Oct. 14, 1930. E. TRAUTMAN ET AL 1,778,236

STORAGE RECEPTACLE

Filed Nov. 16, 1928 2 Sheets-Sheet 1

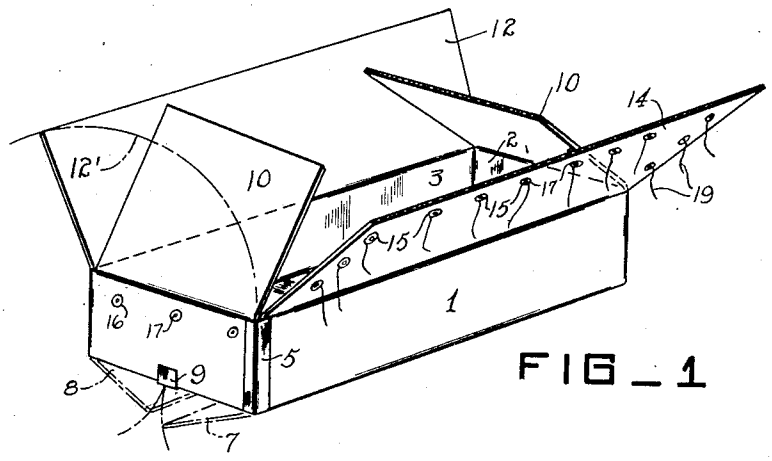


FIG_1

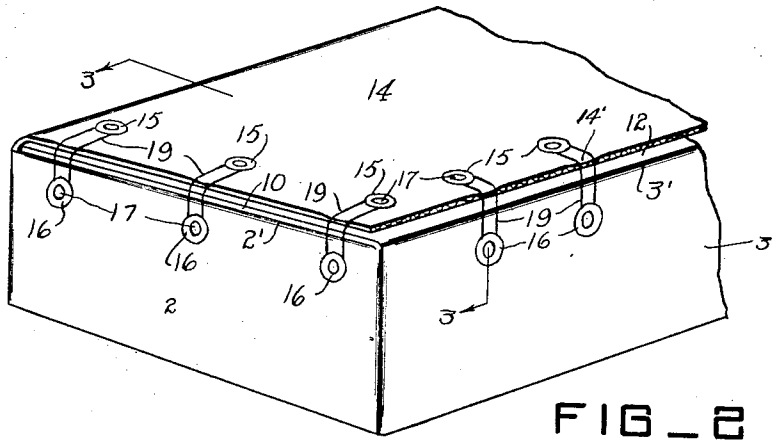


FIG_2

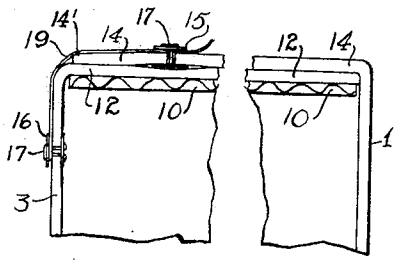


FIG_3

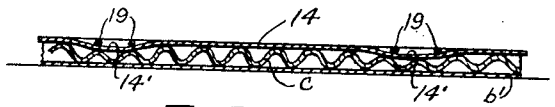


FIG_4

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STORAGE RECEPTACLE

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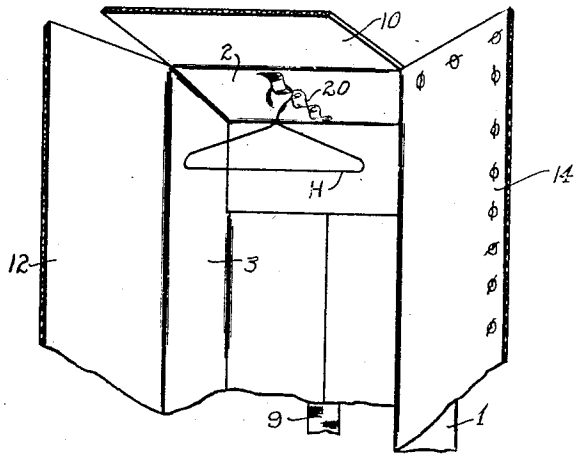


