M. E. DUNKLEY.

TIN CAN.

APPLICATION FILED FEB. 23, 1907.

901,429. Patented Oct. 20, 1908.

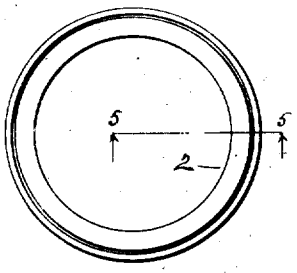


Fig. 1

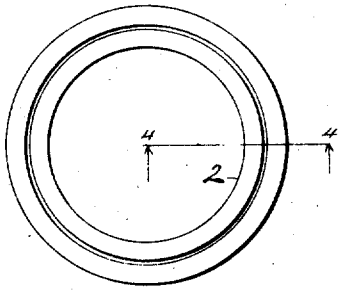


Fig. 3.

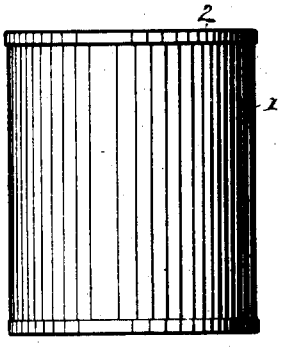


Fig. 2.

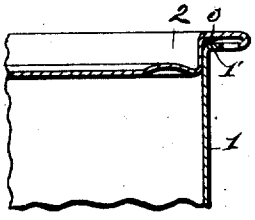


Fig. 4.

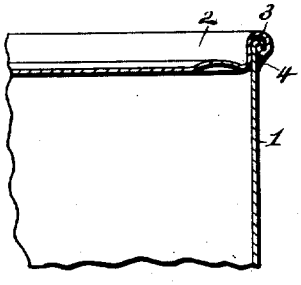


Fig. 5.

Witnesses:

Lulu Greenfield

A. J. Adams

Inventor,

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Att'ys

UNITED STATES PATENT OFFICE.

MELVILLE E. DUNKLEY, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE HERMETIC SEALING COMPANY, OF WILMINGTON, DELAWARE.

TIN CAN.

No. 901,429. Specification of Letters Patent. Patented Oct. 20, 1908.

Application filed February 23, 1907. Serial No. 358,948.

To all whom it may concern:

Be it known that I, MELVILLE E. DUNKLEY, a citizen of the United States, residing in the city and county of Kalamazoo, State of Michigan, have invented certain new and useful Improvements in Tin Cans, of which the following is a specification.

This invention relates to improvements in tin cans for canning and preserving fruit, vegetables, meat, and the like.

The object of the invention is to provide a hermetically sealed can without subjecting the same to the heat necessary to solder the top; that is, to provide an improved can in which the principle of seaming the cap into place is employed supplemented by my improvement, forming a hermetically sealed joint, and consequently a hermetically sealed receptacle.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which,

Figure 1 is a plan view of a can embodying the features of my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the cap as it is formed up prior to spinning or seaming it into place. Fig. 4 is a detail sectional view on line 4—4 of Fig. 3, showing the relation of the can to the cap when the parts are brought together preparatory to the seaming process. Fig. 5 is a sectional view on line 5—5 of Fig. 1, showing the can after the same has been seamed and sealed.

In the drawing, similar numerals of reference refer to similar parts throughout the several views.

Considering the numbered parts of the drawing, the can 1 is of the usual form, having a flange 1′ turned out at the top. The cap 2 is flanged outwardly and the outer edge of the flange is turned or spun under on itself, so that the flange is thus J-shaped in cross section. Between the can and cap a small gasket 3, preferably of rubber, is placed.

After the can has been filled and while its contents are still hot, the cap 2 is pushed into place down snugly against the gasket 3. The flange of the cap is then spun under by any suitable spinning means until the joint is closed, as appears in Fig. 5.

By taking great pains in the rolling, it has been found that a very large percentage of cans are effectively sealed by this means, and I am aware that this double seaming with a gasket has been used before my invention. There is, however, a material percentage of waste by this method of seaming only.

I find that by thoroughly applying a little lacquer 4 in the angle between the double seam and the body 1 of the can, when the same dries and hardens, a perfect joint is formed at that point, and, where the same has been used and applied, I have never found on the most careful and thorough tests that the contents of any can so sealed have deteriorated because of the entrance of air into its contents. This means is of very great advantage because the double seaming of the cans, or the seaming of the cans, to join the caps to the bodies has not proven satisfactory, and at the present time much the larger proportion of cans are soldered in place. The intense heat necessary to effect the soldering chars and destroys considerable of the contents of the can, besides not infrequently contaminating the contents, spotting it with charcoal and scorching the same.

The lacquer can be applied substantially cold, and will harden, entirely filling the narrow creases and sealing the same effectively. This lacquer that is used here is very adhesive and tough and of a quick drying type, so that a sufficient volume of the same will be lodged in the crevices of the double seam and will have opportunity to rapidly dry out and harden and make a complete joint of considerable resistance. Not all lacquers are adapted to this purpose, because the same must be adhesive in order that it may thoroughly adhere to the metal composing the joint, and the same should be sufficiently tough not to crackle, because the crackling of the same would open the joint and admit the air to the same extent that the defective seaming heretofore had admitted the air.

I have referred to lacquer, and the lacquer that serves the purpose very well is made up of copal gum admixed with a considerable quantity of rosin, and the whole dissolved in benzin. The benzin very rapidly evaporates and leaves the layer of adhesive and tough copal gum and rosin in the crease, by affording opportunity for drying the same.

The seaming or double seaming might be filled with a variety of varnish material, gums or other elastic substances, having proper regard for their adhesive qualities and their toughness. Considerable experimentation was necessary before a material was secured that accomplished the result in a satisfactory manner.

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

1. The combination of a tin can body, a cap therefor, the can and cap being flanged, a soft yielding gasket located between said flanges, said flanges being folded in a downturned seam lying close against the can body and a seal of lacquer consisting of copal gum, rosin and benzin, applied to the crevice between the downturned seam and can body.

2. The combination of a tin can body, a cap therefor, the can and the cap being flanged; a soft compressible gasket between the said cap and the can body, the said flanges being folded into a downturned seam which lies close against the can body and a seal of adhesive plastic material applied to the crevice between the downturned seam and the can body.

3. The combination of a tin can body, a cap therefor, the can and the cap being flanged; the said flanges being folded into a downturned close double seam which lies close against the can body and a seal of adhesive plastic material applied to the crevice between the downturned seam and the can body.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

MELVILLE E. DUNKLEY. [L. S.]

Witnesses:
LULU GREENFIELD.
OTIS A. EARL.