Nov. 7, 1939. W. E. CATEN 2,179,227

CONTAINER

Filed Aug. 1, 1936

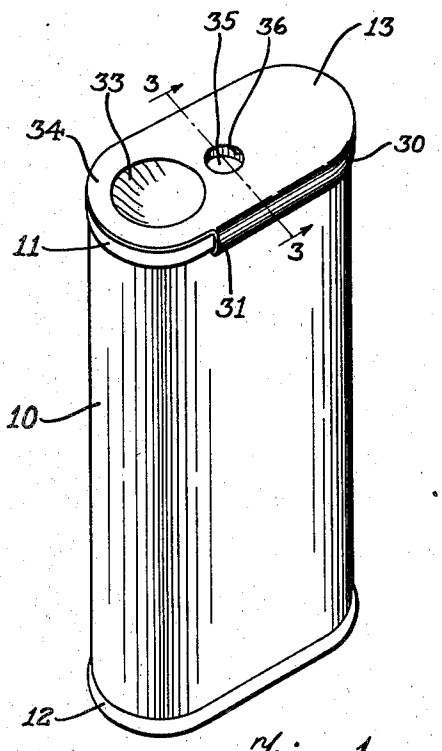


Fig. 1

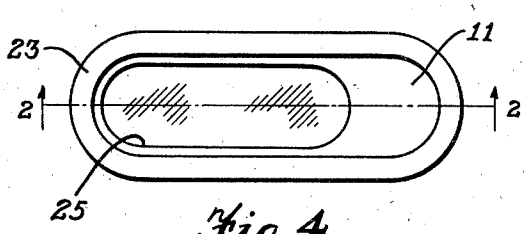


Fig. 4

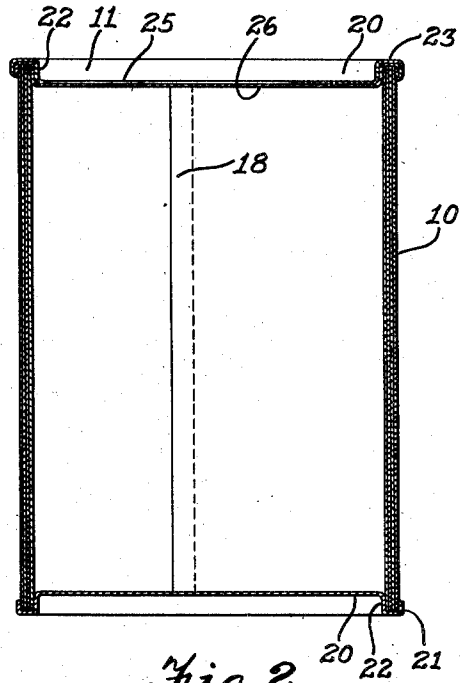


Fig. 2

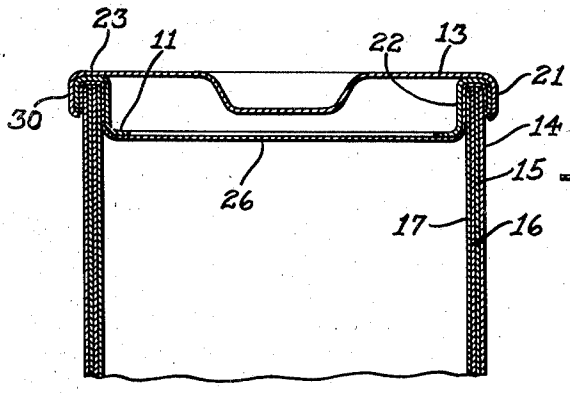


Fig. 3

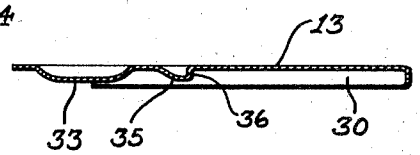


Fig. 5

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CONTAINER

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4 Claims. (Cl. 229—5.6)

This invention relates to containers and more particularly to containers adapted to the packaging of tobacco or like substances.

The principal object of this invention is to provide an efficient and convenient container for tobacco or like material which will preserve the contents in desired condition throughout use, and which can be economically manufactured from inexpensive materials.

Another object is to provide such a container in which the contents are received and maintained in loose, unpacked form, and protected to a high degree from ingress and egress of air and moisture, and from which the contents may be readily sifted for use.

