

Oct. 16, 1951

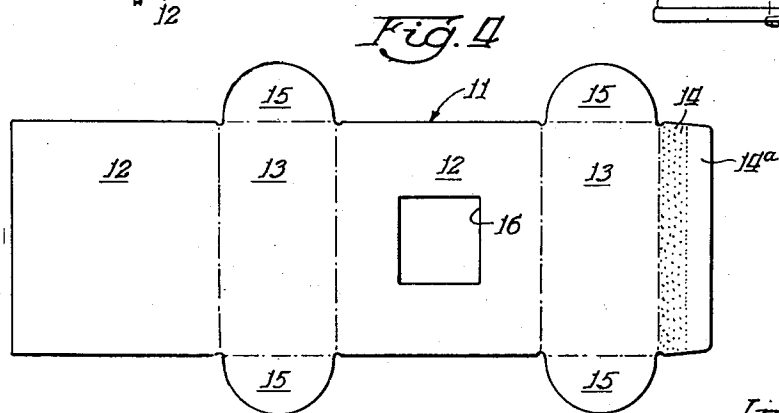
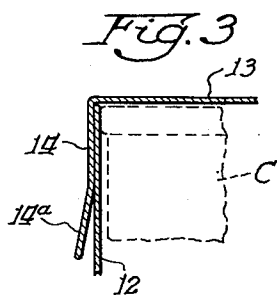
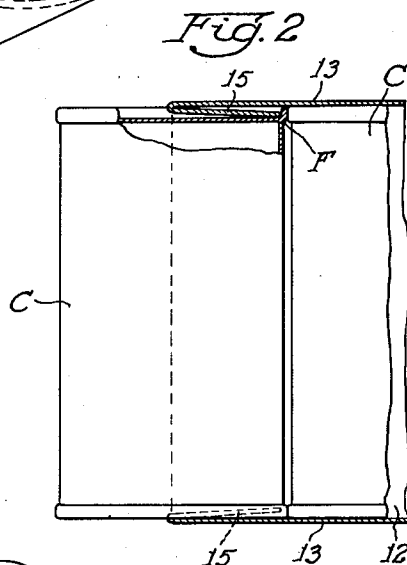
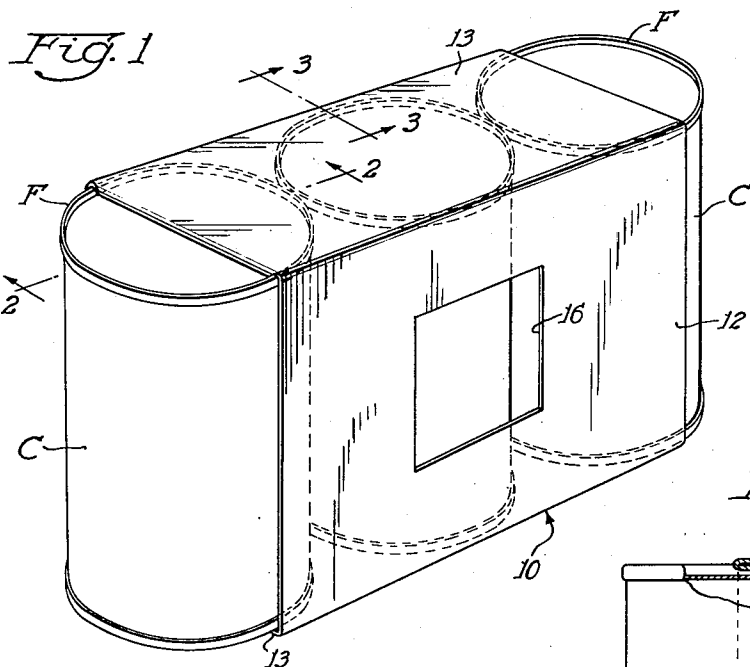
F. A. CHIDSEY, JR

