

Sept. 14, 1937.

A. GUSTAFSON ET AL

2,092,969

GARBAGE CAN LINER

Filed Feb. 18, 1936

2 Sheets-Sheet 1

Fig. 1.

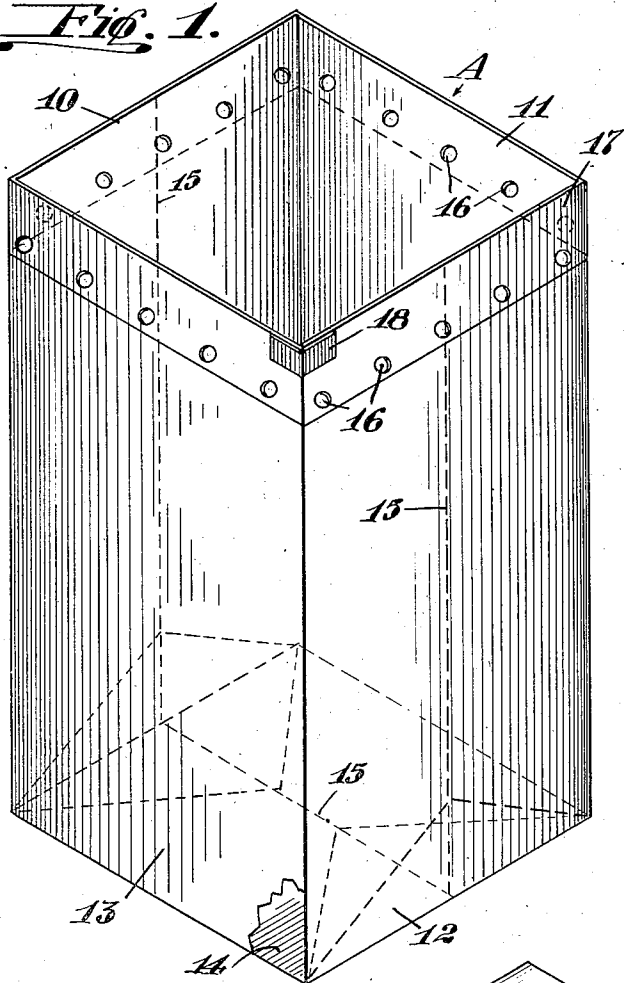


Fig. 2.

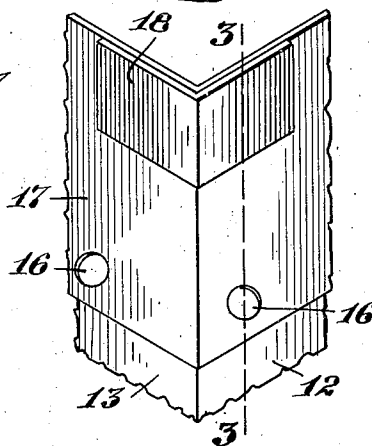


Fig. 3.

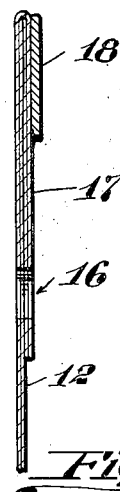


Fig. 4.

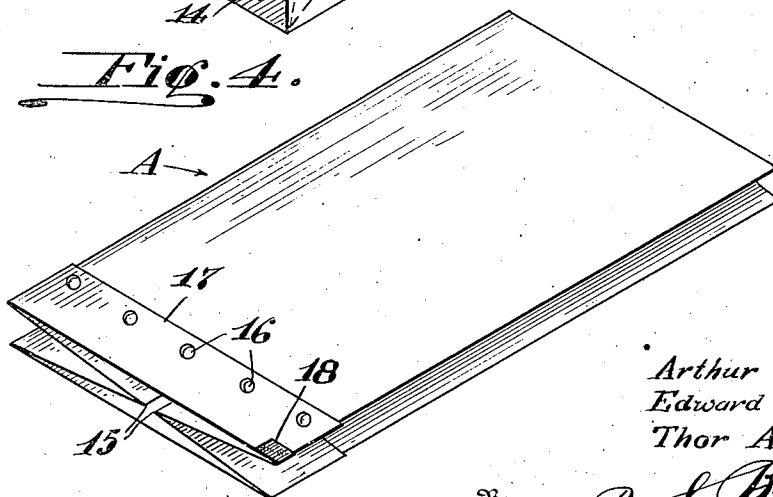


Fig. 5.



