March 22, 1960 E. J. McCORMICK ET AL 2,929,498

DISPLAY DEVICE

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Fig. 1.

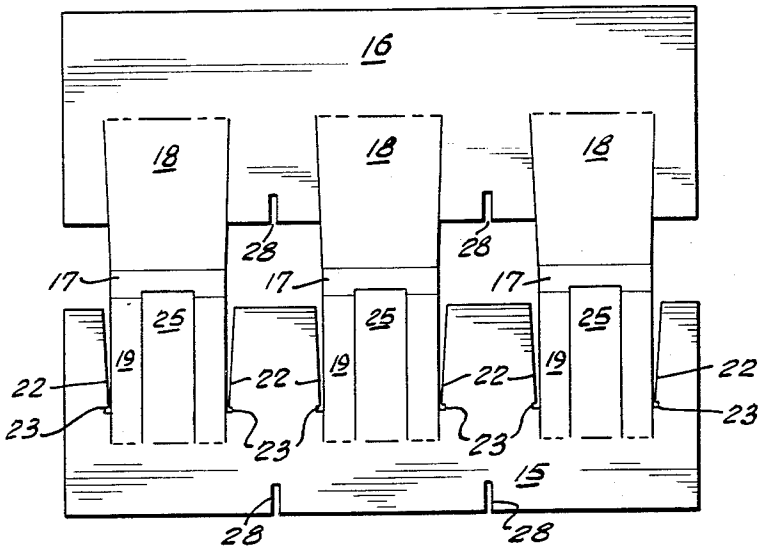
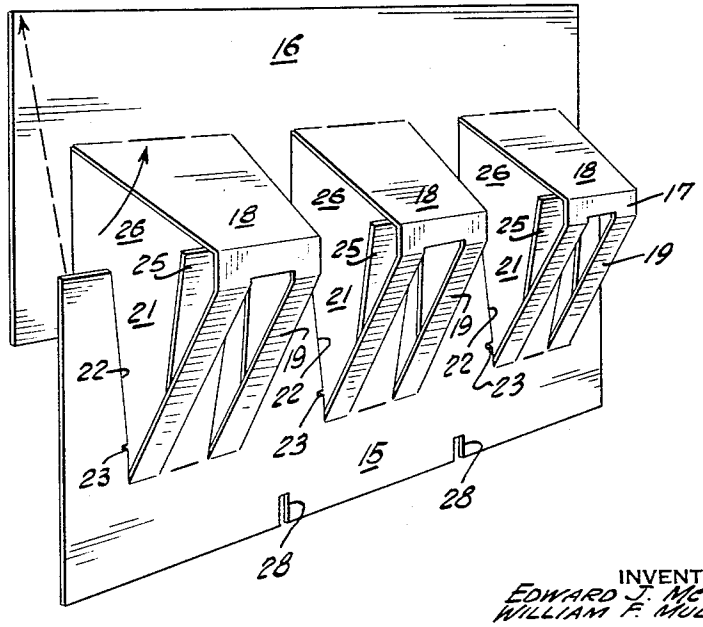


Fig. 2.



INVENTORS:
EDWARD J. McCORMICK
WILLIAM F. MULLER, JR.
BY
Charles A. Harris
ATTORNEY

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Fig. 3.

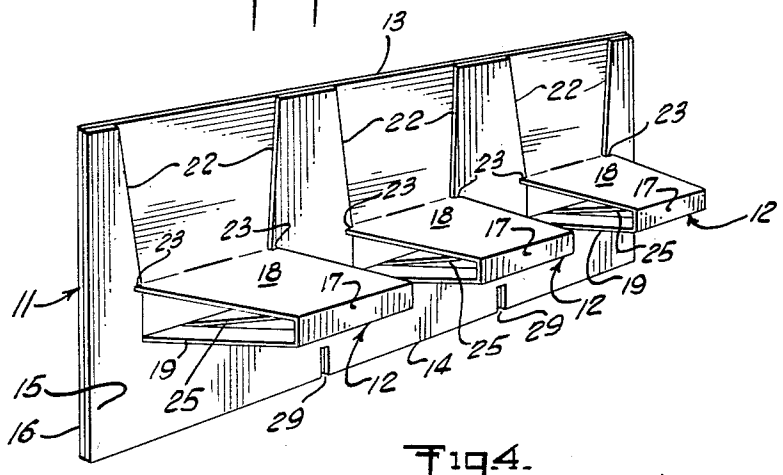


Fig. 4.