2,571,833

CAN HOLDER

Filed Oct. 23, 1948

2 SHEETS—SHEET 1



Inventor:
Francis A. Chidsey, Jr.
By: Ed Wagonmiller

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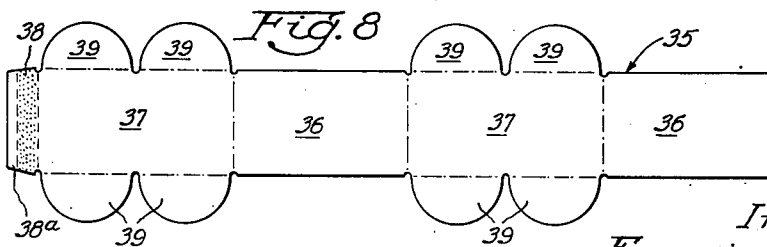
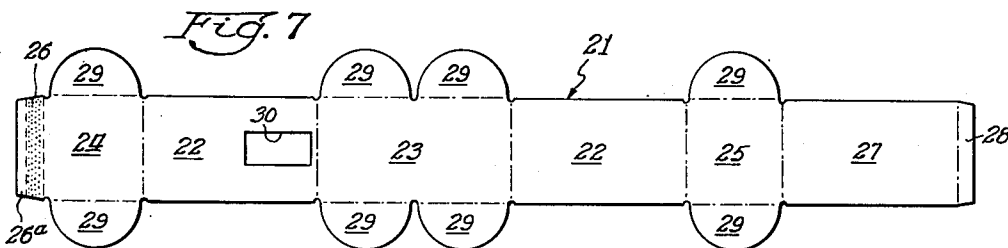
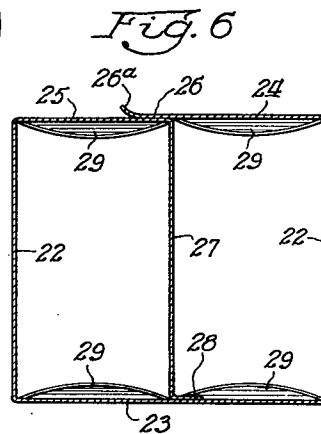
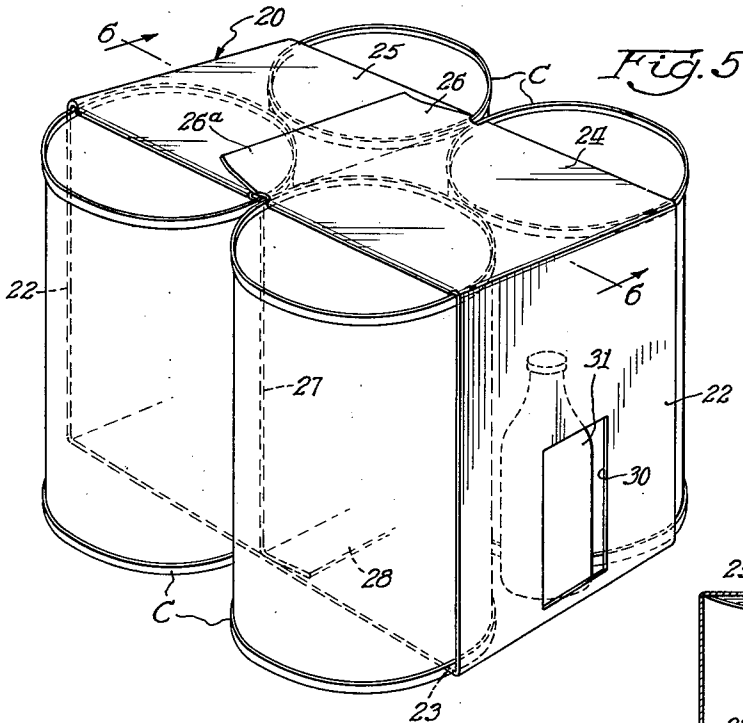
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F. A. CHIDSEY, JR
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2 SHEETS—SHEET 2



Inventor:
Francis A. Chidsey, Jr.
By: Ed Wagon seller

Att.

UNITED STATES PATENT OFFICE

2,571,833

CAN HOLDER

Francis A. Chidsey, Jr., Ithaca, Del., assignor to
Container Corporation of America, Chicago, Ill.,
a corporation of Delaware

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3 Claims. (Cl. 206-46)

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This invention relates to a can holder for packaging a plurality of cans or the like as a unit. In brief, the holder is formed as a paperboard band which encircles the cans, with the outermost cans projecting partially therefrom, and has tabs or flaps bent interiorly to engage against the end sealing flanges of the projecting cans to prevent their movement out of the holder.