Inventors
Arthur Gustafson,
Edward Johnson and
Thor Ahlin;

By

R. S. Bennett

Attorney

Sept. 14, 1937.

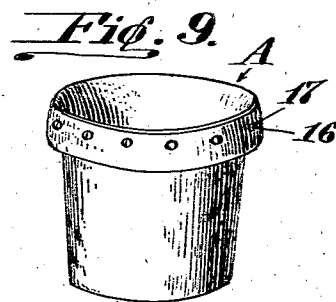
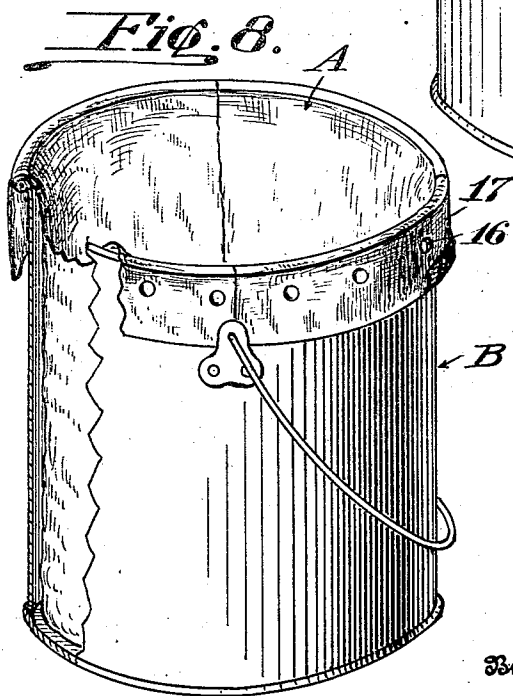
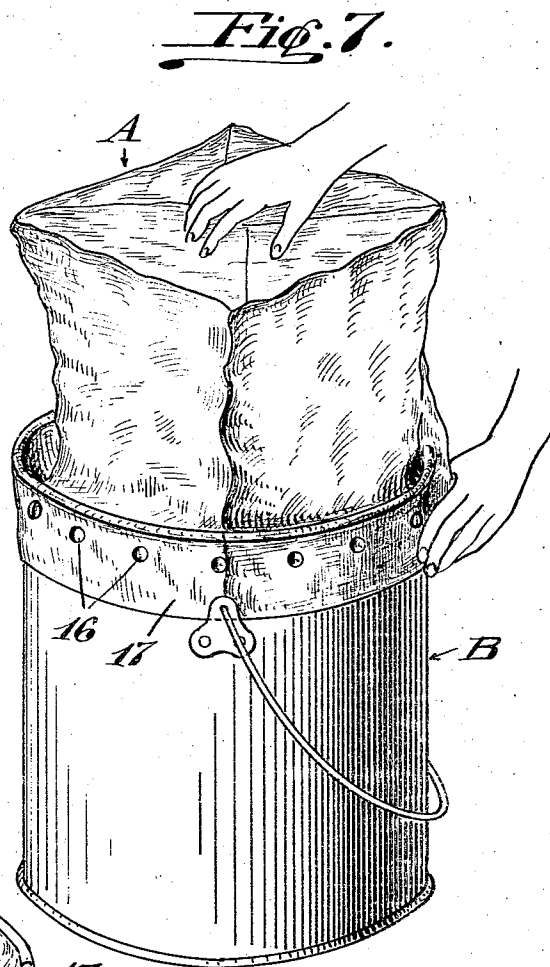
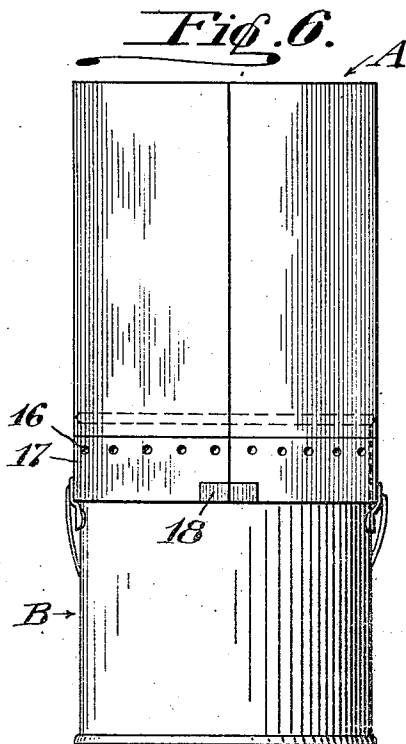
A. GUSTAFSON ET AL

2,092,969

GARBAGE CAN LINER

Filed Feb. 18, 1936

2 Sheets-Sheet 2



Inventors
Arthur Gustafson;
Edward Johnson and
Thor Ahlin;

By

R. S. Burr

Attorney

UNITED STATES PATENT OFFICE

2,092,969

GARBAGE CAN LINER

Arthur Gustafson, Edward Johnson, and Thor Ahlin, Los Angeles, Calif.

