Nov. 7, 1939. G. H. CARY 2,179,280

ADJUSTABLE SPOUT FOR CANS

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Fig. 1

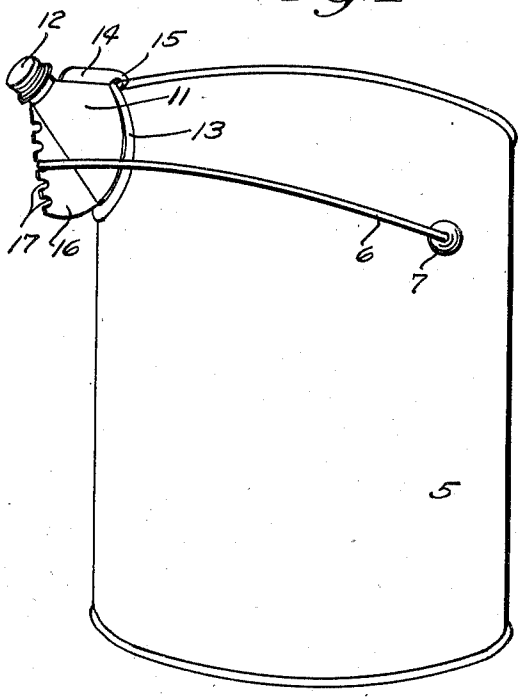


Fig. 2

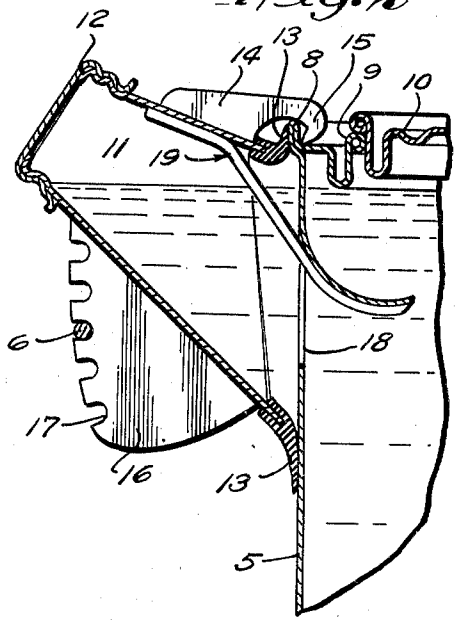


Fig. 4

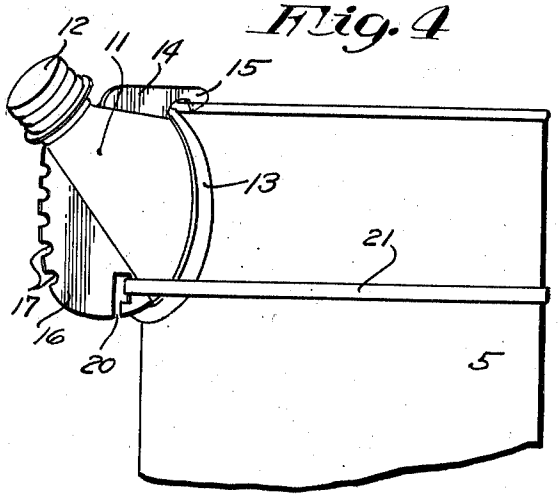
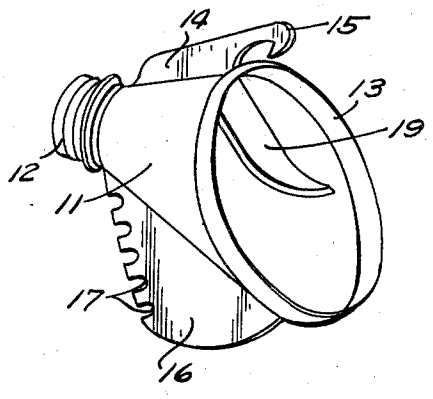


Fig. 3



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ADJUSTABLE SPOUT FOR CANS

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11 Claims. (Cl. 221—23)

My invention provides an extremely simple attachment in the nature of a pouring spout for application to cans, the term can being used in a broad and liberal sense.

Particularly the invention relates to the provision of a spout that may be quickly and efficiently attached to tin cans or containers that contain various liquids such, for example, as molasses, paint or any of the various other liquids that are frequently shipped and sold in tin cans having removable covers. In connection with such containers herein generically designated as cans, it is very desirable to have means for pouring the liquid from the can without removing the cover and without exposing the contents of the can to the outside atmosphere. Moreover, a spout such as herein described is adapted to be applied to cans that are absolutely sealed, and which do not have removable covers.

The spout is of such character that in the application thereof, a puncture in the side of the can may be made either before or after the spout has been attached. Also, in some instances, the spout will be provided with a can-puncturing barb or blade that will cut a hole in the can in the very application of the spout to the can.

The invention is illustrated in the accompanying drawing wherein like characters indicate like parts throughout the several views.

Referring to the drawing:

Fig. 1 is a perspective showing the spout applied to a can having a carrying bail which is utilized as a clamping band or element for holding the spout in operative position;

Fig. 2 is an axial section through the spout and a portion of the can;

Fig. 3 is a perspective showing the spout removed from the can looking at the same toward its open or receiving end; and

Fig. 4 is a view corresponding to Fig. 1 but illustrating a slightly modified arrangement for means of clamping the spout to the can.

Referring first to the structure illustrated in Figs. 1, 2 and 3, the numeral 5 indicates the tin can or container provided with a carrying bail 6 pivoted thereto at 7. As is customary or common, this can at its upper edge, has an inturned annular portion that forms an upstanding outer rib 8 and an annular sealing rib 9 into the opening of which the cover 10 is pressed and frictionally held with a liquid-tight joint.