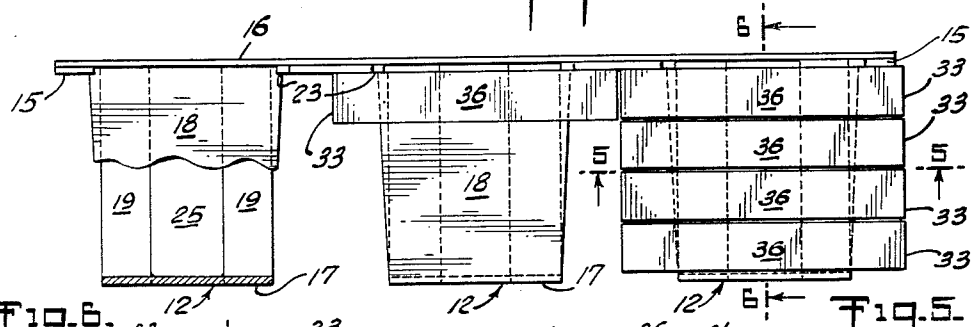


Fig. 6.

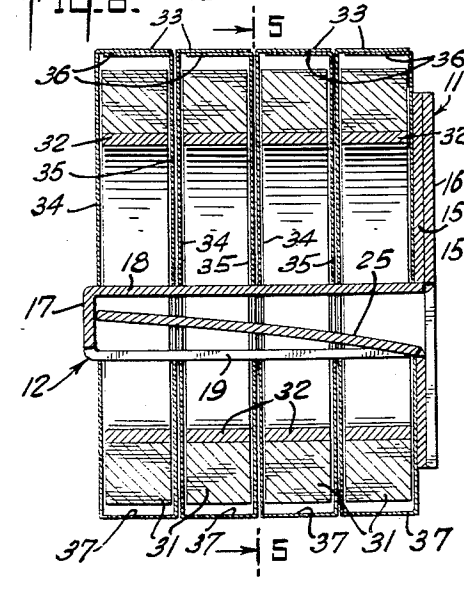
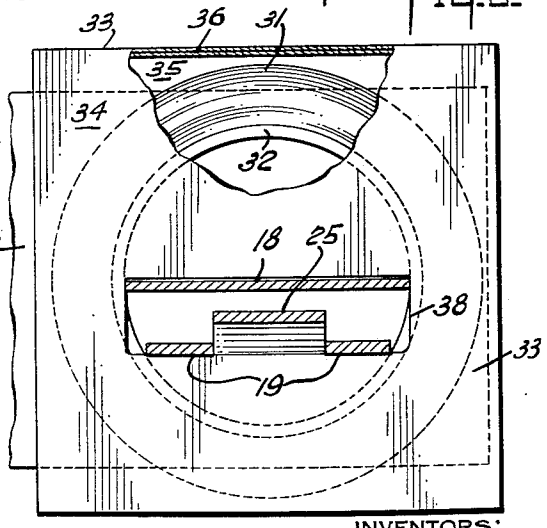


Fig. 5.



INVENTORS:
EDWARD J. McCORMICK
WILLIAM F. MULLER, JR.
BY
Charles A. Harris
ATTORNEY

United States Patent Office 2,929,498 Patented Mar. 22, 1960

2,929,498

DISPLAY DEVICE

Edward J. McCormick, Swarthmore, and William F. Muller, Jr., Springfield, Pa., assignors to Johnson & Johnson, a corporation of New Jersey

Application March 5, 1959, Serial No. 797,369

9 Claims. (Cl. 206—79)

The present invention relates to a packing and display device for hollow rolls, more particularly to such a device for packing and displaying flat rolls of strip material such as pressure-sensitive tape and the like.

This invention contemplates a device for holding a plurality of hollow rolls of tape, or the like, in a fixed position, either for storage or shipment inside a carton or a similar package, or for display. The rolls are mounted on the device in such a way that they are in full view for display purposes and are readily accessible for removal and sale. For packing purposes, the device is designed to hold the rolls firmly in position in a container so that they will not shift in position during handling and shipment. The device itself occupies a minimum of space in the container and does not add substantially to shipping weight. For display purposes, the device must be capable of holding and presenting a plurality of rolls without danger of the rolls being dislodged from the device or the device collapsing on being handled or bumped by customers.

