H. S. ALLEN.

LINER FOR ICE CREAM CANS, PAILS, AND OTHER CONTAINERS.

APPLICATION FILED JULY 17, 1914.

1,216,391.

Patented Feb. 20, 1917.

Fig. 1.

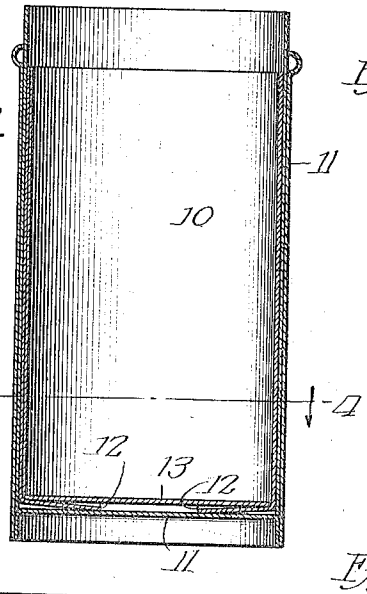


Fig. 2

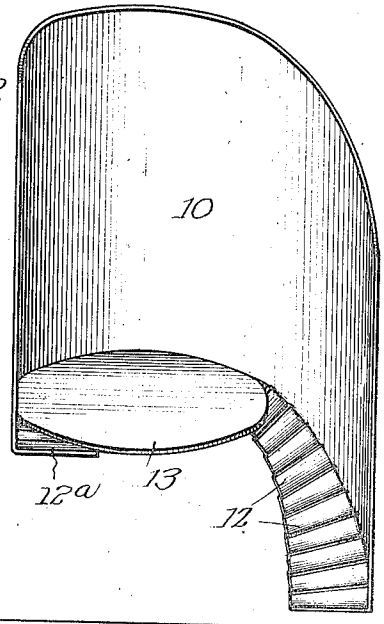


Fig. 3

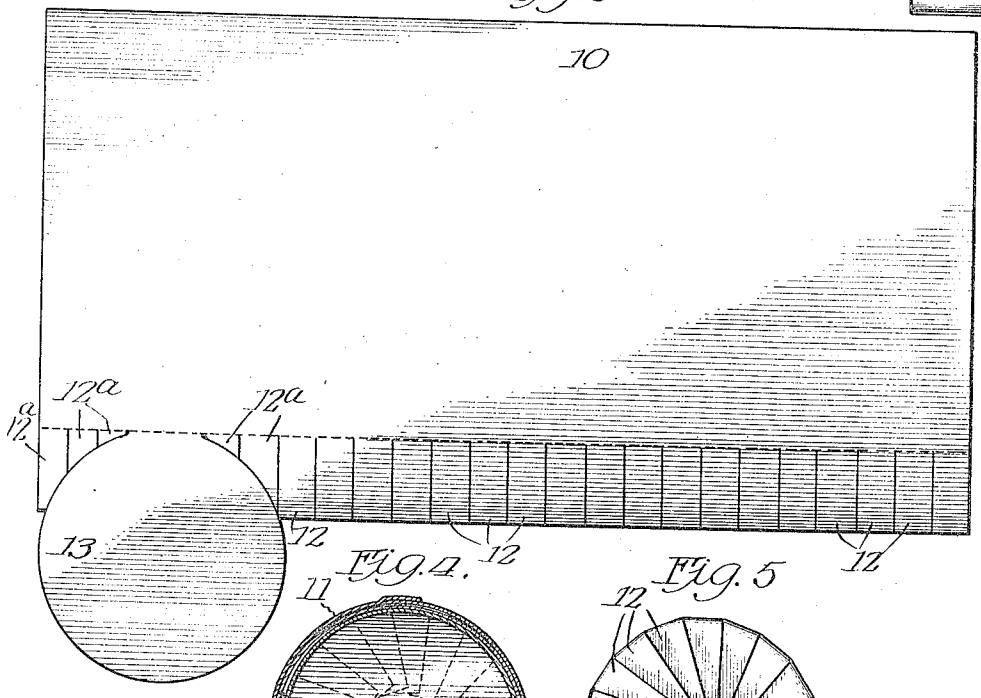


Fig. 4.