FIG_5

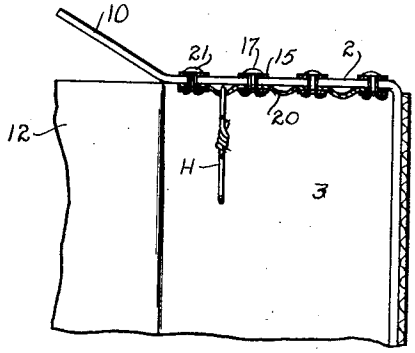


FIG 6

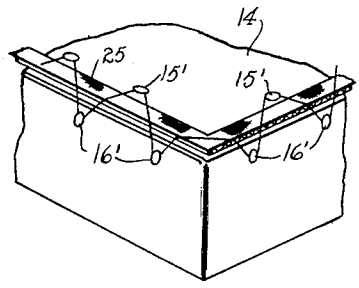


FIG_7

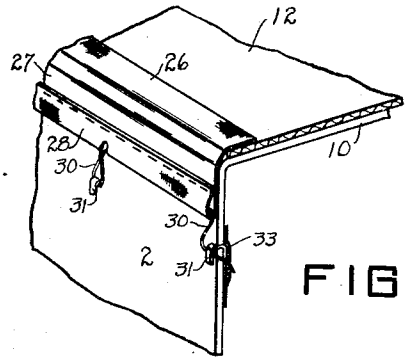


FIG_8

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UNITED STATES PATENT OFFICE

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STORAGE RECEPTACLE

Application filed November 16, 1928. Serial No. 319,863.

The primary object of this invention is to provide a simple and inexpensive storage receptacle which shall have considerable rigidity and strength and which shall be moth and dust proof.

A secondary object is to provide a simple and light weight container for fabric and like material subject to being attacked by moths, which container may be rapidly and effectively sealed up and which may be used again and again without destroying or impairing the sealing means. Further objects will hereinafter appear.

There is considerable present market for moth proof containers, but the majority of the devices sold for this purpose are either too flimsy in construction to be certain in serviceability, or are too heavy and bulky to be easily handled and stored. Hence, there is a present requirement for a comparatively strong light weight moth proof storage receptacle. Our invention answers this requirement, as will be presently shown.

We propose to employ, as a material for the receptacle, that known as corrugated board, although, as a matter of fact, other materials may be substituted, preferably loose cellular composition board of suitable thickness. We propose to construct the receptacle in such a way that there is a single closure member controlling all entrance to the interior thereof. As illustrated, this overlies one or more other closure members and all the free edges of the controlling closure member are drawn down tightly onto the underlying members in such manner as to effect an insect and dust proof seal. Such sealing preferably includes actually deforming the material of the controlling closure member at spaced points so that the whole edge between these points is compressed toward the underlying members.

Further features of the invention will be set forth in the following description relating to the accompanying drawings wherein we show our preferred forms. The essential characteristics are summarized in the claims.

In the drawings, Fig. 1 is a perspective view showing one form of our receptacle with all the movable closure members in at least partially opened position; Fig. 2 is a fragmentary perspective view of one corner of the receptacle adjacent the outer closure member and showing this closure member in sealed position; Fig. 3 is a fragmentary cross sectional detail, as indicated by the lines 3—3 on Fig. 2; Fig. 4 is a diagrammatic view in the nature of a cross section through the top closure member, the plane of the section being parallel to and near one edge of this member; Fig. 5 is a fragmentary perspective view of one end of the container, namely, that at the top when the container is in storing position, and showing suitable means for suspending the clothing; Fig. 6 is a cross sectional view taken centrally of the same end of the container illustrated in Fig. 5; Fig. 7 shows a modified method for sealing the container, and Fig. 8 shows still another modified method.

