T. J. BUCKLEY.

METAL CONTAINER.

APPLICATION FILED JUNE 20, 1912.

1,080,747. Patented Dec. 9, 1913.

Fig. 1.

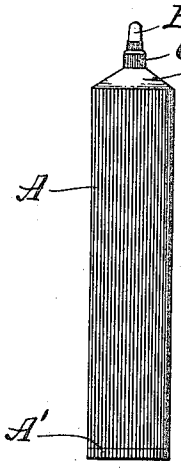


Fig. 2.

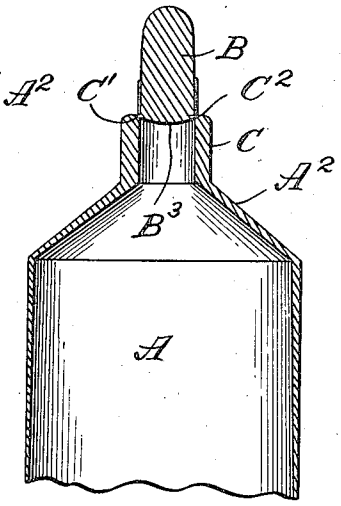


Fig. 3.

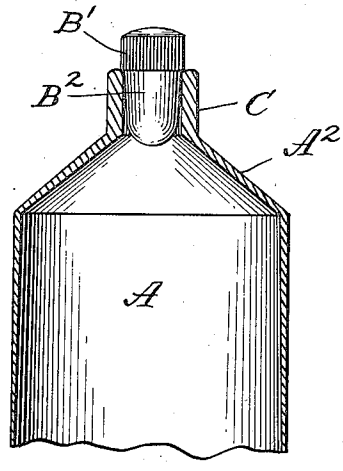
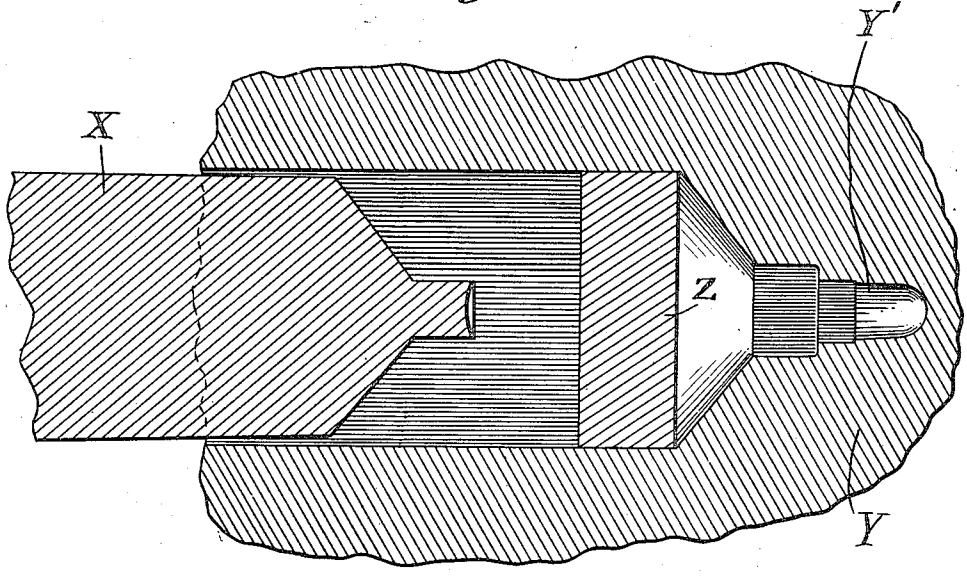


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS J. BUCKLEY, OF NEW BRUNSWICK, NEW JERSEY.

METAL CONTAINER.

1,080,747. Specification of Letters Patent. Patented Dec. 9, 1913.

Application filed June 20, 1912. Serial No. 704,705.

To all whom it may concern:

Be it known that I, THOMAS J. BUCKLEY, a citizen of the United States, and a resident of New Brunswick, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Metal Containers, of which the following is a specification.

The invention relates to metal containers and particularly to containers such as are commonly known as collapsible tubes and are adapted to contain paste or other semi-solids, but it is applicable to other uses.