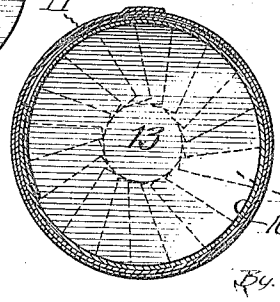
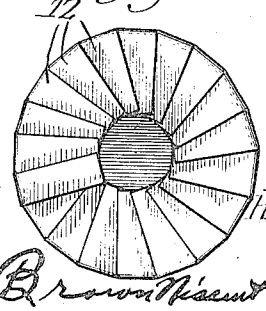


Fig. 5



Witnesses:

A. G. Barrett

A. J. Sauer.

Inventor

Harry S. Allen.

Brown Wisenut & Grinkle Attys

UNITED STATES PATENT OFFICE.

HARRY S. ALLEN, OF PONTIAC, ILLINOIS.

LINER FOR ICE-CREAM CANS, PAILS, AND OTHER CONTAINERS.

1,216,391. Specification of Letters Patent. Patented Feb. 20, 1917.

Application filed July 17, 1914. Serial No. 851,632.

To all whom it may concern:

Be it known that I, HARRY S. ALLEN, a citizen of the United States, residing at Pontiac, in the county of Livingston and State of Illinois, have invented certain new and useful Improvements in Liners for Ice-Cream Cans, Pails, and other Containers, of which the following is a specification.

The invention relates to liners for ice cream cans, pails, and other containers, and has for its object to provide an improved construction of liner adapted to be made from material in sheet form economical to manufacture and easily assembled and inserted into the can or container, and which when in its operative position as a liner serves to protect the material contained in the can or container from contact with the walls thereof.

It is a further object of the invention to provide an improved construction of liner in which the side walls and bottom portion in the knock-down form are cut from a single sheet of material, the side walls and bottom being integrally joined together in a knock-down condition.

Other objects of the invention will appear from the following description, which is directed to the preferred form of the invention as exemplified in the drawings forming a part of the specification, and finally set forth more particularly in the appended claims.

In the said drawings,—

Figure 1 is a vertical sectional view through an ice cream can or container on the interior of which is one of my improved liners embodying the invention, the latter also being shown in section.

Fig. 2 is a perspective view of the improved liner in a partially set-up condition.

Fig. 3 is a plan view of a blank lining showing the manner in which the same is constructed, with the side walls and bottom portions integrally connected in a sheet of material.

Fig. 4 is a sectional view through the can and lining, being taken on line 4—4, Fig. 1, looking in the direction indicated by the arrows; and

Fig. 5 is a broken plan view of the liner in the set-up or assembled form ready for insertion on the interior of the can or container.

In the drawings illustrating the liner, the main body portion thereof is indicated by the reference character 10, the same being of substantially rectangular form so that when the body portion is rolled into the form of a cylinder or tube it will approximately coincide with the inside vertical walls of a can or container, as indicated by the reference character 11, Fig. 1. Along one longitudinal side of the body portion 10 of the liner, formed preferably of paper of a grade or character adapted to contain materials such as ice cream or dairy products and the like, is formed a plurality of slitted portions or tongues, as indicated by the reference character 12. These tongues 12 are formed preferably by parallel slits that extend inwardly from one longitudinal edge of the rectangular body portion of material 10, and in order to enable them to be readily folded to a position at right angles to the body portion 10, the material of the body portion 10 may be scored along the line at the common base of each of the portions 12, this scored line being indicated by the broken line, Fig. 3. It is one of the important features of the invention that I provide a bottom portion for the liner by constructing the same integrally with the wall portion 10, this circular bottom portion being indicated by the reference character 13 and being joined or hinged by a contracted or neck portion to the main body portion along the scored line at the base of each of the slitted portions 12, heretofore referred to. In laying out the circular portion 13 from the material from which the body portion 10 is cut, it will be apparent that the circular bottom portion 13 will overlap the ends of certain of the tongue portions 12, which will be thereby intersected and shortened, as indicated by the parts designated by the reference character 12^a, Fig. 3. It will be seen that the blank comprising the body portion 13 formed integrally therewith and the tongues 12 and 12^a, also integral with the body portion 10, may be readily folded into the form of a cylinder or tube with one end completely closed by the circular bottom portion 13, which is accomplished by first bending the bottom portion 13 and the tongues 12 and 12^a to substantially right angular positions to the body portion 10, after which the body portion 10 may be rolled into the tubular form, one end being completely closed by the circular bottom portion 13 and the length of the body portion 10 will be formed so as to be equal in length to the circumference of the circular

