June 20, 1950 D. G. WILLIAMS 2,511,958

MULTIPLE-TRIP CONTAINER

Filed Dec. 9, 1944

FIG. 1.

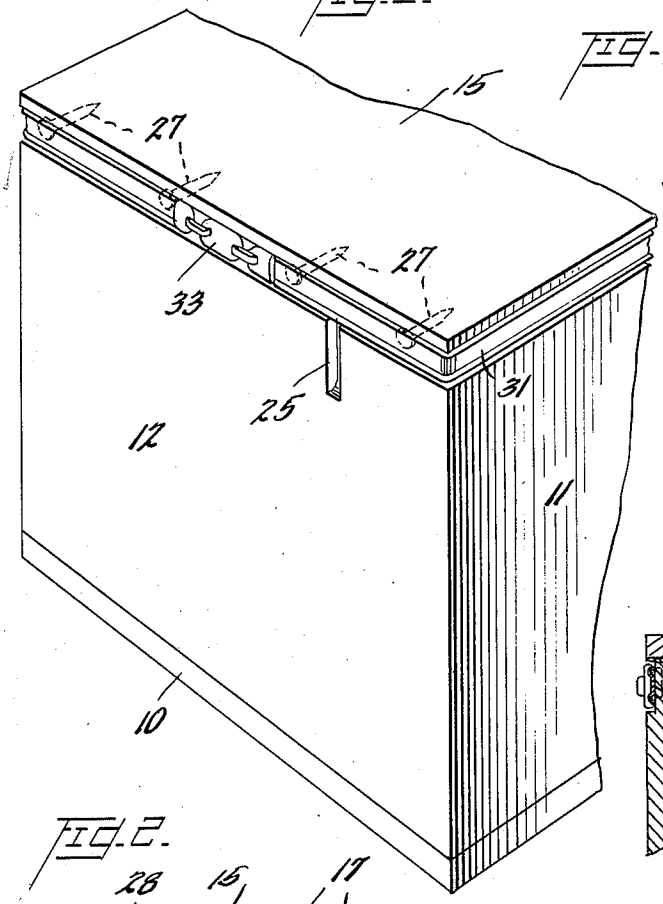


FIG. 7.

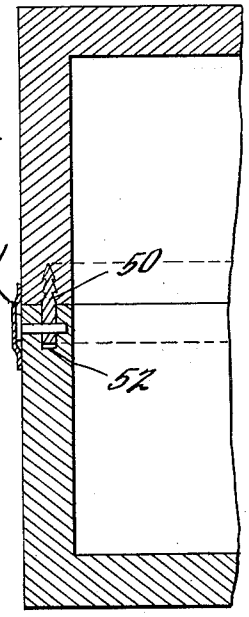


FIG. 4.

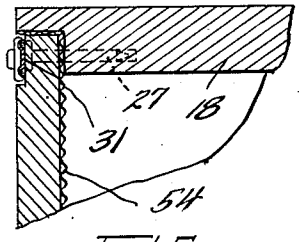


FIG. 2.

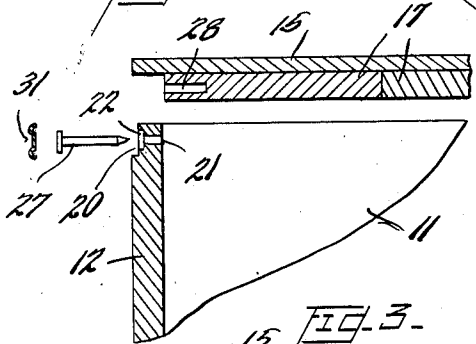


FIG. 5.

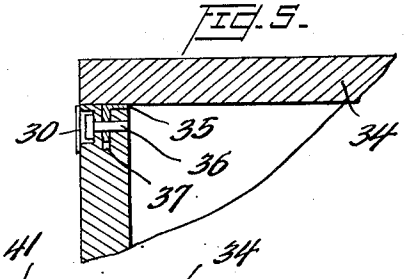
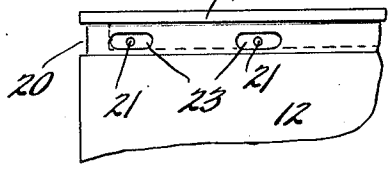


FIG. 3.



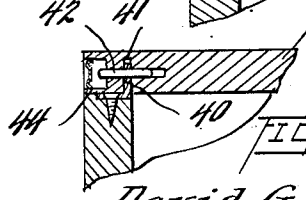


FIG. 6.

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MULTIPLE-TRIP CONTAINER

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3 Claims. (Cl. 217—56)

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This invention relates to multiple-trip containers of the type used for shipping explosives where the empty box and lid are returned to the manufacturer for credit during times such as at present when frequently new material is practically unobtainable. It is the prime object of the invention is provide a container of this type where longer life is assured by means which, at the same time, minimize the hazard incident to the driving of nails into the wooden boxes usually used, and also the use of claws, wedges, and other opening devices which may produce dangerous friction when the container has reached its destination.

A further object of the invention is to provide a container which, altho employing but a single closing band, assures against any tampering with the contents of the box by making it impossible to remove the contents without giving visible evidence of that action. A still further object of the invention is to provide a two piece container held assembled by loosely fitting dowels or other connections, which in turn are prevented from moving from retaining position.

At the present time explosives are shipped in wooden boxes with a closing lid secured in place by nails having heads engaging the top of the lid. Aside from the danger of driving a nail into the box chamber or space and therefore possibly into the explosive, there is always the hazard due to the impact of metal against metal in the driving of the nails into place, and this is true whether the nails are driven by hand or by machine. Furthermore, it frequently happens that the nailed lids are carelessly pried open with a consequent loss of the lid or damage to the box, resulting in inability to reuse the container.