The body of the spout 11 is preferably a thin sheet metal tapered structure provided at its outer end with a removable cap or closure 12, and formed with an oblique inner edge on to which is telescoped or otherwise secured a sealing ring 13 preferably of pliable rubber. On its top the spout 11 is provided with a flange 14 that terminates in a fulcrum-acting hook 15 that is adapted to overlap and engage the inner surface of the rim flange 8 directly opposite to the upper portion of the sealing flange 13. On its under side the spout is provided with a locking flange 16, the outer edge of which is eccentric to a circle struck from the bail pivots 7.

The bail 6 is adapted to be spring-pressed into engagement with the edge of the lock flange 16, and the latter is preferably formed with notches 17 that hold the bail engaged where set on the lock flange. The spring tension in the bail 6 will be sufficient to hold the flexible edge of the sealing flange 13 pressed against the body of the can with a liquid-tight joint.

In Fig. 2, the hole in the side of the can for delivering the contents of the can into the spout, is indicated at 18. This opening 18 may, as above indicated, be formed in the can in various different ways. It might, for example, be cut in the side of the can before the spout is attached and while the can is turned on its side; or it may be formed after the spout has been attached but while the cap 12 is removed, simply by forcing a sharp instrument into the spout. However, in certain instances it is desirable to form this opening 18 by the very application of the spout, and, hence, for that purpose, I have shown a sharp-edged cutting prong or blade 19 attached to the interior of the can by welding, soldering or otherwise. The sharp point of this blade 19 projects far beyond the plane of the face of the sealing flange 13 so that the very act of forcing the spout to position by a downward rocking action, using the hook 15 on the flange 8 as a fulcrum, will project the point of the blade through the side of the can and form the opening 18.

Of course, when this additional feature of forming an opening in the can by the application of the spout is not desired, the barb or puncturing device may be omitted with the resulting reduction in the cost of the spout. However, when the puncturing device is desired, it should be applied substantially as shown so that the hook 15 may be used as a fulcrum. When the barb is used, the spout should, of course, be applied while the can is turned on its side.

The structure illustrated in Fig. 4 is like that above described except that the lock flange 16, in its lower edge, is provided with an undercut

notch 20 that is engaged by a band 21 applied around the can. This band 21, like the bail 6 reacts against the can in holding the spout in position. The band 21 may be a non-metallic, elastic member or a metallic strap, either spring-acting or otherwise suitably secured around the can.

From the foregoing it is thought to be evident that the device described is sufficient for the purposes had in view, can be made at comparatively small cost and can be quickly applied to a can or container. Of course, the spout can be used over and over again on different cans. The desirability of a pouring spout for cans or containers of the above character is thought to be too obvious to require further comment.

Of course, the structure as specifically described, may be modified within the invention herein disclosed and claimed.

What I claim is:

1. The combination with a can having an upstanding rim and a lateral discharge passage located below said rim, of a pouring spout provided at its upper portion with a lock flange detachably engageable with said upstanding rim, and a device anchored to the body of the can and engageable with a lower portion of the spout structure to hold the same seated with its rim tightly pressed against the body of the can and with the spout in position to receive the contents of said can through said lateral passage.

2. A pouring spout of the kind and for the purpose described provided with a flexible sealing ring for contact with the can body and provided at its top with a lock flange terminating in a hook-like end operative as a fulcrum against the upstanding rim of a can, and provided at its lower portion with a notched lock flange, and an anchoring device applied to the body of the can and engageable with said lock flange to hold said spout in working position, said can having a lateral passage opening into the spout.

3. The combination with a can having an upstanding marginal rim, of an attachable pouring spout provided with a flexible sealing ring for contact with the can body and provided at its top with a lock flange terminating in a hook-like end operative as a fulcrum against the upstanding rim of said can, said spout on its lower portion having a lock flange, and a clamping band anchored to the body of the can and engaging said lock flange to hold said spout attached to the can.

4. The combination with a can having an upstanding marginal rim and a pivoted bail, of an attachable pouring spout provided with a flexible sealing ring for contact with the can body, said spout at its upper portion having a lock flange terminating in a hook-like end operative as a fulcrum on the rim flange of said can, and provided at its lower portion with a lock flange with which said bail is engageable to hold the spout against the can with a liquid-tight joint.

5. The structure defined in claim 4 in which the edge of said lock flange is eccentric to a circle struck from the axis of the pivotal connection between said bail and can.

6. The structure defined in claim 4 in which the edge of said lock flange is eccentric to a circle struck from the axis of the pivotal connection between said bail and can, the eccentric edge of said lock flange being notched.

7. The structure defined in claim 1 in which said spout is provided with a can-puncturing barb that projects therefrom beyond the plane of the face of said sealing ring and is adapted to be forced into the can and produce the discharge passage therein when said spout is forced to position by rocking action on said fulcrum-acting hook.

8. The structure defined in claim 4 in which said spout is provided with a can-puncturing barb that projects therefrom beyond the plane of the face of said sealing ring and is adapted to be forced into the can and produce an opening therein when said spout is forced to position by rocking action on said fulcrum-acting hook.

9. The structure defined in claim 1 in which said spout is provided with a removable cap at its outer end.

10. The structure defined in claim 4 in which said spout is provided with a removable cap at its outer end.

11. The combination with a can having a lateral discharge passage located below its rim, of a pouring spout provided with a projecting portion engageable with the can to hold the spout against downward slipping movement on the can, and a clamping device anchored to the body of the can and engageable with said spout to hold the same seated with its rim against the body of the can and with the spout in position to receive the contents of the can through said lateral passage.

GEORGE H. CARY.