

No. 652,831.

Patented July 3, 1900.

H. K. BUCK.
SHIPPING PACKAGE OR CAN.

(Application filed Mar. 21, 1899.)

(No Model.)

Fig. 1.

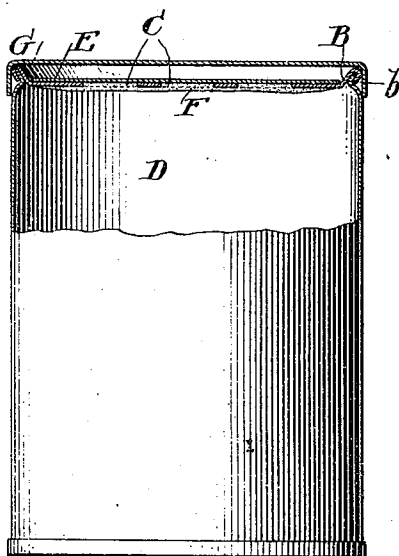
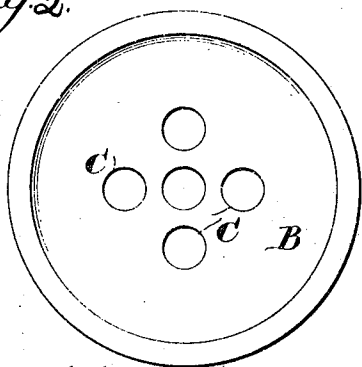
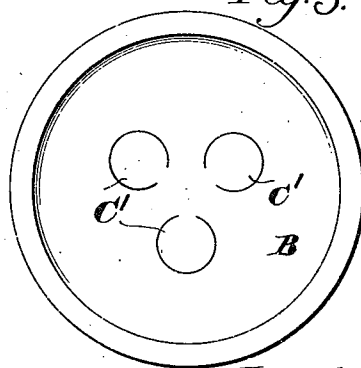


Fig. 2.



Witnesses:
Henry Drury
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Fig. 3.



Inventor:
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By *[Signature]*

UNITED STATES PATENT OFFICE.

HARRY K. BUCK, OF PHILADELPHIA, PENNSYLVANIA.

SHIPPING PACKAGE OR CAN.

SPECIFICATION forming part of Letters Patent No. 652,831, dated July 3, 1900.

Application filed March 21, 1899. Serial No. 709,911. (No model.)

To all whom it may concern:

Be it known that I, HARRY K. BUCK, of the city and county of Philadelphia, State of Pennsylvania, have invented an Improvement in Shipping Packages or Cans, of which the following is a specification.

My invention has reference to shipping packages or cans for caustic lye and other substances; and it consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings.

Heretofore it has been customary to pack caustic lye in a box having a perforated lid covered with a piece of paper, which may at time of use be broken through at points over the perforations and the lye or contents of the package be sifted through. It has been usual to make the package in the form of a light sheet-metal can and with a removable outer lid adapted to shield or protect the perforated lid and paper covering.

The object of my invention is to provide a package with a perforated end or top sealed by a paper or friable layer, but so coated with a wax or resinous substance that moisture shall not penetrate through the friable or paper layer, and, reversely, any tendency of the lye or contents of the package to destroy or rot the paper shall be prevented by said layer or coating of wax or resinous substance which is unacted upon by the said lye. In my preferred construction I form the package of sheet metal, in appearance resembling a can, and to the top I attach a perforated sheet-metal lid after the same has had its perforations covered by a paper layer and coated on the under side with wax or resinous material unacted upon by the lye. The package so formed may then have a removable outer lid or cover to protect the paper against accidental puncture, and also to form a space between the perforated lid and the solid lid in which to place the circular descriptive of the contents.

My invention will be better understood by reference to the accompanying drawings, in which—

Figure 1 is an elevation of a package or can embodying my improvements and showing the upper portion in section. Fig. 2 is a plan view of the perforated sheet-metal lid such as

I commonly employ, and Fig. 3 is a similar view of a modified form thereof.

D is the body of the package or can.

