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METAL CAN FOR LIQUID PRODUCTS

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Fig. 1.

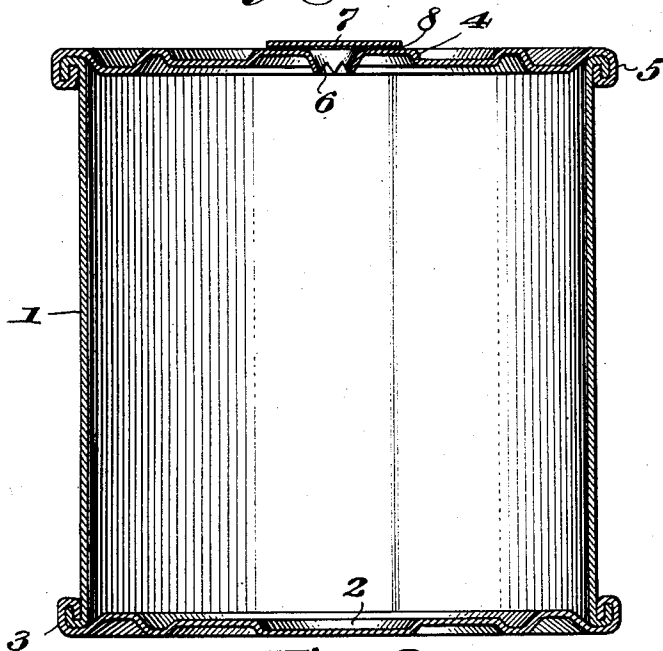


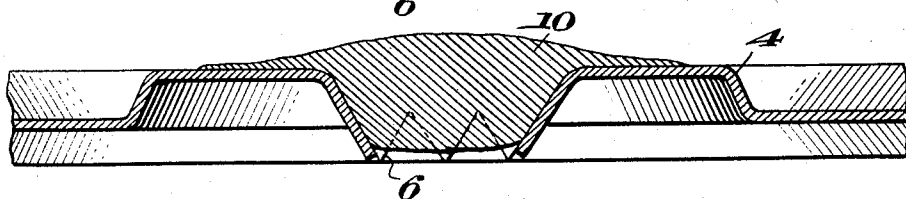
Fig. 2.



Fig. 3.



Fig. 4.



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UNITED STATES PATENT OFFICE

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METAL CAN FOR LIQUID PRODUCTS

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1 Claim. (Cl. 220-44)

1

This invention has to do with a sheet metal can which is particularly adapted for the packaging of liquid products.

It has been a common expedient to provide a sheet metal can including a body with ends seamed thereto wherein one of the ends is punctured in order to provide a small filling opening which may be sealed by solder tipping. The container is completed by the manufacturer and shipped to the packer, who fills the same with the liquid product and then closes the same by tipping.

An object of the present invention is to provide a dust-proof closure means for a vent hole can, which closure means is so constructed that it may be readily ruptured for filling, and which will not in any way interfere with the sealing of the can by tipping.

In the drawings:

Figure 1 is a view of a can embodying the improvements with the sealing disk covering the filling opening;

Figure 2 is a view on an enlarged scale of a portion of the end with the filling opening and the covering disk attached thereto for closing the filling opening;

Figure 3 is a view similar to Figure 2 but showing the closure disk punctured to enable a filling tube to be passed into the container;

Figure 4 is a view similar to Figure 3 but showing the opening through the disk and the can end as closed and sealed by solder applied by a tipping iron.

The invention has to do with a can for liquid products, such as milk. The can includes a body portion 1 to which a bottom end 2 is seamed in any suitable way. As shown in the illustrated embodiment of the invention, the end 2 is secured to the body wall by a double seam 3. The top end 4 of the container is secured to the body portion by the manufacturer by a similar seam 5. One of the ends, herein shown as the top end 4, is provided with an opening 6. This opening is formed in the end by puncturing the end from the outside thereof toward the inside thereof so as to provide inwardly extending projections surrounding the opening to facilitate solder tipping for the closing of the container. This opening is of the usual type and is sometimes referred to as a vent opening and sometimes referred to as a filling opening. The completed can is shipped to the packer and the liquid product is placed in the can through a filling tube inserted through this opening 6.

In order to close the opening so as to make the can dust proof, a solder foil disk 7 is secured to the outer face of the can end 4 by means of an adhesive flux 8. This disk is shown as ex-

2

aggerated in size in the drawings. Only a small disk is necessary in order to completely cover the opening and seal the same. The solder foil in strip form is preferably provided with a thermoplastic adhesive containing a flux. The strip is passed over the can end and a disk is cut from the strip and pressed against the end by a hot plunger which will cause the disk to be firmly attached to the end.

When it is desired to fill the can, the disk 7 is punctured as indicated at 9. This puncture is in register with the opening 6 and a filling tube can be inserted through the opening in the disk and opening in the can end for filling the liquid product into the can.

After the can has been filled, it is presented to an ordinary tipping device where a drop of molten solder is placed on the can end at the filling opening for closing the same. This method of closing is often referred to as solder tipping. In practice, the foil spot is relatively small, preferably about three-eighths inch in diameter, so that the heat of the tipping solder will completely melt down the marginal rim of the pierced spot as shown in Figure 4. The adhesive flux not only holds the spot on the can end, but it also aids in the bonding of the solder to the end in closing of the filling opening.

It is obvious that changes in the closure means for the filling opening may be made without departing from the spirit of the invention as set forth in the appended claim.

I claim:

A metal can for liquid products comprising a body, closure ends seamed thereto, one of said ends having a relatively small filling opening therethrough surrounded on the inner face of the end by inwardly projecting portions whereby said opening is adapted to be closed by solder tipping, a solder foil disk secured to the outer face of said can end by an adhesive containing flux, said disk being positioned so as to close said opening, said foil disk being adapted to be punctured to permit filling of the can and serving as a means to facilitate closing by solder tipping.

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