H. L. McAVOY.

Fruit and Oyster Packing Can.

No. 231,922. Patented Sept. 7, 1880.

FIG. 1.

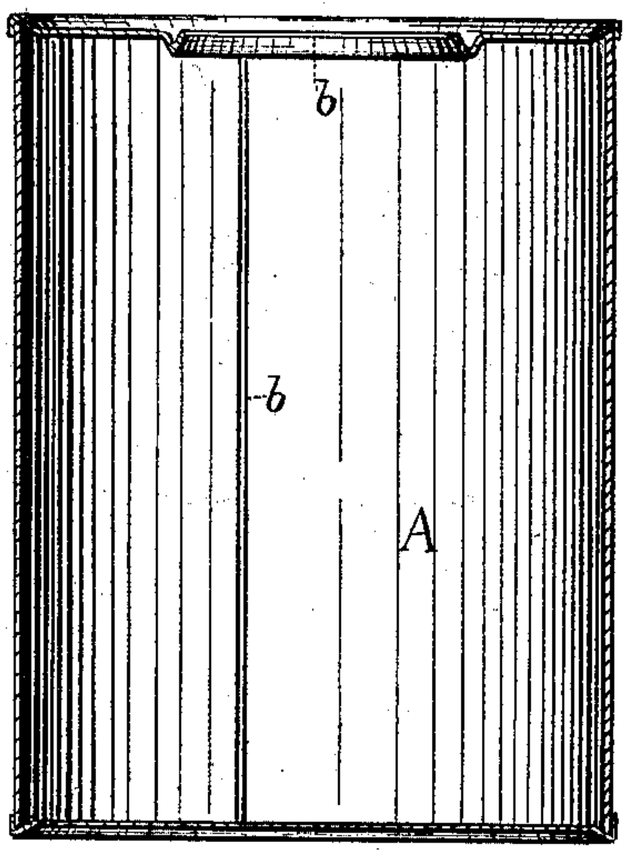
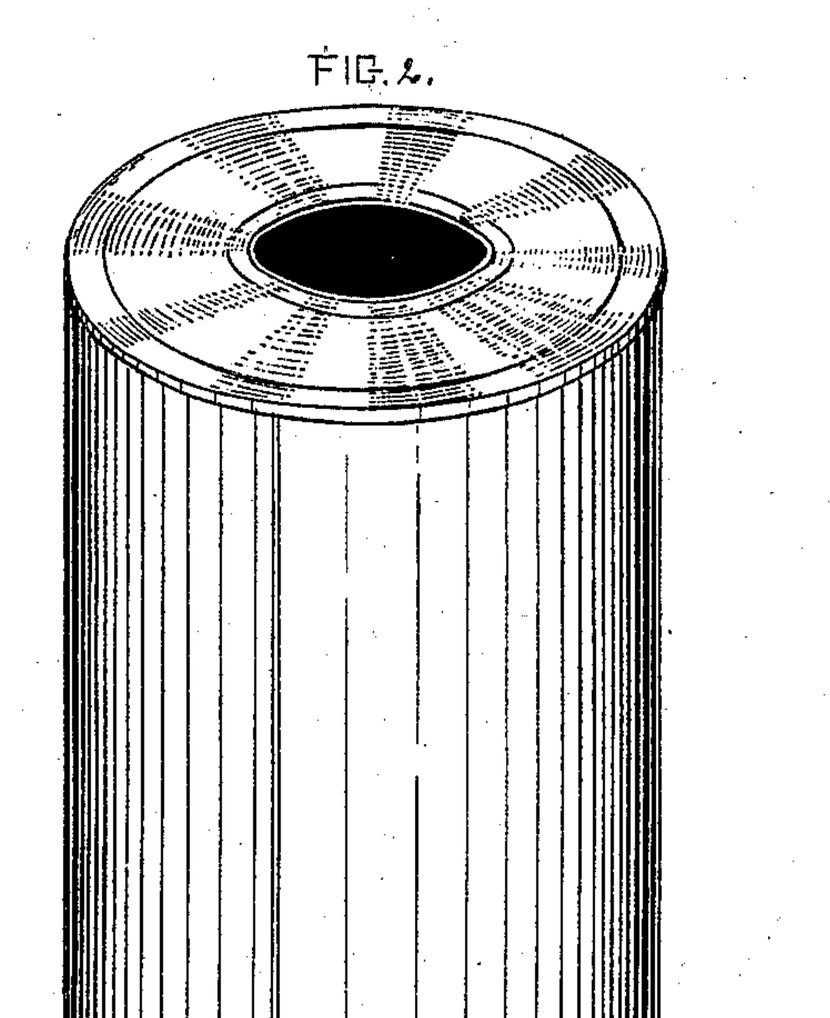


FIG. 2.