Referring in detail to the drawings, the receptacle body is preferably a one-piece member which may be folded and packed flat, as may the ordinary corrugated or composition board packing containers. In Fig. 1, the numeral 1 designates the rear wall of the receptacle, 2 the end walls and 3 the front wall. These walls may be made substantially continuous by sealing the abutting edges at one corner with a piece of tape preferably fabric, designated 5. The underside of the receptacle, as illustrated, may be rendered imperforate in any suitable manner. As in the usual container there may be downwardly underlapping extensions of the end walls 2 (not shown) and abutting panels diagrammatically shown open at 7 and 8 forming the bottom-most wall members of the receptacle.

The abutting edges of the bottom closure members 7 and 8 may be sealed by an elongated strip of adhesive fabric tape, one end of which is shown as slightly overlapping the end of the container at 19.

Continuing upwardly from the wall portions 2 of the container are end closure panels 10 which fold inwardly to form part of the top closure. These may extend toward each other any desired distance, their primary function being to support the edges of the adjacent overlying closure panel 12,

particularly the edges adjacent the walls 2.

It is highly desirable in carrying out the invention that the panel 12 be of sufficient extent that its extreme free edge is in line with the plane of the inner surface of the wall 2 of the receptacle, so that the bend of the final closure member, designated 14, must closely embrace this extreme free edge in being swung down into place.

After the goods to be protected are placed in the container, the panels 10 are folded down onto the goods, the panel 12 is folded over onto the members 10, and the panel 14 then pulled forwardly and downwardly, the bent or hinge portion wrapping closely about the rear edge of the panel 12, into overlying contact with the panel 12.

The sealing means by which the closure member 14 is drawn tightly on all its free edges is subject to considerable modification. It should be quickly operable to seal and unseal the receptacle but it should be so arranged as to operate to effect a complete seal without danger of rupturing the receptacle in any way. Further, the device used should not project to any considerable extent above the plane of the board so as to punch holes in adjacent board when the receptacle is in folded condition, i. e. flattened out for storage and shipping prior to use as a receptacle.

As illustrated in Figs. 1 to 6, we provide tab fasteners similar to those used on second class mailing envelopes and like devices. As shown, there are a series of tabs designated 15 on the top closure and a series 16 along the side and end walls 2 and 3. These tabs, may comprise perforated light fiber discs held onto the respective receptacle wall and closure portions as by split flat headed rivets 17, the inner ends of the rivets being oppositely bent over, as shown to hold the discs in place. If desired, in order to prevent access of dust at the holes made by the rivets, the bent-over ends of the rivets may be covered either by individual adhesive patches or longitudinally running adhesive strips overlying whole lines of rivet ends. Neither last mentioned device is illustrated.

Suitably attached to one set of closure tabs, preferably the set 15, are cords 19. The cords are pulled down tightly onto the top closure member 14, depressing the top surface of the panel 14 as at 14′, Fig. 4, are then wrapped about the closure discs 16, then drawn up over the edge and fastened as by a portion of one complete wrap about the rivets of the discs 16.

In effecting the seal, it is desirable to cut back all free edges of the top panel 14 of the closure so that none of these edges extend out over the adjacent edges of the receptacle. The preferred arrangement is illustrated, particularly in Fig. 2 wherein it will be noted that the front edge of the panel 14 is set back slightly from the corner line of the receptacle, designated 3′. The same relationship appears on the adjacent edge of the panel 14 wherein this is shown as dropped back from the underlying edge of the closure panel 12.

Referring to Fig. 4, this illustrates what takes place when the cords 19 are pulled tightly between two registering tabs. The closure member shown illustrates the cellular structure of corrugated board which has top and bottom body layers *b* and *b′* joined by the corrugated body layer *c*. As two portions of the top layer *b* are pulled down, as at 14′ Fig. 4, the layer *c* is crushed to an extent depending on the pulling force. However, the majority of the corrugations resist this crushing tendency and the intermediate zone of the whole top layer *b* is put in tension. The resulting downward force is distributed along the contacting layer *b′* to cause it to seal tightly onto the member beneath it.