It is an object of the present invention to provide a can holder for holding two or more cans in a convenient unitary pack. It is another object to provide a holder for a plurality of cans which permits quick and easy insertion of the cans therein. A further object is the provision of a can holder in which the cans are automatically secured merely by being inserted therein. Still another object is the provision of a can holder with locking means which hold the cans securely and positively against unauthorized or unintentional removal from the holder. A still further object is to provide a can holder which holds the cans securely, yet provides for sufficient display and exposure thereof to make easy the ascertainment of the contents, brand, or other information on the labels. Yet another object is to provide a holder which will securely maintain the cans in a unitary package, but requires a minimum of material. A further object is the provision of a can holder which is collapsible for shipment and storage. It is also an object to provide a blank for such a holder which is simple in form and easily set up.

The holder of the present invention accomplishes the above objects. It is advantageous in that it provides a simple means for handling, shipping, storing, and selling a plurality of cans as a unit, thus resulting in a saving of time and labor. Furthermore, in the common case of offering two or more cans of a product at a lower price than the same number of cans sold singly, it serves as a means of presenting the plurality of cans as a unit, this encourages sales on the cheaper basis, thus increasing sales volume of the seller while permitting economy by the consumer. The holder is also advantageous in combination sales, in that different products may conveniently be packed together as a unit. It is simple in operation, and inexpensive. It provides for effective point of sale advertising and facilitates attractive display of the goods.

Other and further objects and advantages of the present invention will be apparent to those skilled in the art from the following description and the appended drawings, in which:

Fig. 1 is a perspective view of one embodiment of the can holder of this invention;

Fig. 2 is an enlarged fragmentary vertical sectional view taken substantially in the plane of line 2-2 of Fig. 1;

Fig. 3 is an enlarged fragmentary sectional view taken substantially in the plane of line 3-3 of Fig. 1;

Fig. 4 is a plan on a reduced scale of a blank for the holder of Fig. 1;

Fig. 5 is a perspective view of another embodiment of the invention;

Fig. 6 is a reduced vertical sectional view taken substantially in the plane of line 6-6 of Fig. 5;

Fig. 7 is a plan on a reduced scale of a blank for the holder shown in Figs. 5 and 6; and

Fig. 8 is a plan of a blank for a holder generally similar to those of Figs. 1 and 5 but differing somewhat therefrom.

Referring to the drawings, the can holder 10 of Figs. 1 and 2 is formed from the blank 11 of Fig. 4. The material is preferably paperboard, though other suitable sheet material might be used. Since all of the parts of the holder are found in the blank, and it is only necessary to fold and glue the blank to provide the holder, the same reference numerals are employed for the holder elements and the corresponding panels of the blank. The holder 10 has a pair of side walls 12 with corresponding edges connected by end walls 13, a glue flap 14 extending from one of the end walls being secured to the free end of one of the side walls. To facilitate removal of the cans, a readily separable glue flap arrangement is employed. Several easy-opening glue strips are well known in the paperboard carton art, and any suitable one of these may be employed in the holder 10. One type of easy-opening glue strip is that in which the overlapped parts are glued together lightly, as where there is only a limited area or areas of adhesion between the parts, or only a light application of glue. In the present case, this type of securement is illustrated as employed in the holder 10. The flap 14 is lightly glued to the wall 12, and an unglued extension or tab 14a of the flap 14 is provided which remains free of the wall 12, as shown in Fig. 3, so that it may be readily grasped for separating the glue flap and side wall. Other easy-opening constructions might, of course, be used. In practice, the blank is folded on the score line between its terminal side wall panel and the adjacent end wall panel, and also on the score line between the other two side and end wall panels, and the adhesively glued flap 14 secured to the side wall margin which it overlies. This provides a closed band, which may be left flat until the holder is

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to be used. Can securing flaps 15 extend from the end edges of the end walls 13. These flaps may be left unfolded when the blank 11 is formed into the band as just described, or may be folded over the end wall panels 13 so as to lie within the band.