Application February 18, 1936, Serial No. 64,486

2 Claims. (Cl. 220—65)

This invention relates to a liner for garbage cans and the like and has as its primary object the provision of a demountable temporary lining for garbage cans for protecting the interior of the can from the corrosive action of the garbage and at the same time afford a sanitary covering for the interior of the can which will serve on emptying the can to facilitate cleaning thereof.

Another object is to provide a liner of the above character which is adapted to be readily applied to the interior of the can to effectively cover the inside walls thereof, and which when applied will afford an unbroken or continuous covering for the rim of the can.

Another object is to provide a liner for garbage cans which is so formed and operated as to admit of a construction in the liner of that commonly employed in the manufacture of the ordinary rectangular paper bags of commerce and yet permit ready application of the liner to a cylindrical garbage can and its conformity to the interior of the can and at the same time afford an unbroken covering for the margin or rim of the can. Heretofore ordinary rectangular paper bags have been employed as liners for garbage cans but have proven unsatisfactory in that it is difficult to conform the bag to the cylindrical interior of the can and also because such bags are difficult of application to afford an unbroken covering for the margin of the can since the common practice is to tear the marginal portion of the bag so as to permit its being folded over the rim of the can. The present invention obviates the necessity of tearing of the liner in order to fit it to a cylindrical can around the interior of its cylindrical walls and also to extend it outwardly over the rim of the can to overlies the outer periphery thereof.

Another object is to provide a construction in the liner for facilitating grasping thereof in effecting its application to a garbage can.

Another object is to provide a flexible bag-like liner for cans which is adapted to be inverted over the open end of a can and then collapsed and turned inside out to dispose it in its lining position interiorly of the can, in which means are provided for venting air from the interior of the can during the operation of introducing the liner into the can.

A further object is to provide a fibrous liner for cans which is resistant to penetration by moisture, yet is moisture absorptive on the side thereof presented to the contents thereof, as to absorb liquid from such contents.

With the foregoing objects in view together with such other objects and advantages as may subsequently appear the invention is carried into effect as hereinafter described and claimed and as illustrated in the accompanying drawings in which:

Fig. 1 is a perspective view of the liner in an open detached position;

Fig. 2 is a detail in perspective of a corner portion of the liner depicting a hand hold and vents with which the liner is equipped;

Fig. 3 is a detail in vertical section taken on the line 3—3 of Fig. 2 showing the manner of constructing the rim portion of the liner;

Fig. 4 is a detail in perspective of the liner showing it in a folded position;

Fig. 5 is an enlarged detail in section of the sheet material preferably used in forming the liner;

Fig. 6 is a view in side elevation illustrating the manner of initially applying the liner to a can;

Fig. 7 is a perspective view illustrating the manner of positioning the liner interiorly of the can by collapsing the liner and turning it inside out;

Fig. 8 is a perspective view with portions broken away showing the liner as applied to the can in its lining position;

Fig. 9 is a perspective view showing a modified form of the liner.

Referring to the drawings more specifically A indicates generally a can liner embodying the invention, which liner is bag shaped, and is formed of sheet fibrous material. While the liner may be variously shaped, it is preferably of general rectangular form as shown in Fig. 1 whereby it is adapted to be constructed in the fashion common in the manufacture of the ordinary rectangular paper bags of commerce, that is with side walls 10, 11, 12, and 13, and a bottom wall 14, with opposed side walls and the bottom wall foldable inwardly along fold lines 15 to fold the liner into a flat package as shown in Fig. 4.

In carrying out the invention the liner is formed with its side walls 10, 11, 12, and 13 of substantially corresponding widths so that the bottom wall 14 and the open end of the liner will be square in outline; the side walls being formed of a length exceeding the height of the can to which the liner is to be applied, and the open end of the liner being of a width exceeding the external diameter of the rim of the can so that the open upper end of a can may be inserted in the open end of the liner.

An important feature of the invention resides in forming the side walls of the liner with a series of apertures 16 adjacent the open end of the liner which apertures may be of any suitable size and number sufficient to constitute an adequate vent for the air content of the liner and of the can to which it is to be applied, as hereinafter more fully described.