According to one embodiment of this invention, the packing and display device is in the form of a unitary foldable structure which may be stamped or cut from a single piece of cardboard or a similar material. This device may be made by cutting a single piece of cardboard in one operation, and then folding those sections of the sheet which remain joined together. When folded for use, it comprises a vertical base and at least one projection extending horizontally from the base. Hollow rolls of tape or a similar material may be mounted on the device by fitting the rolls over the projection. The base is designed so that it conforms to the size of the rolls and occupies only about as much space as the flat faces of the rolls which are held on the projection, or projections. Each projection is designed to hold a full complement of rolls so that when the device is fully loaded, the end of the projection does not protrude beyond the rolls which it holds to any great extent. The fully loaded device is designed to be supported from the base with the base mounted vertically and the projections extending horizontally, for display purposes. For instance, it may be mounted in this manner on a display peg board on notches provided in the bottom of the base.

In another embodiment of this invention, a sleeve and holder is provided for each of the rolls; and the sleeve defines a central aperture of the same general shape as the front cross section of the projection. The aperture is designed to register with the projection when the rolls are mounted thereon so that the rolls are positioned and held on the projection and cannot shift. The sleeve may also act as a holder for the roll, or a dispenser for a roll of tape, for example, in which case the aperture acts as a convenient hand-holding means. Normally, the packing and display device according to this embodiment of the invention comprises a plurality of projections spaced from one another laterally along the base; and the outside lateral dimension of the sleeves is such

that the sleeves on adjacent projections just fit together, or contact one another along their edges, thereby assisting the projections in holding the rolls firmly in position on the base.

Other and further advantages of the invention will be apparent from the following description and claims taken together with the drawings wherein:

Figure 1 is a plan view of a packing and display device according to one embodiment of this invention, showing the device in its unfolded position, or as it would appear just after stamping or cutting from a single sheet of material;

Fig. 2 is a view in perspective of the device of Fig. 1 as the necessary folds are being made but before its various parts have assumed their ultimate positions;

Fig. 3 is a view in perspective of the device of Figs. 1 and 2 with its parts folded in their ultimate positions;

Fig. 4 is a top view of the device of the previous figures showing a number of hollow tape rolls mounted inside sleeves and fitted on the projections extending therefrom;

Fig. 5 is a somewhat enlarged view, partly in section and partly in elevation, along the line 5—5 of Fig. 4; and

Fig. 6 is a similarly enlarged view along the line 6—6 of Fig. 4.

Referring to the drawings, there is shown a packing and display device which may be formed from a single sheet of material such as cardboard. Referring particularly to Figs. 3 and 6, this device comprises a vertical base **11** and a plurality of projections **12** extending horizontally from the base intermediate the top and bottom edges **13** and **14**, respectively, of the base. The projections **12** are more or less rectangular in vertical cross section when viewed from one end, with the cross sectional area increasing slightly from the front to the rear of the projections. In other words, the projections **12** are slightly wider where they connect to the vertical base **11** than they are at their outer ends.

The base comprises a front base member **15** and a back base member **16** which are substantially coextensive in area and adapted to be superimposed one upon the other to form the base **11**. When the device is cut from a single sheet of material, as shown in Fig. 1, the front and back base members **15** and **16** are connected by those portions of the sheet which, when folded, make up the projections **12**. Each of said projections comprises a vertical front wall **17**, a top wall **18** foldably connected to and extending between the top edge of the front wall **17** and the back base member **16**, and a bottom wall **19** foldably connected to and extending between the bottom edge of the front wall **17** and the front base member **15**. The top walls **18** of the projections connect to the back base member intermediate its top and bottom edges, and the bottom walls **19** of the projections connect to the front base member intermediate its top and bottom edges. The exact points at which the top and bottom walls connect to their respectitve back and front base members is selected to position the projections where desired on the vertical base **11**.