By means of the container hereinafter described impact and dangerous friction are eliminated, the life of the box and the lid is greatly increased, and evidence is given if the contents of the box have been tampered with.

In the drawings

Figure 1 is a perspective view of the preferred form of my container.

Figure 2 is an exploded view, largely in section.

Figure 3 is an elevation of the box with the tape or band removed and the nails or other fasteners withdrawn.

Figure 4 shows a slight modification.

Figures 5, 6, and 7 show different methods for securing together the two parts of the container.

In the preferred form of the invention as illustrated in Figures 1 to 3 the receptable member of the container is a box formed of a bottom

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10, sides 11, and ends 12 of a well-known type and having an open top. Where the cost is not prohibitive the bottom, sides and ends are integral, as for example when the box is formed by molding, as in using plastic or concrete.

The cover is preferably in two parts, the top portion 15 being of plywood and of the same width and length as the box bottom, and the lower portion being of ordinary box boards 17 permanently secured to the plywood top and being of such size as to fit inside of the receptacle member. As shown in Figure 4, the cover member may be in one piece 18, but is otherwise identical with the cover 15—17.

The receptacle member is rabbeted at the top to form a continuous kerf 20. A plurality of holes 21, at desired intervals, are provided to receive nails, dowels, or other headed or unheaded fastening members. These holes are countersunk as at 22 to receive the head of the connection, if the latter be headed, and it is my preference to enlarge the countersink as at 23 in Figure 3 to make it more convenient to withdraw a nail or dowel by hand. A saw kerf 25 communicates with the kerf 20.

In the preferred form the connections are nails 27 of the shingle type fitting loosely in preformed holes 28 in the lid or cover in registry with the holes 21 thru the tops of the sides and ends. The word loosely is meant to imply that the friction is not too great as to prevent the ready removal of the retaining means, whether a nail or other fastener, without any danger to the contents of the container, if it be loaded with explosives. It is intended generally that the nails shall be inserted and removed by hand, and they may in fact be quite loose or may fit with enough friction to keep them from sliding in the registered holes.

When all of the connections or retaining means are in place they may be prevented from moving out of the holes by a means such as an adhesive tape 30, as in Figure 5. I prefer, however, to use a commercial band of the Signode or equivalent type. This is a strap 31 about a half inch wide and with apex turned edges. It is slightly narrower than the rabbet and may be drawn as taut as desired and then secured as by the seal 33. When so applied, the dowels or nails cannot be removed without first removing the strap fastener. This is readily accomplished by inserting shears in the saw kerf 25 to sever the band which then comes freely out of the groove between the rabbet and the top portion of the cover.

In Figure 5 the cover is a solid sheet 34 to which are secured brackets 35 pierced to receive the pins

36 and fitting within recesses 37 in the receptacle member. The band is here shown as a gummed tape 30 Figure 6 is similar except the brackets 40 are secured to the receptacle member and are received in recesses 41 in the lid, and the dowels 42 are inserted thru the continuous kerf 44 located entirely in the cover member rather than in the lower portion of the box.

The container of Figure 7 is in two somewhat similar portions. One of these portions carries a bracket 50 which may be a continuous piece, suitably recessed to receive the fasteners, and receivable in a continuous groove 52 in the other member of the container. In this modification there is no kerf or rabbet corresponding to that numbered 20, but, instead the tape 51 which is somewhat wider than usual, is applied directly to the outside of the box.

In any of the forms it is difficult to tamper with the contents by removing the box bottom 10 when of the ordinary type as the type of liner normally employed inside of an explosive package has only a top opening. As an added precaution, a single strip of lining material 54 may be used, as in Figure 4, extending from one side to the other in one piece and being perforated by the nails. This would indicate any tampering from the bottom and used with the seal would insure genuine contents.

What I claim is:

1. In a multiple-trip container for explosives, a rectangular receptacle having a bottom, two sides, and two ends, with a rabbeted portion forming a recess extending entirely around the outer periphery of the top thereof and having holes extending through the rabbeted portion on opposite sides of the receptacle, a cover for the receptacle comprising a top portion to rest upon the receptacle and extending beyond the rabbeted portion flush with the major part of the receptacle to form with the rabbeted portions a groove, and a bottom portion fitting the four inner surfaces of the receptacle with its edges parallel thereto and extending into the receptacle a distance equal to the vertical dimension of the rabbeted portion and having in the bottom portion of the cover holes registering with the holes in the receptacle, retaining means fitting loosely in the registering holes in the receptacle and the cover, and strap means entirely within said groove for preventing withdrawal of the retaining means.

2. The device of claim 1 in which the rabbeted portion is countersunk adjacent to each hole for a convenient access to the retaining means for the manual removal of same.

3. The device of claim 1 in which the entire box is of wood, the strap means is a metal band, and the receptacle has a saw cut communicating with the rabbeted portion at right angles for facilitating the cutting of the metal band by a pair of shears so that the retaining means may then be removed by hand.

DAVID G. WILLIAMS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
227,447	Sabin	May 11, 1880
298,146	Wilson	May 6, 1884
829,887	Parrish	Aug. 28, 1906
870,122	Perkins	Nov. 5, 1907
928,176	Brooks	July 13, 1909
1,310,352	Koors	July 15, 1919
1,374,652	Hansen	Apr. 12, 1921
1,491,356	Monro	Apr. 22, 1924

FOREIGN PATENTS

Number	Country	Date
9,164	Great Britain	May 9, 1894
21,017	Great Britain	1904
24,189	Great Britain	Dec. 15, 1893