accordion fold could be more widely spaced, as at every fourth tear line **17**.

It will be noted that the wax paper permits such accordion folding after application of the pressure-sensitive adhesive without danger of the pleats adhering to one another, this being an important feature of the invention. Although continuous forms are sometimes supplied in roll form, such practice is not desirable where pressure-sensitive adhesive has been applied to the form.

A rather long section of the accordion folded form is then packaged in a box **21**, the pleats extending horizontally with respect to the top and bottom of the box. In use, the top of the box is opened, and the exposed end of the form is fed to the tabulating machine, the remaining portion remaining in the box. It will be understood that the typing would normally be applied to the adhesively coated surface of the form, hence it is desirable to remove the wax paper before the form reaches the tabulating machine. The invention contemplates an inexpensive convenient method of separating the wax paper by means of a separating element **23** extending across the top **25** of the box. This separator may be a simple string so secured that the box may be opened with the string remaining in place. As the form is continuously withdrawn from the box, the wax paper is guided to one side of the string while the card stock passes on the other side.

From the foregoing description, it is apparent that those skilled in the art will understand the structure, function and mode of operation of the invention herein disclosed, and appreciate the advantages thereof. Although one embodiment has been disclosed in detail, it is to be understood that the invention is not limited thereto, but the drawings and description thereof are to be understood as being merely illustrative. For example, heat-sensitive adhesive may be used in place of pressure-sensitive adhesive, or other provision may be made for sealing the folded flap **3** of individual cards. It is realized that many modifications and variations will present themselves to those skilled in the art without departing from the spirit of this invention or the scope thereof as set forth in the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

1. A substantially continuous form of foldable mailing cards, comprising a substantially continuous strip of relatively stiff card stock, said strip being formed with a plurality of uniformly spaced transverse fold and tear lines extending entirely across said strip, thereby to define a plurality of interconnected foldable mailing cards, said strip being accordion folded along at least some of said transverse tear lines, said strip being further provided with lines of feed perforations extending only along each margin of the strip, whereby said strip may be fed through a machine for printing information thereon, said strip further being provided with a longitudinal fold line extending substantially continuously along a line offset from the center thereof, thereby to provide a relatively short unfolded flap adapted to be folded in part over and secured to the remainder of the mailing card to conceal the printing therebeneath.

2. A substantially continuous form of foldable mailing cards, comprising a substantially continuous strip of relatively stiff card stock, said strip being formed with a plurality of uniformly spaced transverse fold and tear lines extending entirely across said strip, thereby to define a plurality of interconnected foldable mailing cards, said strip being accordion folded along at least some of said transverse tear lines, said strip being further provided with lines of feed perforations extending only along each margin of the strip, whereby said strip may be fed through a machine for printing information thereon, said strip further being provided with a longitudinal fold line extending substantially continuously along a line offset from the center thereof, thereby to provide a relatively short unfolded flap adapted to be folded in part over and secured to the remainder of the mailing card to conceal the printing therebeneath, a pair of narrow areas of pressure-sensitive adhesive equi-distantly spaced on opposite sides of said longitudinal fold line in positions to register with one another when an individual card is folded, and a paper separator interleaved with the accordion card stock, thereby to avoid undesired adhesive between cards in accordion-folded condition.

3. A continuous form as set forth in claim 2, further including an enclosing carton, and separator means extending across the top of the carton in spaced parallel relationship from two sides thereof, thereby to facilitate separation of the card stock as it is fed to one side of the separator means while the paper strip is directed to the other side thereof, as the card stock is fed to a machine.

References Cited in the file of this patent

UNITED STATES PATENTS

426,503	Keller	Apr. 29, 1890
699,875	Johnston	May 13, 1902
908,875	MacKaskie	Jan. 5, 1909
2,365,716	Metzner	Dec. 26, 1944
2,413,649	Overly	Dec. 31, 1946
2,774,531	Rosenthal	Dec. 18, 1956