When the holder 10 is to be used for packing a plurality of cans C as a unit, the collapsed band is expanded to substantially rectangular tubular shape. If the flaps 15 have not previously been folded inwardly, they are now preferably folded interiorly of the tube, and the cans inserted from both of the open tube ends, or in other words from both ends of the holder. The side walls 12 are of a height preferably slightly greater than the can height. The length of the end walls 13, that is, the distance between the fold lines of the flaps 15 on each end wall, is somewhat less than the sum of the diameters of the cans C to be arranged in the holder 10, so that the two outermost cans each extend partially out of the holder. In the embodiment illustrated, approximately half of each outermost or end can projects from the holder, but this may, of course, be varied. The width of the end walls 13, or in other words of the holder 10, is substantially equal to the diameter of the cans C. In the embodiment shown in Fig. 1, the holder 10 is proportioned to hold three cans C, and accordingly the length of the end walls 13 is approximately twice the can diameter. It will be clear that the holder 10 may be formed to hold any desired number of cans more than one merely by changing the relative dimensions as shown. For example, a holder for two cans C would be identical to the holder 10 except that the length of the end walls would be substantially equal to the can diameter, while for four cans the end wall length would approximate three times the can diameter.

When the cans C are inserted in the holder 10, they force the flaps 15 toward their respective end walls 13. As the two outermost cans are inserted from opposite ends of the holder, either simultaneously or otherwise, the row of cans C is centered relative to the holder so that the end cans will project substantially equally from the holder. The flaps 15, which as shown are substantially semi-circular with a radius slightly smaller than that of the can ends, move against the ends of the outermost cans C by reason of the inherent resilience of the holder material and engage that part of the can end sealing flange F which is disposed within the holder 10 when the end cans are in their final positions. The end cans C are thus held against withdrawal from the holder, and in turn prevent any cans between them from moving out of the holder. The resilience of the flaps 15 maintains them against the can ends so that their edges remain in position engaging the flanges F.

An aperture or a plurality of apertures such as the aperture 16 may be provided in one or both of the side walls 12, to permit viewing one or more of the cans between the outermost cans. Such an aperture also permits rotation of an intermediate can to bring different portions of its label into view. Again, the aperture 16 may be employed to disclose an article, such as a container for sauce, packed in the holder with the cans. The end cans C obviously may readily be turned to bring all parts of their labels into view.

The cans C are removed from the holder 10 by pulling on the tab 14a to separate the glue flap 14 and side wall 12 to "open" the holder. If some other easy-opening construction is employed, it,

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of course, is opened in its intended manner. The cans may also be removed from the holder by swinging toward their respective end walls the two flaps 15 holding each end can, so that they are disengaged from the flanges F. Any suitable instrument may be used for this purpose, such as an ordinary table knife. Preferably both flaps are swung out of engagement with the can flanges at one time. After the end cans have been removed from the holder the securing flaps 15 may be swung out or down to a non-interfering position, or torn away, and the inner cans removed or dumped out.

In Figs. 5 to 7 inclusive there is illustrated another embodiment of the invention. In this embodiment, the holder 20 is designed to accommodate a plurality of cans arranged in two rows. This holder is formed from the blank 21 of Fig. 7. As in the case of the previously described embodiment, the parts of the blank and of the holder are designated by the same reference numerals. The side walls 22 of the holder are of approximately the same height as the cans C, and at what for convenience may be referred to as their bottom edges are connected by an end wall 23. The wall 23 has a length substantially equal to the diameter of the cans, and a width slightly greater than twice the can diameter. The upper end wall is formed of two end wall panels 24 and 25. The panel 24 comprises one terminal of the blank 21, being hingedly connected to the upper edge of one side wall 22, and has a terminal marginal portion which serves as a glue flap 26, and may have an extension or tab 26a similar to the tab 14a of the previously described embodiment. The upper end wall panel 25 is connected to the upper edge of the other side wall 22. Each of the panels 24 and 25 has a width substantially equal to the can diameter. To the edge of the panel 25 opposite that connected to the side wall there is hingedly connected a flap which serves as a central partition 27 for the holder 20. The partition 27 has a height substantially equal to that of the side walls 22. A glue flap 28 is hinged on the opposite or bottom edge of the partition 27, and comprises the other terminal of the blank 21. Can securing flaps 29 similar to the flaps 15 already described extend from the end wall 23 and panels 24 and 25, the wall 23 having two of these flaps at each end.

