

H. C. LELAND.

SHEET METAL CANS AND BOXES.

No. 179,035.

Patented June 20, 1876.

Fig. 1.

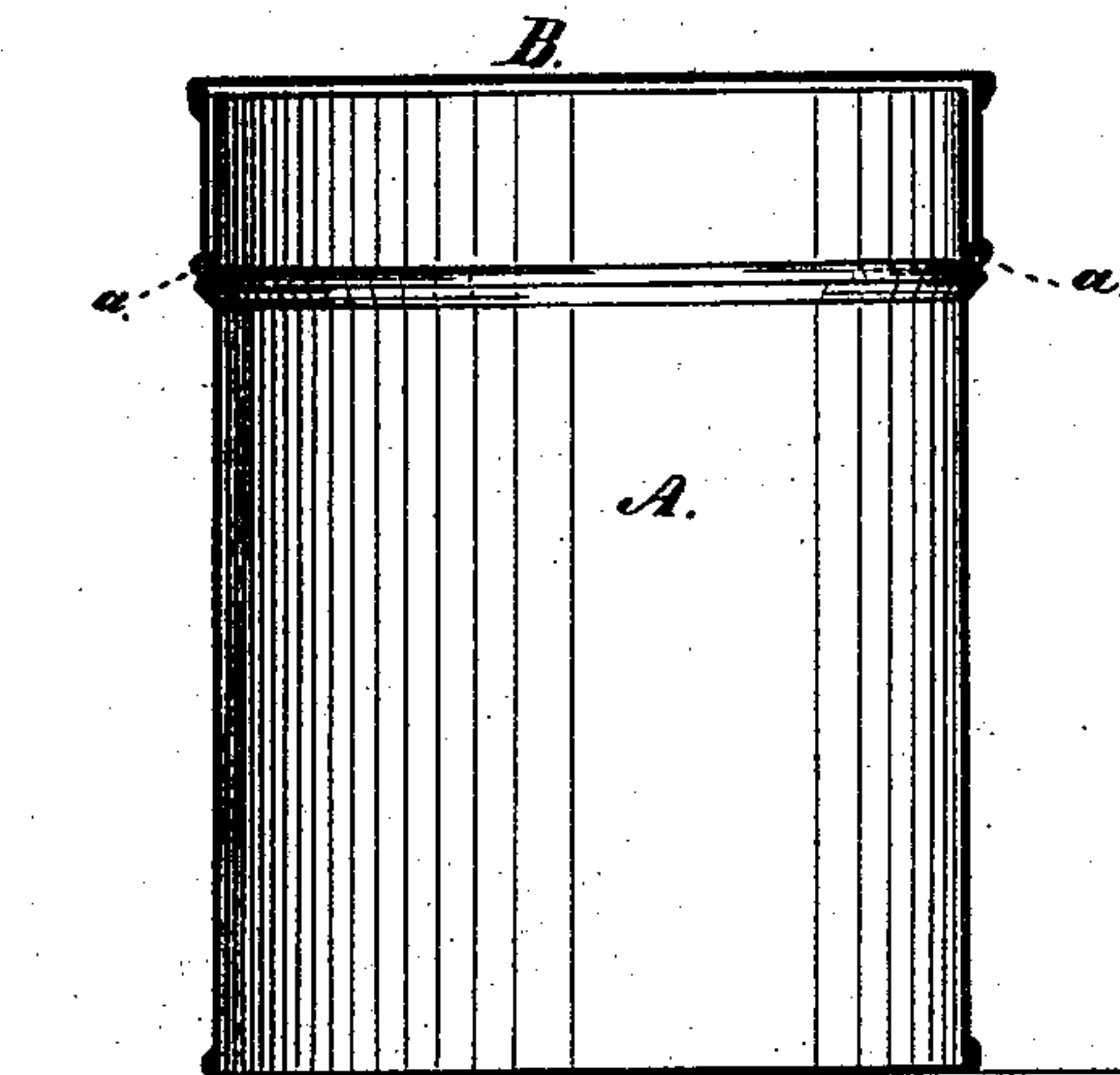
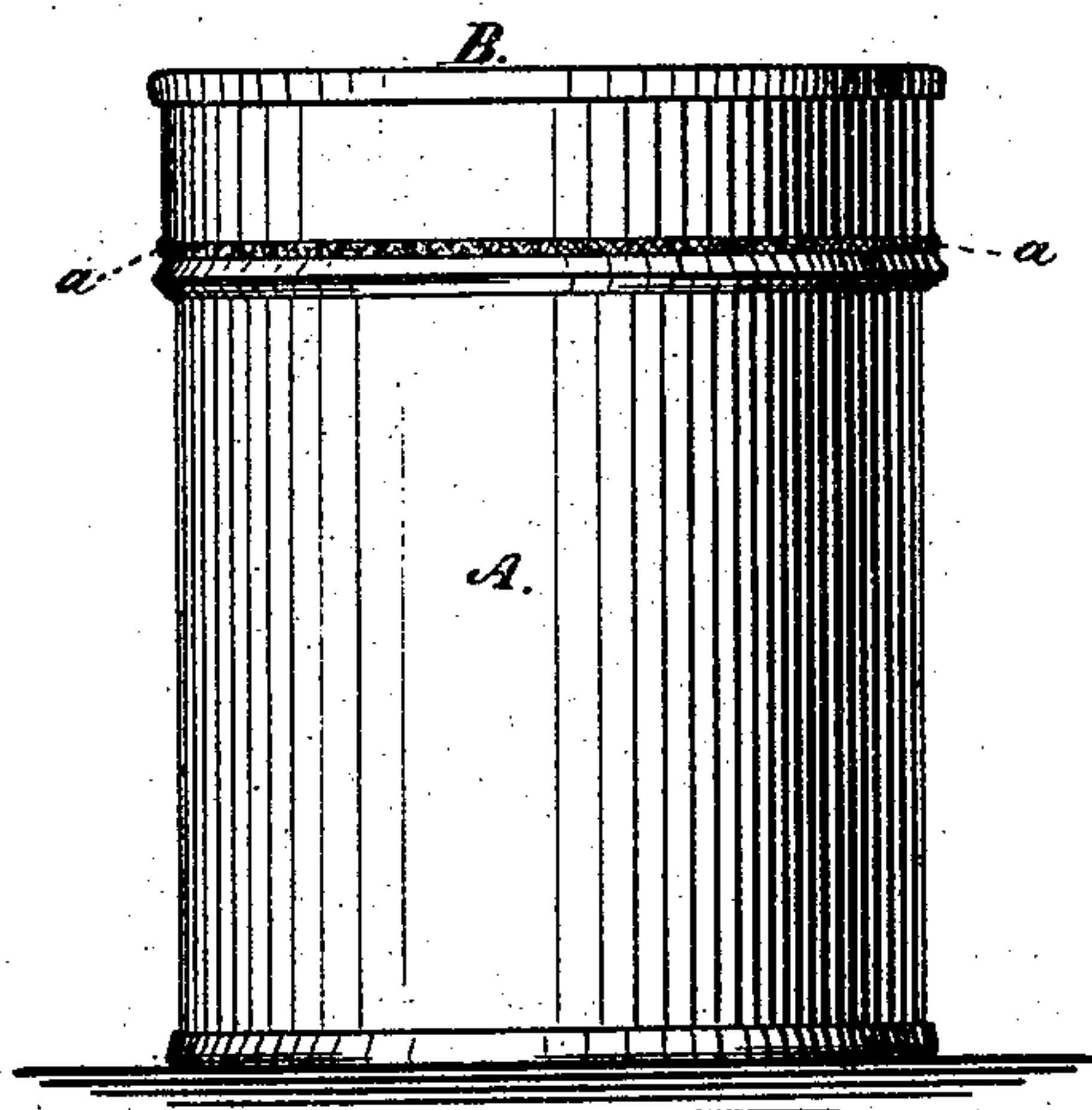


Fig. 2.