bottom portion 13 and preferably a little longer than the circumference of the circular bottom portion 13 in order that the ends of the body portion 10 may overlap a short distance as indicated in Fig. 4, in order to form a closed joint upon the insertion of the material within the filler. In setting up the filler prior to inserting it in the can or container, the bottom portion 13 will be preferably formed at such an angle to the body portion 10 that it will lie above the right angular projections 12 and 12ª, which projections or tongues will overlap toward their outer extremities when the body portion 10 is rolled to the cylindrical form as illustrated in Figs. 2, 4 and 5. Thus it will be seen that the blank liner may be rolled to the cylindrical form, and that the circular bottom portion coöperating with the tongues or projections 12 and 12ª when in the set-up form will form a relatively closed bottom, which will be water or liquid tight and completely protect materials placed in the can or container within the liner.

The purpose of liners of this character is well known, particularly in the handling of ice creams and dairy products which are commonly placed in metallic cans or containers the surfaces of which are usually tinned to prevent oxidation or corrosion of the metal can or container by contact with the materials. It is well known that such vessels require frequent tinning at great expense, and that notwithstanding such care ice cream and other delicate dairy products are often injured by contact with portions of cans in which the tin surfaces have deteriorated so that the products are in direct contact with metals or substances which oxidize or corrode by the materials in the can, pail or other container. And it is obvious while the drawing shows a particular form of can, that the liner of the present invention is applicable to other forms, no matter what shape they may take nor of what material they are made so long as it is desirable to protect the contents of the container from contact with the walls of the container itself.

If it is desired to close the top of the liner, this may be done by the use of a covering of suitable form, not herein illustrated, as the top covering forms no part of the liner of the present invention.

In order that the invention may be understood, the details of the preferred embodiment have been shown and described, but it is not intended to be limited to the exact construction or details illustrated, for it will be apparent that persons skilled in the art may make many modifications of my improved liner without departing from the purpose and spirit of the invention.

I claim:

1. A liner for ice cream cans and the like comprising a substantially rectangular body portion having an imperforate bottom portion formed integrally with the body portion and joined thereto along one of its longitudinal edges, and protective means for the joint between the imperforate bottom and the body portion when the liner is formed to its set-up condition comprising a plurality of tongues formed integrally with the body portion of the liner along the entire longitudinal edge thereof to which the circular bottom portion is joined, each tongue being adapted to overlap its adjacent tongue whereby to form a substantially tight joint between the bottom portion and the body portion and presenting a smooth surface on the interior of the liner.

2. The combination with a can or vessel of rigid material adapted to contain food products and the like, of a removable liner formed from a relatively thin flexible material comprising a substantially rectangular sheet of paper having a plurality of tongues or projections formed integrally along one longitudinal edge thereof, and an imperforate bottom portion formed also integrally with said body portion along the same longitudinal edge of the body portion as the said tongues or projections, said bottom portion being integrally joined to the body portion along the line of the base of said tongues or projections, there being a plurality of said tongues or projections adjacent the base of the bottom portion shortened to coincide with the intersecting circumference of the bottom portion, but of sufficient length that when the body of the liner is formed into a substantially cylindrical form to line the interior of the can or vessel, all of said tongues or projections including those shortened as described, may be folded to right angular positions and will overlap each other and underlie and close the joint between the bottom portion and the vertical wall of the liner substantially around the entire periphery of the bottom portion.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 15th day of July, A. D. 1914.

HARRY S. ALLEN.

Witnesses:

CHARLES H. SEEM,

CHARLES S. WILSON.