Feb. 6, 1968 R. C. DAVID ET AL 3,367,340

BACKING STRIP-STUD COMPONENT FOR FLEXIBLE FOLDERS

Original Filed Aug. 24, 1964

Fig. 1

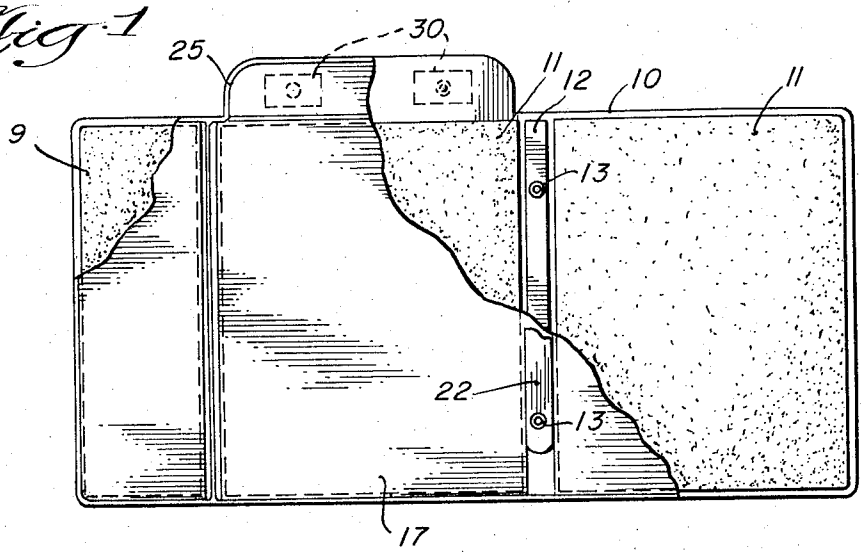


Fig. 2

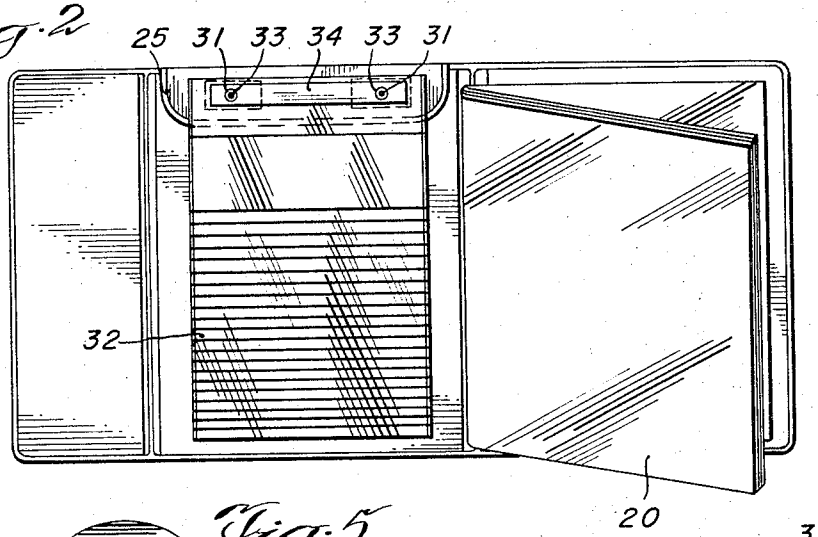


Fig. 5

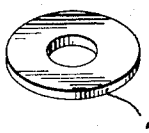


Fig. 3

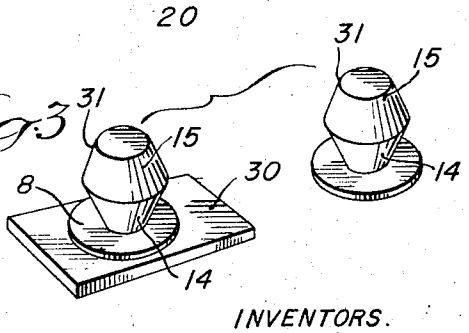
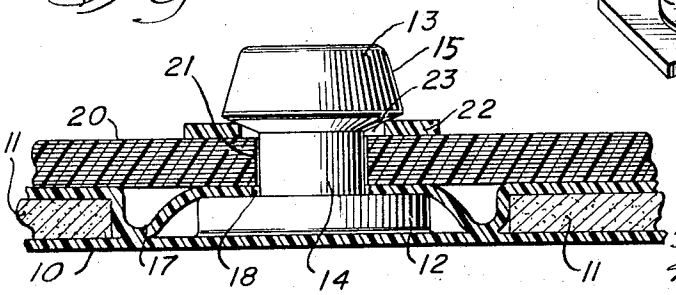


Fig. 4



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BACKING STRIP-STUD COMPONENT FOR FLEXIBLE FOLDERS

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Continuation of application Ser. No. 391,685, Aug. 24, 1964. This application Mar. 16, 1967, Ser. No. 643,758
2 Claims. (Cl. 129—39.5)

ABSTRACT OF THE DISCLOSURE

A folder device having top, bottom and overlapping sections and a single backing strip which forms a spine member, the strip having at least one stud cast integral therewith, the stud being adapted to retain removable filler sheets.

