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A. R. MANN

DEVICE FOR OPENING CAN OR BOX COVERS

Filed April 21, 1923

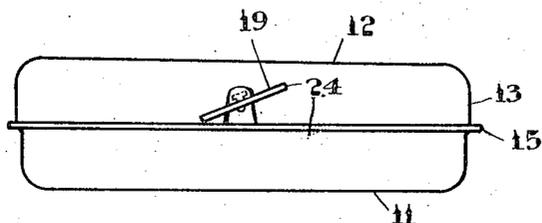


FIG. 1

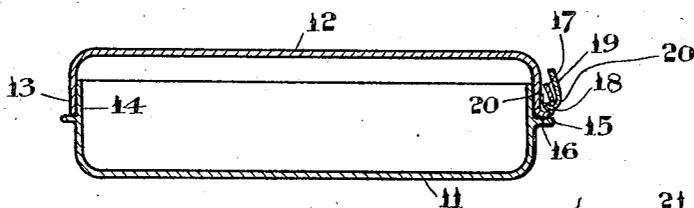


FIG. 2

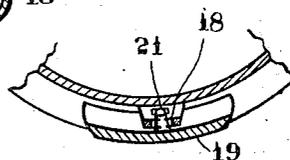


FIG. 6

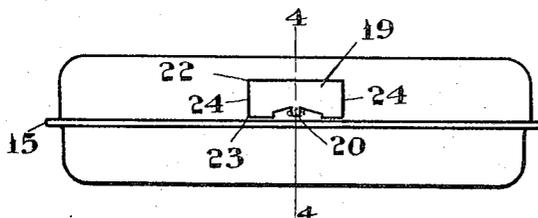


FIG. 3

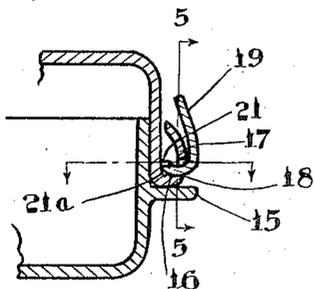


FIG. 4

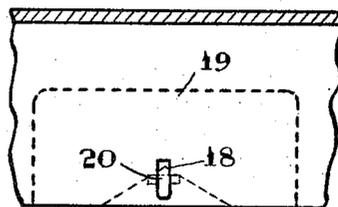


FIG. 7

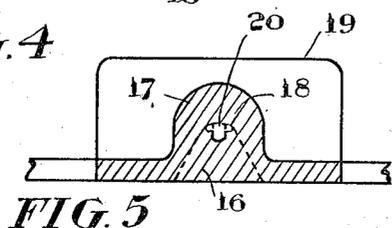


FIG. 5

INVENTOR
ALEXANDER R. MANN
BY *Fetherstonhaugh & Co*
ATTORNEYS

UNITED STATES PATENT OFFICE.

ALEXANDER R. MANN, OF MONTREAL, QUEBEC, CANADA.

DEVICE FOR OPENING CAN OR BOX COVERS.

Application filed April 21, 1923. Serial No. 633,648.

To all whom it may concern:

Be it known that I, ALEXANDER R. MANN, a subject of the King of Great Britain, and resident of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Devices for Opening Can or Box Covers, of which the following is a full, clear, and exact description.

This invention relates to new and useful improvements in devices for opening boxes, which are more particularly designed for packing shoe polish, paste, or the like and the main object of the invention is to provide a cover lifter for boxes of this character which will be inexpensive to manufacture, easy to operate and which will have no protruding parts to interfere with the stacking of the boxes closely together for transportation.

Another object is to provide a box opener which will not interfere with the air tightness of the box.

A further object is to provide a box opener which will be so constructed that it can be easily and readily manipulated by anyone having no previous experience with the same.

In my invention I provide an opening lever which is attached to the cover of a box, so that it can be turned upwardly to lie against the rim of the cover when not in use. The lever is pivotally connected to the cover and when turned down at right angles to the cover rim, provides a good grip for operating the lever to open the cover of the box.