In the case of material, such as loosely compacted composition board, substantially the same sealing forces are set up, due to the cellular structure between the top and bottom layers of board material, these layers having considerable tensile strength, particularly where the sides of such board are surface treated.

Suitable means for suspending clothing within the receptacle above described may comprise a strap-like member 20, see Figs. 5 and 6, which is suitably attached to one end wall 2 as by a series of rivets 21, one rivet being shown as holding one of the discs 15, there being any suitable number of loops between the rivets adapted for supporting clothes hangers H. With the above described arrangement, a convenient number of suits or overcoats to fill a receptacle may be stored while supported on the hangers. Such garments are simply laid in place while the receptacle is in the position shown in Fig. 1, and afterward the receptacle is upended to bring the looped hanger supports uppermost. Preferably the container is made about 8 in. deep, 4 ft. and 8 in. long and about 22 in. wide, this being a convenient size for storage purposes, while affording sufficient bottom surface when stood on end, as just mentioned, to prevent the receptacle from tipping over readily.

A modified form of closure is shown in Fig. 7 wherein the discs, designated 15′ and 16′, are not in registration, that is to say, one over the other, but are offset, and a single cord is used. This cord, designated 24 may be suitably attached at one end as on one of the members 16′, and drawn first over a disc 15′, then under a disc 16′ etc. until the entire closure seal is effected. Fig. 7 also illustrates the use of reinforcing strips 25 of fabric adhesive material or the like which, due to its

superior strength, as compared to paper, increases the sealing effect discussed with relation to Fig. 4.

A further modification is shown in Fig. 8 wherein it may be assumed that all the free edges of the closure member 12 supports respective fabric strips 26, these being glued or otherwise attached to the top surface 12 and extending out beyond the top surface as at 27. The extension portions of the strips are formed into tubes as at 28 and the tube is slit at various points as at 29. Extending within the tube is a cord 30, which may be drawn through the slits and hooked over fasteners, such as 31, these being preferably metal clips thrust through and supported by the vertical walls of the receptacle and held in place by adhesive patches 33 within the receptacle. In effecting the sealing of the receptacle with this arrangement the loops of the cord 30 are successively tightened all around the edges of the closure 12 and the end of the cord then suitably secured as on a disc similar to those shown in Fig. 3 (not illustrated in Fig. 8).

We claim:

1. A storage receptacle comprising a container having substantially imperforate bottom and side walls, a top wall comprising swingable closure members, one overlapping another, and means to render the container moth and dust proof including a top closure member contiguous with one of said side walls and overlapping the underlying closure members, there being spaced means positioned along all free edges of the top closure member, similarly spaced means on the side walls of the container, and flexible tension devices connecting the aforesaid means, for drawing down such free edges of the top closure member throughout their entire length, into sealing relation to the underlying members.

2. A storage receptacle in accordance with claim 1 wherein at least one of the free edges of the top closure member is set back from the plane of the outermost surface of the adjacent side wall.

3. A storage receptacle comprising a container substantially closed at the bottom and sides, the top wall comprising a raisable closure member, the material thereof including cellular compressible material embraced by top and bottom body layers, there being spaced means on the closure member and adjacent container sides including flexible connecting members arranged to draw downwardly at spaced points at the edges of the top layer to compress the directly underlying cellular material and place the intermediate zone of the top layer in tension to thereby effect a continuous sealing of the bottom layer therebeneath against the container.

4. A storage receptacle comprising a container having substantially imperforate bottom and side walls, extensions contiguous with the side walls and arranged to fold inwardly one over the other, a top closure member, a set of spaced securing devices substantially uniformly distributed along all the free edges of said member, there being a cooperating set of securing devices on the side walls adjacent said free edges, and cords connecting said sets of devices and arranged to draw substantially the entire length of the free edges of the top closure member into sealing relation to the underlying closure members.

In testimony whereof, we hereunto affix our signatures.

ERNEST TRAUTMAN.
PAUL FETZGER.