Witnesses:

Henry Eichling
H. Wells

Inventor:

Henry C. Leland
per James A. Whitney
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UNITED STATES PATENT OFFICE.

HENRY C. LELAND, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN SHEET-METAL CANS AND BOXES.

Specification forming part of Letters Patent No. **179,035**, dated June 20, 1876; application filed April 12, 1876.

To all whom it may concern:

Be it known that I, HENRY C. LELAND, of the city and county of Hartford, in the State of Connecticut, have invented an Improvement in Sheet-Metal Cans and Boxes, of which the following is a specification:

The object of this invention is to provide a hermetically-sealed can or box for paints and other articles of trade, which, while effectually closed or sealed, shall be capable of being readily opened, either by a firm direct pull upon the cover by torsion exerted upon the same, or by the wedge-like or prying action of a knife or blade inserted under the edge of the cover.

The invention consists in a sheet-metal can or box, in which the cover is sealed or attached to the body of the can or box by an amalgam joint—that is to say, by an amalgam applied at the junction of the cover with the can or box, in such manner as to hermetically connect the two together, the amalgam made preferably of tin, combined with a suitable proportion of quicksilver, being made designedly of such strength or consistency as to retain the cover in place under ordinary conditions of use, storage, or transportation, and yet be capable of rupture by moderate force applied thereto in any of the methods hereinbefore referred to.

Figure 1 is a central longitudinal section of a sheet-metal can or box made according to my invention. Fig. 2 is a side view of the same.

In the manufacture of the can or box the body A may be of the usual cylindric or any other suitable form, and the cover B may, in like manner, be of any of the usual or ordinary kinds adapted to fit upon and close the top or open end of the body A.

As represented in the drawings, the cover B is constructed with the ordinary rim or flange *a*, forming a slip-cover fitted upon the upper part of the body, the body and cover as thus constructed being of an ordinary or common type; but the joint *a*, formed by the edge of the cover against the body A, instead of being soldered by the use of a soldering-iron and solder, commonly so termed, is filled, coated, or covered with an amalgam of quicksilver and tin, or of quicksilver and any other

metal which will provide an amalgam that will be of such strength and consistency as to form a hermetically-sealed joint, and yet be capable of rupture with sufficient ease to permit the wrenching or withdrawal of the cover from the body of the can or box. The amalgam is, of course, applied in its soft, pasty, or fluid condition, as the case may be, in any manner that may be preferred—as, for example, by means of a metallic brush, with which the amalgam may be wiped around the joint to close the same.

I do not confine myself to any special mode of applying the amalgam to the joint, nor to any special composition of the amalgam, nor to any special configuration of the body A, my invention being capable of various modifications in the methods of its application, according to the variety of can or box in the construction of which it is employed. In some cases the amalgam joint may be formed by simply wiping the sheet-tin (of which cans are ordinarily composed) at the junction of the edge of the cover with the surface of the body with metallic quicksilver, which, uniting with the tin on the surface of the sheet metal, will of itself form an amalgam capable in some cases of providing a sealed joint sufficiently tight for all practical purposes in such cases.

I do not claim a can constructed with an ordinary soldered joint arranged between the cover and the body of the can to be broken by force directly applied to the cover to separate the cover from the body; but

What I do claim as my invention is—

A hermetically-sealed sheet-metal can or box in which the cover is attached to the body by an amalgam joint, the amalgam being made of such strength and consistency as to retain and seal the cover in place under conditions of ordinary usage, and yet capable of fracture, without rupture from a moderate degree of force exerted with that object upon the cover of the can, substantially as and for the purpose herein set forth.

HENRY C. LELAND.

Witnesses:

H. WELLS, Jr.,
EDWARD HODY.