In the drawings:

Figure 1 is an outside elevation of the box showing the opening device in the operative position.

Figure 2 is a sectional elevation of a box.

Figure 3 is an outside elevation of the box with the opening device folded against the rim of the cover.

Figure 4 is an enlarged sectional elevation of the lifting mechanism, taken on the line 4—4 Figure 3.

Figure 5 is a sectional elevation taken on the line 5—5 Figure 4.

Figure 6 is a partial sectional plan view of

one modification of the device.

Referring more particularly to the drawings, 11 designates the bottom of the box and 12 the cover, the rim 13 of which passes over and is in frictional engagement with the rim

14 of the bottom. A flange or ridge 15 is formed in the bottom of the box to hold the cover in position. In my preferred form of construction which is shown in Figures 1 to 6, a supporting bracket is arranged on the outside of one part of the cover rim, said bracket comprises a horizontal web 16 projecting outwardly from the lower edge of the rim and an upright wall 17 projecting upwardly from the outer edge of the web and substantially parallel with the cover rim. This bracket may be made integral with the cover from the same sheet of metal. The wall of the bracket is provided with an aperture 18. A lever 19 is provided for lifting the cover and is connected to the cover by means of a hook 20 passing through the aperture 18 in the bracket, the end of said hook being made broader at its point 21 than in the neck 21^a. To provide a means for inserting the hook, the aperture is made in the form of an elongated slot, the width of the slot being slightly larger than the width of the neck, and the length of the slot slightly larger than the broadest part of the hook end or point 21, so that the lever, when tilted, will pass easily through the slot and when turned the broad end of the hook cannot pass through the width of the slot, and holds the lever in position. The lever is provided with winged portions 22 to form a grip for turning the lever, the corners 23 of which engage with the flange 15. The lever may be curved as shown in Figure 6 so that when it is turned vertically against the rim of the cover, the edges 24 will grip said rim slightly and prevent said lever from falling outwardly until a slight force is used to accomplish this object. In Figure 7 the lever is placed through a slot cut in the cover and no bracket is provided.

The operation of the device is as follows: To open a can or box cover the lever is first turned down to position shown in Figure 1 and then turned so that the corner 23 engages with the flange 15. The lever pivots about the corner and on force being applied the lever raises the lid through the medium of the neck 21^a which engages with the end of the aperture in the cover. When the device is in the inoperative position the lever is turned vertically upwards against the rim of the cover and no part of the device projects beyond the outer edge of the bottom flange to interfere with stacking the boxes closely together for transportation.

Having thus described my invention, what I claim is:

1. A box comprising a bottom having an upwardly projecting rim and an outwardly projecting flange, a cover having a downwardly projecting rim adapted to frictionally engage with the bottom rim and a lever hinged to the cover rim to swing to a folded position against the said rim or to an operative position substantially at right angles to the rim, said hinge connection being designed to permit rotary movement of the lever when in the last mentioned position so that the bottom corners of the lever may be engaged with the flange to act as a pivot point for raising the lid on the rotation of the lever.
2. A box comprising a bottom having an upwardly projecting rim and an outwardly projecting flange, a cover having a downwardly projecting rim adapted to frictionally engage with the bottom rim, a bracket made integral with the cover, and a lever having a hook connection to the bracket to

allow the lever to be folded against the rim in the inoperative position, said hook connection also permitting a rotary movement to elevate the cover when said lever is returned at right angles to the cover rim, the bottom corners of the lever being adapted to engage with said flange and to act as a pivot point to raise the cover on rotation of said lever.

3. A box comprising a bottom having an upwardly projecting rim and an outwardly projecting flange, a cover having a downwardly projecting rim adapted to frictionally engage with the bottom rim and a lever having a hooked connection to the cover to allow the lever to be folded against the cover rim when in the inoperative position, said hooked connection also permitting a rotary movement to lift the cover when said lever is returned at right angles to the cover rim.

In witness whereof I have hereunto set my hand.

ALEXANDER R. MANN.