The objects of the invention, among others, are to provide a container with simple, inexpensive and effective means whereby it may be rendered airtight and maintained in this condition until its contents are to be used; to provide it with an airtight stopper of such character and form that it may be made and connected with the container as a part of the operation of forming the said container and without additional work or manipulation; and to so form the said stopper that it will securely and hermetically close the outlet of the container and at the same time may be quickly and easily removed therefrom and used as a removable stopper after the container has been opened by its first removal.

To these ends the invention consists in the formation, combination and arrangement of parts hereinafter described and claimed and illustrated in the accompanying drawings.

In the said drawings Figure 1 is a side elevation of a container embodying the improvements. Fig. 2 is an enlarged vertical, medial section of the upper part of the same. Fig. 3 is a view similar to Fig. 2, showing the stopper after its initial removal in use as a removable plug. Fig. 4 is a vertical, medial section of the portions of the dies by which the upper part of the container and stopper are formed.

The body A of the tube is of the usual form and is preferably made of flexible metal, such as thin, pure tin, so that the contents may be extracted therefrom by collapsing the body of the container and forcing the said contents out through the neck C. The lower end of the tube A is sealed by folding over in the usual manner, after the tube has been filled as shown at A^1. The shoulder A^2 closes the upper end of the container with the exception of a small aperture in the middle, and this aperture is surrounded by the neck or collar C adapted to receive the plug or stopper B. This plug or stopper consists of a thumbhold B^1 and a conical plug proper B^2, and is normally a projection from the inner top edge of the collar C formed integral therewith and joined to the said edge of the collar at C^1 slightly below the extreme top edge. The end B^3 of the plug which is joined to the collar before initial removal is convex, and the top C^2 of the annular collar C is also convex, so that the curve of the surface B^3 of the plug and the curve of the outer edge of the collar almost meet at the line of breakage between the collar and the plug and terminate at this point. This arrangement has a peculiar and important effect upon the action of the parts and the operativeness and utility of the device.

One of the important advantages of the device resides in the fact that it is so arranged that its manufacture may be effected by the simple means illustrated in Fig. 4. In this figure the male die X has the form of the interior of the container, with the exception of the plug, which is left solid, and a female die Y has the form of the exterior. The disk Z of blocked tin or other suitable metal is placed in the lower part of the female die, as is shown, and when the dies are closed this metal is forced into the form illustrated in Fig. 2, the stopper B being formed by the forcing of the metal into the recess Y^1, and the neck C and sides of the tube being formed by the flow of the metal under the pressure of the dies between the said dies. In this manner, as heretofore noted, the body of the container and the stopper are formed by one simple operation without the necessity for other work or manipulation.

In use the container is first filled and then sealed in the usual manner. It may then be shipped, stored and placed on sale and maintained in an airtight condition indefinitely. When the consumer wishes to extract the contents it is only necessary for him to take hold of the projecting plug B with his fingers and break it off. When the desired quantity of the contents has been extracted the plug may then be reversed, as shown in Fig. 3, and forced into the neck of the container to form an effective closure, the milled portion or thumbhold B^1 of the plug in this operation, and in the subse-

quent operation of removing the stopper being adapted to afford a sufficient purchase for the fingers.

What I claim is:

1. A device of the character described, comprising a hollow container proper, a hollow neck, a plug or stopper extending therefrom and a weak portion connecting the stopper and the neck and disposed at an angle to the longitudinal axis of the stopper.

2. A device of the character described, comprising a hollow container, a hollow neck, a plug or stopper having a portion the external diameter of which is less than the internal diameter of the neck, and a relatively thin connecting portion extending inwardly from the neck to the exterior of the stopper.

3. In a device of the character described, the combination with a container proper of a hollow neck communicating with the interior of the said container proper, a plug mounted on said hollow neck and normally closing the same, and a connecting film between the inner walls of the neck and the outer part of the plug.

4. In a device of the character described, the combination with a container proper of a hollow neck communicating with the interior of the said container proper, a plug mounted on said hollow neck and normally closing the same, and a connecting film extending from the outer part of the plug to the neck at an angle to the longitudinal axis of said plug.

Witness my hand this 19th day of June 1912, at the city of New York, in the county and State of New York.

THOS. J. BUCKLEY.

Witnesses:
A. C. McDONNELL,
MARY H. LEWIS.