In order to form each of the projections, a recess **21** is provided in the front base member **15**, behind the bottom wall **19** of the projection in Fig. 1, extending between the top edge of the front base member **15** and the point where the bottom wall of the projection joins the front base member. The recess **21** is positioned underneath the top wall **18** of the projection, and the sides **22** of the recess are adapted to receive the sides of the top wall **18** when the front base member **15** is superimposed over the back base member **16** by folding the top and bottom walls **18** and **19** of the projection about

the front wall 17 thereof and sliding the top wall 18 into the recess. For this purpose, the sides 22 of the recess 21 are tapered outwardly away from the vertical centerline of the recess, and the top of the recess is wider than the top wall 18 where the top wall joins the back base member 16 and narrower than this portion of the top wall at the bottom of the recess 21 where the bottom wall 19 joins the front base member 15. To aid in receiving the sides of the top wall, notches 23 are provided in the sides of the recess. These notches are spaced from the point where the bottom wall joins the front base member by a distance corresponding to the desired height of the projection 12 at this point.

Reinforcing tongues 25 are provided for each of the projections 12 to prevent them from sagging when the base 11 is mounted vertically on a pegboard, for instance. Each of the tongues 25 is foldably connected to the front base member 15 at the bottom of one of the recesses 21 and extends into the back of the fold between the top and the front wall of the corresponding projection 12. The tongue 25 acts like a leaf spring in resisting downward movement of the front of the projection 12 under the weight of the rolls stored thereon.

When all of the parts of the packing and display device of this invention are cut out of a single sheet of material, the device is formed merely by folding where indicated in the drawings and without the necessity of separating any of its parts from the sheet. This means that the front and back base members 15 and 16, the front, top and bottom walls 17, 18, and 19 of the projection and the tongues 25, all are integral, since none of them have been separated from the sheet from which they were formed. To accomplish this, the recesses 21 in the front base member 15 are formed by the "removal," or cutting out, of the bottom walls 19 and the tongues 25 of the projections. Similarly, recesses 26 are formed in the back base member by the cutting out of the top walls of the projections. The recesses in the back base member 16 extend between the bottom edges of the member and the points where each of the top walls of the projections join the back base member, and are located so as to face the recesses 21 in the front base member. While the recesses 26 in the back base member 16 conform exactly in shape to the corresponding portions of the top walls 18 of the projections which are removed therefrom, the recesses 21 in the bottom base member 15 are widened so that their sides 22 taper outwardly away from the vertical centerlines of the recesses 21, and away from the sides of the bottom walls 19 of the projections 12, as shown in Fig. 1, between the notches 23 in the sides of the recesses and the top edge of the front base member. The tongues 25, in turn, are struck out of the bottom walls 19 of the projections 12 and portions of the front walls 17 thereof. As shown in Fig. 1, the tips of the tongues 25 are taken from the front walls 17 to make the tongues slightly longer than the bottom walls 19 of the projections in order to provide the aforementioned spring-like action for reinforcing purposes. The front and the back base members 15 and 16 have corresponding slots 28 along their bottom edges to form notches 29 in the vertical base 11 for mounting the device on pegboard display hooks.

Referring to Figs. 4, 5, and 6, a plurality of rolls 31 of tape mounted upon hollow cores 32 are shown mounted one in front of the other on one of the projections 12 of the packing and display device of this invention. Each of the rolls is contained in a rectangular sleeve or holder 33 of cardboard or a similar rigid or semirigid material. Each of the sleeves shown has a front wall 34 and a back wall 35 connecting a top and a bottom wall 36 and 37, respectively, the sides of the sleeve being open to provide access to the tape on the roll. Each of the sleeves also defines a central aperture 38 in the form of rectangular holes located in the front and the back walls 34 and 35 of the sleeves to correspond with the location of the hollow portion of the roll 31. The aperture 38 is of the same general shape as the front vertical cross section of each of the projections 12. This means that a plurality of sleeves 33, each containing a roll, may be fitted snugly on one of the projections 12 as shown in Figs. 4–6 in such a way that the rolls are held firmly against shifting for packing or display purposes. As shown in Fig. 4, the outside lateral dimension, or width, of the sleeves 33 is such that when sleeves are positioned on adjacent projections 12 the right side of the sleeve on one projection fits against the left side of the sleeve on the next projection so that their edges are in contact with one another. This close fit between the edges of the sleeves 33 assists the projections 12 in holding the sleeves and the rolls 31 in position and preventing them from shifting during handling and use.

Having now described the invention in specific detail and exemplified the manner in which it may be carried into practice, it will be readily apparent to those skilled in the art that innumerable variations, modifications, applications, and extensions of the basic principles involved may be made without departing from its spirit and scope.