This is a continuation application of Ser. No. 391,685 filed Aug. 24, 1964, now abandoned.

This invention relates generally to folders having filler sheets therein and more particularly relates to an improvement in folders having fused cover sheets of one material and filler sheets of another material.

A number of folders presently available and used for retaining brochures, documents, advertising and the like, range from ring type units which are extremely bulky, to plastic carrying cases having heat sealed covers and filler sheets which are attached to the carrying case by a cumbersome, costly, mechanical fastening means that often times is visible to a person viewing the carrying case when it is in a closed or locked position. Thus, many of the conventional filler sheet folders on the market today are unsatisfactory because of their cost and/or unattractive appearance.

In order to obviate these deficiencies and to eliminate the need for employing tools presently required for installing or removing filler sheet fastening means, a compact assembly has been invented which not only enhances the overall appearance of the folder but additionally reduces the unit folder cost. This compact folder has been the subject of an application filled by Robert H. Miller, Apr. 7, 1964, S.N. 358,018, now Patent No. 3,324,918. In the folder application referred to, an outer cover and inner cover, each preferably made of vinyl, are fused together with stiffener members encased within the covers to form a hard-back folder cover. Filler sheets made from a second material such as polyethylene or polyurethane, can be attached to the fused folder cover either by means of heat sealing or through the use of various fastener means.

In our present invention, we have discovered a new and novel improvement for attaching the filler sheets to the hard-back cover. In our improved folder, filler sheet retaining studs are preferably made integral with the folder backing strip to form a unitary component, the effect being that the filler sheets can be readily pressed onto the studs after which a plastic filler sheet retention strap is snapped onto the studs thus completing the folder assembly. With this improved folder, savings are not only effected due to a reduction in folder assembly time, but additionally the cost of the backing strip, retaining studs, and sheet retention strap are significantly reduced over elements presently utilized to attach filler sheets to the hard-back cover.

Moreover, our novel unitary backing strip-stud component and backing strap can be employed for use with a flap that is part of the hard-back cover. A card index folder such as disclosed and claimed in the Robert H. Miller application, Ser. No. 344,053, filed Feb. 11, 1964, now Patent No. 3,280,820, can be, if desired, attached to

the studs located on the cover flap to provide a folder having both filler sheets and card index holder.

Other features and advantages are inherent in the construction claimed and disclosed which will be apparent to those skilled in the art from the following detail description in conjunction with the accompanying drawings wherein:

FIGURE 1 shows the folder in an open position without filler sheets and with a portion of the inner or lining cover removed. A portion of a retention strap is shown snapped onto the stud located on the backing strip;

FIGURE 2 shows the folder with the filler sheets inserted and a card index holder snapped onto studs extending outwardly from a flap on the folder cover;

FIGURE 3 shows an enlarged view of the retention stud as an integral part of a portion of a backing tab having a stud thereon, the integral backing tab and stud component being heat sealed to the inner cover of the flap shown in FIGURES 1 and 2;

FIGURE 4 shows an enlarged fragmentary view of the integral stud backing strip component and the filler sheets and retention strap positioned relative to the retention stud, the stud shaped in a different embodiment than that shown in FIGURE 3; and

FIGURE 5 shows a retention button used in place of the retention strap.

In FIGURE 1, outer cover **10** has stiffener members **9** and **11** disposed thereon at selected locations. The stiffener members are generally made of multi-ply cardboard and serve to provide the folder with a study, flexible, hard-back cover. Positioned between stiffener members **11** is a backing strip or spine **12** which is preferably made of plastic material such as polyethylene; however, if desired, the backing strip could be made of other material. Integral with backing strip **12** are retaining studs **13**, the unitary strip and stud component being conveniently made in a single mold injection operation. The studs are made of a material harder than the vinyl cover sheets, e.g., polyethylene. As viewed from FIGURES 3 and 4, studs **13** each have a neck portion **14** and a head portion **15**, one end of neck portion **14** terminating as the lower end of head portion **15** while the remaining end of the neck portion terminates as part of attached strip **12** in FIGURE 4 and a flange as shown in FIGURE 3. In FIGURE 3 flange **8** is sealed to tab **30**.

With backing strip-stud component in position, an inner or lining cover **17** made of the same material as outer cover **10** and having apertures **18** located therein is laid over both stiffeners **9** and **11** and backing strip **12** with apertures **18** being inserted over head portion **15** of sheet retaining studs **13**. Covers **10** and **17** are fused to each other at the outer edges as well as along the edges of stiffeners **9** and **11** and backing strip **12**, the sealing serving to retain the stiffener members and backing strip in their proper positions.