B is the perforated lid at the top, and this is clamped firmly to the upper edge of the body by a crimp *b*. The lid B is depressed somewhat, and its central surface is provided with one or more perforations C.

E is a paper layer which may contain instructions and is cemented over the upper surface of the perforated lid B.

F is a thick coating of beeswax and resin, which covers the under surface of the paper E where it is exposed through the apertures C to the contents of the package or can. The impervious layer F also materially strengthens the paper layer against accidental perforations. Where the contents of the package is caustic lye, there is great tendency on exposure to the air of absorbing moisture, and thereby producing a condition which would speedily rot and destroy the paper layer E. However, by the interposition of the wax F the lye cannot rot the paper, and consequently the latter is fully protected from its action. Much of the difficulty heretofore experienced arises in putting up the packages, at which time the lye is contained in the body of the package D for a short interval before the lid B is clamped in place. During this short interval the moisture in the atmosphere begins to act upon the upper surface of the lye, and if the atmosphere happens to be moist the said upper layer of the caustic lye becomes affected, so as to have strong corroding tendency upon the paper. By my improvements this objectionable action is completely prevented and the paper retains its original strength indefinitely, and is consequently in excellent condition for shipment and storage in the stores.

By my improved construction the under perforated portion of the lid is coated with a body of material unacted upon by caustic lye, which is directly attached to the said under surface in a thick layer, so as to completely bridge over and substantially fill the perforations and form a shield and support for the friable layer of paper, whereby it is protected against the action of the lye and liability of accidental rupture, but permits rupture when the contents are to be removed.

G is the outer cover or cap and is readily removable from the top of the package or can, it being employed, as before stated, to protect the paper layer E above the apertures. The space between the lid G and perforated cover B is sufficient in practice to contain the descriptive circular of the contents. The outer paper wrapper or label about the can seals the removable lid G to the body portion in the well-known manner.

By applying the impervious layer of wax and resinous material to the under side of the metal of the lid it is firmly supported independently of the paper of the label, and hence where it is attached to the said label through the perforations in the lid it thus sustains the paper against accidental breakage. The paper is pasted directly to the top of the lid and lies perfectly flat, which is essential to permit the can to be clamped in the sealing-machine, which rotates the can and lid in flanging down the edge of the lid. The wax and resin therefore do not interfere with the proper position of the label, but do protect it, as above set out, at the places where it is weak. By my construction it is seen that the paper is, in effect, sealed to the lid both on the outside and inside, the former by the paste and the latter by the wax and resinous material.

In place of the compound of wax and resin I may employ a protecting-body consisting of pitch, silicate of soda, or other substance or compound unaffected by moisture and alkali.

Ordinarily the lid B is perforated, as at C in Fig. 2; but in place of completely stamping out the apertures they may be partly cut out, as indicated at C' in Fig. 3, in which case when it is desired to pour out the contents these pieces C' are bent inward by pressing upon the paper immediately over them, said

action depressing the sheet-metal pieces and rupturing the paper at the same time.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A package or can having a perforated lid, combined with a friable layer directly attached to the outside surface of the lid so as to cover the perforations therein, and a body of material such as wax or resin or mixtures of these unacted upon by caustic lye directly attached to the inner surface of the perforated lid in a thick layer so as to completely bridge over and fill the perforations and be attached directly to the under surface of the friable layer where exposed through the perforations of the lid to form a direct shield and support for the said friable layer whereby it is protected against the action of the lye and liability of accidental rupture but permits rupture when the contents are to be removed.

2. A package or can having a perforated lid, combined with a friable layer directly attached to the outside surface of the lid so as to cover the perforations therein, and a body of materials such as wax or resin or mixtures of these unacted upon by caustic lye directly attached to the inner surface of the perforated lid in a thick layer so as to completely bridge over the perforations and form a direct shield and support for the friable layer whereby it is protected against the action of the lye and liability of accidental rupture but permits rupture when the contents are to be removed.

In testimony of which invention I have hereunto set my hand.

HARRY K. BUCK.

Witnesses:

R. M. HUNTER,
R. M. KELLY.