Still another object of this invention is to provide a sealed container for tobacco or like material with walls impervious to air and moisture and having an opening provided with an air and moisture proof frangible covering to protect the contents prior to first use, and a movable closure for the opening for use after breaking of the covering.

Other objects and advantages of the invention will be apparent from the following description, the accompanying drawing, and the appended claims.

In the drawing—

Fig. 1 is a perspective view of a complete container embodying the present invention;

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 4, and with the closure member removed;

Fig. 3 is a fragmentary vertical section on an enlarged scale taken on the line 3—3 of Fig. 1;

Fig. 4 is a top plan view of the container, the closure member being removed; and

Fig. 5 is a longitudinal vertical section of the closure member, taken on the center line.

The container of the present invention while suitable for many purposes is particularly desirable for use in the packaging of cut tobacco for smoking and the like, and will be illustrated and described in such relationship and as a container for such purpose of the customary two-ounce size. In the packaging of tobacco or the like, in order to maintain the product in most satisfactory usable condition, it is important that provision be made in the package for the control of ingress and egress of moisture and air. The loss of natural moisture and essential oils from the tobacco results in a deterioration of the product making it less desirable in use. A free circulation of air in and out of the package will carry off the natural oils and moisture, and it is therefore desirable to restrict this passage of air. It has been found, however, that a partial restriction of the package, while restricting in some degree the loss of desirable elements from the tobacco, is undesirable in that under such conditions the growth of mold appears to be more rapid than when the container is either freely exposed to the air or entirely sealed with respect thereto. Accordingly, to prevent objectionable molding of the tobacco, and to secure the desired retention of moisture, essential oils, etc., it is important that the container be adequately secured against passage of air or moisture.

In the larger sizes of tobacco packages, it is common practice to use an hermetically sealed container, but in the standard two-ounce pocket package containers it is the usual practice to market tobacco in an unsealed metal container, the tobacco in the form of a filler being wrapped in a paper wrapper. Such packages are not sealed against passage of volatile matters and moisture either before they are opened or subsequently and are subject to serious losses of natural moisture and oils from the tobacco. It is the practice in the conventional container to form and press the tobacco, prior to packing, into a relatively compact form, and this form or block is then wrapped in paper to produce a filler having the approximate shape of the package. This unsealed filler is then inserted in the customary metal container having a hinged top, and the top is closed and held by a revenue stamp. This requires the additional operations of forming and inserting the wrapper and does not result in a package sealed against loss of moisture, etc. And in use, the tobacco desired must be loosened from the body of the pack, an operation of some difficulty particularly after the top portion of the tobacco has been used up.

The present invention overcomes the defects of the previous practices, and provides a low-cost container, adapted to be made principally from paperboard, and which is sealed in an efficient manner to inhibit the ingress and egress of air well beyond the point at which mold occurs, and in fact substantially completely, and which likewise prevents loss of the moisture and natural oils of the tobacco. Furthermore, this invention allows the use of a loose pack, the container being increased slightly in size to allow for the increase in volume resulting from such a pack. The use of a loose pack, which is made possible because there is no necessity of pressing of the tobacco for the preservance of moisture or otherwise, has the advantage of allowing the tobacco to be sifted from the package for use, and does away with the awkward and inconvenient digging in the package with the fingers or some implement, in order to get the tobacco out of the container. Furthermore, the use of a loose pack makes possible the simplification of the packing process with a lowering in cost of production.

The invention is illustrated as embodied in a container adapted to hold the customary two ounces of tobacco. Such a container is very

nearly the size of the cans in present use. For example it has been found that by keeping the height and width of the container the same as the cans now on the market, and by making a slight increase in the thickness of the container sufficient additional volume is obtained to permit of using the loose pack mentioned above, while the overall increase in the dimensions of the package is so slight as to be quite unobjectionable to the user, if noticeable.

Referring now in detail to the drawing, a container is shown in which there is a paperboard body portion 10, metal top and bottom end pieces 11 and 12, and a closure member 13, cooperating with the top end piece 11. The body portion 10, which is shown formed of paperboard, is preferably formed by winding a single blank sheet convolutely to provide a multi-wall construction. A type of body wall which has been found satisfactory is formed by winding a sheet of six point manila stock to provide a body portion having three layers with suitable overlap, as indicated at 14, 15 and 16 in Fig. 3. These layers are adhesively secured together preferably by means of a moisture resistant adhesive of suitable character.