The invention claimed is:

1. A packing and display device for hollow rolls which comprises a vertical base and at least one projection extending horizontally from said base intermediate its top and bottom edges, said projection being adapted to fit inside the hollow portions of and support a plurality of said rolls simultaneously, said base comprising a front base member and a back base member, said base members being substantially coextensive and adapted to be superimposed one upon the other to form the base, said projection comprising a vertical front wall, a top wall foldably connected to and extending between the top edge of said front wall and said back base member intermediate the top and bottom edges of said back base member, and a bottom wall foldably connected to and extending between the bottom edge of said front wall and said front base member intermediate the top and bottom edges of said front base member, said front base member defining a recess extending between its top edge and the point where said bottom wall joins the front base member, the sides of the recess being tapered outwardly away from the vertical centerline of the recess and the top of said recess being wider than said top wall where the top wall joins the back base member and narrower than this portion of the top wall at the bottom of the recess where the bottom wall joins the front base member, the sides of said recess being adapted to receive the sides of said top wall when the front base member is superimposed over the back base member by folding said top and bottom walls about said front wall and sliding the top wall into the recess.

2. A packing and display device according to claim 1, wherein the sides of said recess are notched to receive the sides of said top wall when the front and back base members are superimposed as aforesaid.

3. A packing and display device according to claim 1, which further comprises a reinforcing tongue foldably connected to the front base member at the bottom of said recess, said tongue extending into the back of the fold between said top wall and said front wall.

4. A packing and display device according to claim 1, which further comprises a sleeve and holder for each of said rolls, each of said sleeves defining a central aperture of the same general shape as the front vertical cross section of said projection, whereby a plurality of said sleeves each containing a roll will fit snugly on said projection when said apertures are registered with said projection.

5. A packing and display device according to claim 4, wherein there are a plurality of said projections spaced from one another laterally along the base and a corresponding number of said recesses in said front base member, said sleeves having an outside lateral dimension such that the right side of the sleeve on one projection

fits against the left side of the sleeve on the next projection.

6. A packing and display device for hollow rolls which comprises a vertical base and at least one projection extending horizontally from said base intermediate its top and bottom edges, said projection being adapted to fit inside the hollow portions of and support a plurality of said rolls simultaneously, said base comprising a front base member and back base member, said base members being substantially coextensive and adapted to be superimposed one upon the other to form the base, said projection comprising a vertical front wall, a top wall foldably connected to and extending between the top edge of said front wall and said back base member intermediate the top and bottom edges of said back base member, and a bottom wall foldably connected to and extending between the bottom edge of said front wall and said front base member intermediate the top and bottom edges, said back base member being cut out to form a recess below the point where said top wall joins the back base member and said front base member being cut out to form a recess above the point where said bottom wall joins the front base member, the recesses in said front and back base members extending to the top and bottom edges of said members respectively, the top wall being wider than the bottom wall where the top and bottom walls join the back and front base members, the sides of the recess in the front member being tapered outwardly away from the projection, the top of the recess in the front base member being wider than said top wall where the top wall joins the back base member and narrower than this portion of the top wall at the bottom of the recess where the bottom wall joins the front base member, the sides of said front recess being adapted to receive the sides of said top wall when the front base member is superimposed over the back base member by folding said top

and bottom walls about said front wall and sliding the top wall into the front recess, said front and back base members and said front, top and bottom walls all being integral, having been cut in and folded from the same sheet of material and not having been separated from said sheet.

7. A packing and display device according to claim 6, which further comprises a reinforcing tongue foldably connected to the front base member at the bottom of said recess, said tongue extending into the back of the fold between said top wall and said front wall, the tongue having been cut in and folded from said sheet and not having been separated from said sheet.

8. A packing and display device according to claim 6, wherein there are a plurality of said projections spaced from one another laterally along the base and a corresponding number of said recesses appropriately located in the respective base members, the front, top and bottom walls of all of said projections being integral with said base members, having been cut in and folded from the said sheet of material and not having been separated from said sheet.

9. A packing and display device according to claim 8, wherein the bottom edges of said front and back base members contain notches which are located so that they are superimposed when the front and back base members are superimposed, thereby forming notches in the base of said device for mounting the device on pegboard display hooks.

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