WITNESSES:

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INVENTOR:

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By his Atty,

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UNITED STATES PATENT OFFICE.

HUGH L. McAVOY, OF BALTIMORE, MARYLAND, ASSIGNOR TO CHARLES KOPPELMAN AND JAMES FRYER, OF SAME PLACE.

FRUIT AND OYSTER PACKING CAN.

SPECIFICATION forming part of Letters Patent No. 231,922, dated September 7, 1880.

Application filed June 19, 1879.

To all whom it may concern:

Be it known that I, HUGH L. McAVOY, of Baltimore, in the county of Baltimore and State of Maryland, have invented a new and useful Improvement in Fruit and Oyster Packing Cans, of which the following is a specification.

The invention relates to an improvement in the ordinary fruit and oyster packing can, which is made of the tin-plate of commerce.

Owing to the sharp competition among manufacturers to produce cans of this description at a low cost, they have resorted to the use of a so-called "tin-plate" whereof lead is a constituent in large proportion of the alloy used for coating or plating the iron sheets. Furthermore, the joints or seams of the can are secured by a solder in which lead is a principal constituent. Packing-cans having these objectionable features are now in almost universal use, and as a consequence certain of the fruits and vegetables, and also oysters and meats, which have been preserved in these cans are frequently discolored, and it is also alleged that the same are sometimes contaminated to such extent by the poisonous metal as to be decidedly detrimental to health. This objectionable metallic alloy into which lead enters is not confined to the poorer qualities of tin, but some of the first quality of tin-plate contains a large quantity of lead.

The alloy of tin and lead will oxidize readily, and the oxide of lead thus formed is soluble in acetic, lactic, malic, and citric acids, the last two of which exist in common fruits. By the action of these acids is formed the salt known as "sugar of lead."

Lead compounds are cumulative poisons; and though the quantity may be minute which is imparted to the contents of one can, yet persons who habitually use canned goods may thus lose their health. The desideratum is a tin can which is not open to these objections, and which shall yet be of such moderate cost as to permit of general use by extensive packers who supply the trade.

Figure 1 represents a vertical section of an ordinary can. Fig. 2 represents a can in perspective.

As a matter of economy I propose to cover with silver only the inside A of the can, and in carrying out my invention the finished cans are filled with the plating solution and the poles of the battery are inserted through the open top, but a very brief time being required to effect the deposit of a sufficient amount of the silver to answer the purpose.

While for reasons of economy I prefer a method of effecting the plating which omits plating the outside, it will be understood that, so far as the desired result is concerned, the can may be plated both inside and outside.

This improvement may be applied to packing-cans of any shape, such as the ordinary round can or the square can so largely used for packing meat.

The advantages resulting from this manner of finishing tin cans are numerous. It prevents injury to the can's contents by obviating the liability of the acid in the case of fruit to attack the otherwise poisonous metal; it covers the cut edges *b* of the tinned iron, which, even if not poisonous, remain, so that the iron is exposed to the action of the fruit-acid and thus discolors certain fruit, such as peaches and pears; it tends to make the joints tight, and by protecting the joints from the action of the fruit-acids prevents subsequent leakage, for a joint tight at the outset (even though not well secured) will remain tight.

Dealers and others who have on hand at the close of a season a stock of canned goods in these improved cans need not sacrifice them by a forced sale, as many do now, because they will not deteriorate.

Having described my invention, I claim and desire to secure by United States Letters Patent—

1. A tin-plate can for alimentary substances, whose inside is coated, by electro-deposition, with a metal harmless to the contents of the can, as set forth.

2. A tin-plate can for alimentary substances, whose inside is coated, by electro-deposition, with a metal which, in contact with the contents of the can, will not oxidize and form an injurious salt, as set forth.

HUGH L. McAVOY.

Witnesses:
GEO. A. BOYDEN,
CHAS. B. MANN.