Means are provided to give the body portion a surface having air and moisture proof characteristics in excess of those possessed by the paperboard alone. As illustrated, a liner 17 is provided on the inner face of the body portion. This liner is preferably not co-extensive with the blank in order to avoid unnecessary use of the relatively expensive liner material, and does not extend between the plies of the body portion, but has a length only slightly in excess of the inside perimeter of the body portion, providing for overlap 18. In the other direction, the liner extends the full height of the can body, and terminates within and is held by the attaching portions of ends 11 and 12, as will be more fully described below. The liner is preferably wound with the body portion at the time of formation of the latter and also adhesively secured thereto by an adhesive having properties similar to that described above. A substance having suitable moisture and air resistance and other requisite characteristics is used for the liner. It has been found satisfactory to employ a paper-backed metal foil, such as aluminum foil, or a glycerine or parchmentized sheet or a sheet of the glassine type. If desired the sheet of stock may be provided with a suitable moisture proof surface coating to provide the desired characteristics.

Top and bottom ends 11 and 12 are crimped to body portion 10 in sealed relationship. The ends are provided with a recessed portion 20 which conforms to the shape of the body portion openings, and fits snugly therein. The outermost portions of the ends shown at 21, are crimped down against the outer wall of the container body in the form of a bead, and grip the body portion between the recessed walls and the bead.

Liner 17 extends into this space between the recess wall 22 of the metal end and the body of the container and is gripped between them. To insure satisfactory sealing at this point, it is preferred that these attachments be in the form of a luted joint, and to this end a suitable sealing material is applied at the point of attachment. Such sealing material is preferably applied to the end blanks, or to the body portion wall ends, just prior to attachment. It is also desirable that such sealing material have adhesive characteristics, and among the substances which have been found satisfactory for this use are neutral casein, sodium silicate, and a cellulose ester material such as a solution of nitrocellulose.

Bottom end 12 is imperforate, and when formed of metal is impervious to the passage of moisture and air, and consequently no additional protection is required for this part of a container. If desired, the bottom end 12 may have formed in it a series of closely spaced transverse corrugations to provide a convenient means for the striking of matches. Top end 11 has an aperture 25 cut therein which provides for the removal of the contents, and which may be of any desired and convenient shape and size. As shown in Fig. 4 for example aperture 25 has a width nearly equal to that of the recessed portion 20 through which the aperture is cut, and extends lengthwise throughout the major portion of the length of the recess 20; or if an aperture of maximum size is desired it may extend throughout the entire area of the recessed portion.

Underlying aperture 25 is frangible sealing means 26. This sealing means is shown as placed in contact with the lower face of top end 11. Sealing means 26 is formed of a material which has air and moisture proof characteristics, and which is adapted to be readily broken by the finger to gain access to the contents of the package. If desired, the sealing means 26 may also be made of a transparent material to provide for inspection of the contents without breaking of the frangible seal. A sheet of moisture proof cellophane has been found satisfactory for use as a sealing means.

Sealing means 26 is attached to the container in sealed relationship. A satisfactory method of attachment, as illustrated in the drawings, is to provide a sealing means in the form of a sheet of sufficient size to extend into the gripping portion of top end 11. This sheet of material preferably extends over the entire end portion of the container, directly inwardly of end 11, and also extend peripherally beyond the end of body portion 10. Upon the applying of the top end 11 and the crimping thereof in place as described above, sealing means 26 is then held in sealed relationship with liner 17, body portion 10, and top end 11. Preferably a luted joint is formed similar to that described above. That is, sealing material is applied to the end of the body wall. The sealing means 26 is placed over the treated end of the wall, and the metal end 11 is then placed in assembled position, the recessed part thereof causing the sheet of material to be drawn across the end under slight tension which avoids creases and the like. The end is then crimped in position, forming a thoroughly effective sealed construction. There is thus provided a container in which all the parts which contact the substances packed therein are in sealed relationship, and possess air and moisture proof characteristics in highly satisfactory manner to meet the rigid requirements of packaging tobacco. For example containers have been constructed in accordance with this invention having airproof characteristics sufficient to withstand even up to a two-inch vacuum, and this is found to be completely satisfactory for the packaging of tobacco and the like.