The blank 21 is folded and glued in such manner that the glue flap 28 is secured to the bottom end wall 23 and the glue flap 26 is secured to the upper end wall panel 25, the panels 24 and 25 lying in substantially the same plane. In this complete but collapsed form, the blank defines a closed band which when expanded provides a holder of open-ended tubular form divided by a central wall member, the central partition 27. As with the flaps 15 of the first-described embodiment, the flaps 29 may be folded inwardly either before or after the holder 20 is set up. The partition 27 provides two tubular sections or compartments in the holder 20, each defined by half the end wall 23, a side wall 22, one of the end wall panels 24 or 25, and the partition 27. At the open ends of each of these compartments are the flaps 29. Each compartment is thus substantially the same as the previously described holder 10, and cans C are inserted therein in the same manner as described in connection with the holder 10, and are secured by the flaps 29 engaging the flanges F in the same way as the flaps 15 in the case of the holder 10. The partition 27 strengthens the

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holder and prevents possible sagging or spreading apart of the end walls. Such spreading of the end walls is not, however, a necessary result of not providing the partition 27, since the side and end walls of the holder 20 engage the cans C quite closely, conforming very nearly to the cross section of the double row, and any movement of the walls away from the cans at any one point is, therefore, resisted at all other points.

An aperture or apertures 30 similar to the aperture 16 may be provided in one or both of the side walls 22 if desired. An article 31 such as a product sample, sauce, optional ingredient of the can contents, an instruction or recipe booklet, a premium, or other material may be disposed in the holder 20 if desired, as shown in Fig. 5. The article 31 can advantageously be positioned opposite an aperture 30. Of course, such articles may be disposed in holders, other than the holder 20, made in accordance with the present invention. For example, the holder 10 previously described might contain such an article, as already pointed out above.

Although the holder 20 is illustrated as holding two rows of two cans each, it will, of course, be obvious that there might be three or more cans in each row, it merely being necessary to increase the length of the holder to accommodate one or more cans between the outermost cans. Similarly, the holder 20 might be formed to hold more than two rows of cans, with additional partitions being provided if desired.

It will be clear that the flap 26 and its tab 26a operate in the same manner as the flap 14 and tab 14a of the holder 10 to provide for easy opening of the holder 20. Other opening means may be used if desired.

As already pointed out above, the holder of this invention may be formed to accommodate a plurality of rows of two or more cans without employing the partition 27 of the holder 20. A blank 35 for such a holder, designed to hold two rows of two cans each, is shown in Fig. 8. This blank comprises two side wall panels 36 alternating with two end wall panels 37, from one of which extends a glue flap 38, which may have a tap 38a similar to the tabs 14a and 26a already described. A pair of can securing flaps 39 extends from each end of each of the panels 37, substantially as in the case of flaps 29 extending from the panel 23 of the blank 21. A comparison of the blank 35 with the blank 11 of the first-described embodiment of the invention shows clearly that the two are substantially identical except for proportions and the provision of two can securing flaps on the ends of the end wall panels in the case of one blank and only one flap in the case of the other. The holder formed from the blank 35 thus resembles the holder 10 in form and the holder 20 in size, omitting the central partition of the latter. The holder is formed from the blank 35 in the same manner that the holder 10 is formed from the blank 11. The cans are inserted and held in the holder in the same way as in the case of the holders 10 and 20.

It will be seen that the holder of this invention may be so made as to hold more than two rows of cans, if desired, either with or without interior partitions between the rows, and that the can securing flaps will assure retention of all the cans. It may be here pointed out that it is not necessary in all cases that there be a pair of securing flaps, top and bottom, at each end of the holder for each row of cans. Thus, if

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the holder conforms closely to the can dimensions, and particularly the can height, only one flap may be provided for each end can. While the single flap can hold only one end of the can from movement out of the holder, the can cannot move vertically or swing sufficiently to disengage that end from the flap or to bring the other end out of the holder. Again, the holder might be made to accommodate say three rows of cans, two rows along the side walls each having three cans, for example, and the central row consisting of two cans disposed in the spaces between the cans of the side rows. Securing flaps would then be necessary only for the end cans of the side rows, since the cans of the central row could not move past these end cans.