Filler sheets **20** having apertures **21** therein are inserted over head retention portion **15** of studs **13**, the apertures **21** in the sheets and apertures **18** in inner cover **17** being smaller in diameter than the maximum diameter of the studs **13**. The diameters of the apertures in the sheets **20** and inner cover **17** are smaller than at least part of the portion of the stud over which they are pulled during assembly such that the portion of the stud above the positioned sheets and cover **17** serves as a positive means for retaining the sheets and cover in position. (See FIGURE 4.)

The folder assembly is completed when sheet retention strap **22** having apertures **23** is pressed over studs **13**, the strap being frictionally retained in position by studs **13**, the maximum diameter of the studs being slightly larger than the diameter of the apertures **23** in strap **22**.

Strap **22** preferably made of vinyl with the edges surrounding both the strip and apertures **23** being heat sealed, is semi-flexible in that it can be bent along its longitudinal length but is sufficiently rigid to provide creasing edges along the marginal longitudinal edges of the strap for sheets **20** when the folder is in a closed position. Further, the filler sheets, inner cover and retention strap are all resilient enough that, in use, they can be stretched to fit over the head portion **15** of stud **13** where they then return to their normal dimensions and surround the reduced diameter of the neck or lower portion of the studs.

In addition to employing a novel backing strip and stud component for retaining the filler sheets and backing strap, we are also able to incorporate this type of component for use with a card index holder which can be attached to flap **25** which is part of the hard-back cover of the folder. A backing tab **30** having studs **31**, shown in an enlarged view in FIGURE 3, is sealed between inner cover **17** and outer cover **10** on flap **25**. A card index holder **32**, with apertures **33** is then fastened to studs **31**, the studs **31** each having a head and neck portion corresponding to studs **13**. A retention component **34**, corresponding to strap **23**, can then be snapped onto the studs thus holding the index holder in position within the folder.

Although a retention strap has been employed in the instant application, it is appreciated the sheets could be made so that upon assembly they could be retained without the need for a retention member, the studs **13** serving as the sole means for holding the filler sheets and index holder in position. Also, instead of using a backing strap **22** to retain the filler sheets in position, other retention members such as retention button **26**, preferably made of plastic, could be utilized for retaining filler sheets **20** in position.

The dimensions of the folder can vary as desired; however, we have found for a suitable application, the hard-back cover in an open position as indicated in FIGURE 1 is about 24 inches long and about 11½ inches wide. The backing strip-stud component, formed from a polyethylene strip is about ⅝ inch wide and about 11¼ inches long with the studs being approximately ⅜ inch in height and spaced apart about 9 inches, center to center. Backing strap **22** is about 10 inches long and about ½ inch wide and has apertures which are also spaced about 9 inches apart, center to center.

The diameter of the apertures in the inner cover and filler sheets is about ¼ inch whereas the maximum diameter of the stud, which is located at that end of neck portion **14** which terminates as an end of head portion **15**, is about $\frac{9}{32}$ inch while the minimum diameter of the neck portion is about $\frac{7}{32}$ inch. The diameter of the apertures in retention strap **22** is also about $\frac{7}{32}$ inch such that it will provide a tight fit for the strap when positioned with respect to stud **13**.

Instead of using backing strip **12** having stud **13** formed integrally therewith, a cardboard or metal backing strip may be used and the stud **13** may be fused to either the inner cover **17** or the outer cover **10**.

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

What is claimed is:

1. A folder adaptable for having filler sheets removably affixed thereto, said folder comprising:

an outer cover made of a first material;

an inner cover made of said first material;

spaced stiffener members disposed between said inner and outer covers;

said inner and outer covers being sealed together along the corresponding marginal edges of said covers and along the edges of said stiffener members whereby a top section, a bottom section and an overlapping section are formed;

a single backing strip disposed between and immediately adjacent said inner and outer covers and positioned between and in spaced relation to said stiffener members forming said top and bottom sections;

said backing strip having at least one retaining stud cast integral therewith to form a unitary strip and stud member, whereby said strip forms a spine for filler sheets and said stud projects through and upward from said inner cover;

said stud having a neck portion rigid with said strip and a blunt head portion positioned on said neck portion, said head portion having a larger diameter than said neck portion;

a plurality of plastic filler sheets each having at least one aperture about the mid portion thereof, said filler sheets being removably attached to said stud at the location of said aperture which is placed in registry upon said stud; and,

a retention member having substantially the same width as said backing strip, said retention member being formed of a semi-flexible material and having at least one aperture therein for registry with said apertures of said filler sheets and suitable for accommodating said stud whereby said filler sheets are retained in position by said retention member.

2. A folder in accordance with claim **1** wherein said first and second covers are made of vinyl and said backing strip is made of polyethylene.

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