For use as a closure member subsequent to the fracturing of frangible sealing means 26, and during the use of the product, a movable closure member is provided, operatively connected to top end 11. In the embodiment illustrated, as shown more particularly in Fig. 1 and Fig. 5, a metal

closure member 13 is provided, and is slidingly attached to top end 11. Closure member 13 has downwardly and inwardly bent peripheral flange 30, which extends around one end of closure member 13 and throughout the major portion of the sides thereof, terminating at 31. Flange 30 is adapted to engage in sliding relationship the outer portion of bead 21, which forms part of attaching means of top end 11. The top portion of closure member 13 has indentations therein, and which may be stamped therein at the time of forming. The larger of these is finger hold 33, and this is located at the end 34 of closure member 13, end 34 being the free end, or end under which flange portion 30 does not extend and also the end overlying aperture 25. Somewhat inwardly of finger hold 33 is located stop means 35, which is also in the form of a depression stamped in the closure member 13. Stop means 35 has face 36 directed away from free end 34, and adapted to engage the recess wall 22 when the closure member 13 is moved to open position. Stop means 35 thus defines a limiting position of maximum opening for cover member 13. Closure member 13 may be stopped in any position short of the position of maximum opening, and thus, in cooperation with aperture 25, provides a control for the rate of sifting of the product from the container. Closure member 13 is formed of comparatively light gage sheet metal, and is sufficiently flexible to deform enough to permit of being snapped in place over bead 21 in assembly, or permitting complete removal if desired. As will be evident from Fig. 1, in the closed position of closure member 13, flange 30 is in close contact with bead 21 throughout the major portion of the length of the bead, and the free end 34 of the closure member forms a snug fit with the raised flat top portion 23 lying between recess wall 22 and crimp 21 of top end 11. This raised flat portion 23 has a substantial width, insuring adequate contact with free end 34 when closure 13 is in closed position. Thus there is provided a closure for the container which protects the sealing means 26 against accidental rupture and which, after the fracturing of the seal, impedes the passage of air and moisture to a satisfactory extent to maintain the tobacco in the desired condition throughout its use. Prior to use closure member 13 is held in closed position by the application of the revenue stamp across its top, and with its ends attached to body portion 10, thus making it necessary to tear the stamp in order to open the container.

The use of a container embodying this invention makes possible a more economical method of packaging of tobacco or like products. The customary step, referred to above, of pressing and wrapping a quantity of tobacco to produce a filler, is completely avoided by the use of the container herein disclosed. In using a container embodying the present invention, a body portion 10 is formed and top end 11 together with sealing means 26 is applied as described above. The tobacco or other product is then simply poured in the still open bottom end, a loose filling being used. Bottom end 12 is then crimped onto the filled container. Closure member 13 is clipped over top end 11, and the revenue stamp applied, thus producing the finished package ready for marketing, and having the contents sealingly protected therein and in the form of a loose fill. In the use of the container the revenue stamp is broken, closure member 13 is slid back to open position, frangible sealing means 26 is broken, and the contents can then be sifted out through opening 25, closure member 13 being slidingly adjusted to expose the aperture to the desired extent to provide for controlled sifting of the tobacco out of the container, and being returned to closed after use to prevent objectionable escape of moisture and the like.

While the form of article herein described constitutes a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of article, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A container of the character described for tobacco or the like comprising a paperboard body portion having a surfacing to provide air and moisture proof characteristics, metal ends crimped to said body portion in sealed relationship, one of said ends having an aperture therein, frangible sealing means underlying said apertured end and held in sealed relation by the crimp of said end to provide a seal for the aperture of said end, and a movable closure member for said aperture having operative sliding engagement with a peripheral bead formed by the crimped portion of said apertured end.

2. In a container, a tubular body comprising fibrous material and having an inner liner of impervious material, a metallic end closure for said body having a portion extending across the mouth of said body and flanged portions having crimped relation with the edge of said body to form a closure seam, said first-named portion having an aperture therein, and a frangible closure underlying said metallic closure and having the margin thereof extending into said crimped seam, said liner and the marginal portion of said frangible closure being adhesively secured together.

3. In a container, a tubular body comprising fibrous material having straight wall portions joined by arcuate wall portions, a metallic end closure for said body having a portion extending across the mouth thereof and flanged portions having crimped relation with the end of said body to form a closure seam, said first-named portion having an aperture therein, a frangible closure underlying said metal closure and having the margin thereof extending into said crimped seam, and a cover having a flange portion engaging said seam, whereby the cover is slidably held in position on the body.

4. In a container, a tubular body comprising fibrous material having straight wall portions joined by arcuate wall portions, a metallic end closure for said body having a portion extending across the mouth thereof and flanged portions having crimped relation with the end of said body to form a closure seam, said first named portion having an aperture therein, and a frangible closure underlying said metal closure and having the margin thereof extending into said crimped seam.

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