The cans C are disclosed as the common cylindrical type of "tin" can so widely employed for preserving and marketing food products and also for a diversified range of other products. The cans C may be of other than cylindrical shape. They may also be containers of material other than metal, and formed in any desired manner, so long as they are provided with flanges or other projections which may be engaged by the can-securing flaps of the holder. Although the securing flaps 15, 29 and 39 have been shown and described as substantially semi-circular, it may be explained that this is only because the cans C are shown as having circular ends and projecting halfway from the holder. The holder of this invention is not, however, limited to cans of any particular shape. The flaps may be of any appropriate shape and size to engage effectively with cans of any shape. It is not necessary to the invention that these flaps correspond to and engage substantially all that portion of the flange F within the holder, although it is considered preferable. It may also be added that instead of the flaps being folded interiorly of the holder before the cans are inserted, they may be folded over the open ends of the holder and forced inwardly by the cans as these are inserted. The end cans may extend considerably more or less than halfway out of the holder, and the flaps be shaped to correspond to the can end portions within the holder.

The described embodiments of the holder of this invention have been disclosed as having the form of a rectangular tube open at both ends. It is not essential to the invention that the tube be rectangular, since it may conform to the particular shape of the cans or other containers to be inserted therein. Furthermore, the holder need not be open at both ends, since it may be so constructed as to have but one open end. Can-securing flaps would, of course, be located at the single open end, and operate in the manner described.

Although for convenience terms such as upper, top, vertical, horizontal, bottom, and side have been employed, it is to be understood that the terms are relative, and more or less arbitrarily chosen for facility of description. Thus, for example, it will be clear that the top end wall panels 24 and 25 of the holder 20 might form the bottom of the holder, and the bottom end wall 23 serve as the top. Again, a holder according to this invention might be disposed on one of its side walls, with the other side wall serving as the top wall. Validity is given the terms as used, however, by the fact that almost without exception cans are displayed for sale standing on end in vertical position.

It will be evident from the foregoing descrip-

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tion, in which several possible changes of the illustrated embodiments are suggested, that variations and modifications may be made without departing from the principles of the invention, and it is intended that all matter shown in the accompanying drawings and described hereinbefore shall be interpreted as illustrative and not in a limiting sense, and that the invention be limited only as required by the spirit and scope of the appended claims.

I claim:

1. A can package comprising a plurality of cans arranged in a row, a holder for said cans comprising a closed band of paperboard or the like encircling said row of cans centrally of said row said band being open at both ends and the end cans of the row being only partially within said band, and securing flaps hinged adjacent the ends of said band bent inwardly thereof and engaging the portions of the end flanges of said end cans within the band to hold the cans against removal.

2. An open end holder for two parallel rows of identical flanged-end cans of predetermined height and diameter, said holder comprising a closed band of resilient paperboard including a pair of opposed walls adapted to fit relatively closely against the ends of the cans, a pair of outside vertical walls joining the first mentioned walls, and a centrally disposed reinforcing partition wall extending between and secured to the first mentioned walls and forming with said vertical walls two compartments, the holder being of a length between its open ends which is less than the length of the individual rows of cans for which the holder is adapted, the pair of opposed walls being formed with integral flap extensions at each of the open ends of each compartment of the holder of a length less than the can diameter and having an edge portion conformable to a portion of the interior surface

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of the can flange, said flaps each being foldable interiorly of the band to a position closely adjacent its supporting wall but urged away from the wall by the resilience of the folded paperboard, whereby each of such flaps is adapted to engage edgewise against a portion of the flange of an end can in a row of contained cans which is remote from the edge of the wall to which such flap is attached.

3. A holder comprising a plurality of paper board panels serially connected and defining a tube of substantially rectangular cross section having similar top and bottom walls of substantially elongated rectangular shape and side walls spaced apart a distance less than the top and bottom walls, said top and bottom walls being provided adjacent each of their ends with integral substantially arcuate shaped retaining flaps bent inward into approximate contact with the inner faces of said top and bottom walls, the inner ends of the opposing pairs of flaps being spaced apart a distance approximately the width of said top wall.

FRANCIS A. CHIDSEY, JR.

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