As a means for reinforcing the margins of the apertures 16 the portion of the walls of the liner in which the apertures are formed is made of a

double thickness of the sheet material of the liner as by bending the margin of the open end of the liner and returning it upon itself either interiorly or exteriorly of the liner with the overlying portion affixed to the side walls by a suitable adhesive to form the open end of the liner with a hem 17 in which the apertures 16 are formed.

In order to facilitate application of the liner to a can it is fitted with a finger hold 18 consisting of a strip of card board or similar material adhered to the side walls of the liner and extending along the margin of its open end and around a corner thereof; the strip serving to reinforce the portion of the margin covered thereby and also affording an anti-slip grip for the fingers which is particularly advantageous where the material of which the liner is formed is of a slippery character.

The liner may be formed of various flexible sheet materials such as paper used in the construction of paper bags, or of water proof sheet material, such as oiled or waxed paper, or of a sheet cellulose material such as "Cellophane", but where the liner is to be employed where moist materials and a small amount of liquid is to be deposited therein, the sheet material is preferably formed as shown in Fig. 5, that is of at least two plies *a* and *b* of paper adhered together by a water proof cement *c* with the layer *a* constituting the normal inner side of the liner of a tough close grained moisture resistant sheet, while the normal outer layer *b* is formed of a moisture absorptive sheet.

In the application of the invention the liner is inverted and positioned with its open end encompassing the upper marginal portion of a can *B* as with the apertures 16 disposed adjacent the lower outer margin of the rim of the can particularly shown in Fig. 6. The operator then grasps the finger-hold 18 between the thumb and finger of one hand and draws the hem 17 of the liner taut around the margin of the can in a position with the apertures 16 disposed exteriorly of the can adjacent the rim thereof. The reinforcement afforded by the hem permits pulling the liner taut without rupture or tearing especially at the margins of the apertures. The operator then depresses the upstanding portion of the liner and forces the inverted bottom thereof downwardly into the interior of the can while holding the hem tightly in place on the margin of the can, as illustrated in Fig. 7, and in this fashion turning the liner inside out except as to the hem portion thereof overlying the exterior of the can. While thus collapsing the liner and effecting its reversal interiorly of the can the air content of the liner and of the can displaced thereby is forced to atmosphere around the rim of the can and through the apertures 16.

After effecting positioning of the liner within the can the bottom of the liner is brought into a seated position on the bottom of the can and the side walls of the liner are disposed in close proximity to the side walls of the can thus effectively lining the latter and at the same time covering the rim of the can and forming a downwardly extending apron around the upper outer circumferential marginal portion thereof afforded by the downwardly extending hem 17, as particularly shown in Fig. 8; the portion of the liner overlying the rim of the can being continuous and unbroken and thereby completely covering the rim of the can. The portion of the liner

overlying the rim of the can does not interfere with positioning of a demountable cover on the can.

Where the liner is formed of internal and external plies *a* and *b* as shown in Fig. 5 on turning the liner inside out on applying it to a can the moisture absorptive layer *B* normally disposed on the outside of the liner will then be positioned interiorly thereof; the absorptive layer *B* then serving to absorb within the limit of its capacity liquid contained in the material deposited in the liner. The water proof cement *c* will then serve to prevent passage of the liquid through the walls of the liner thus preventing excessive softening of the materials of the liner such as might occasion its disintegration.

It is manifest that in some instances the liner may be made in the form of a cylinder or truncated cone instead of a rectangular form, and manipulated in its application in the fashion above described. In some instances the liner may be produced with the hem 17 downturned and with its body portion of frustro-conical shape as shown in Fig. 9, in which event the liner is turned in-side-out apart from the can in forming the downturned hem 17, and is subsequently applied to a can by inserting the bottom end portion of the liner into the open end of the can.

By use of the invention the interior surface and rim portion of the can are effectively covered with the flexible sheet material of the liner, and the can is thus fitted with a lining which may be readily removed and replaced.

While the invention has been shown and described as applied to garbage cans for which use it is especially applicable, it will be understood that the liner may be employed wherever it is desirable to provide a flexible liner for other types of cans, or other open ended vessels.

We claim:

1. A liner for cans comprising a bag formed of flexible sheet material having its open end of a diameter exceeding that of a can to which it is to be applied for positioning around the exterior of the rims of the can with the body portion of the bag extended away from the interior of the can, a finger hold on the marginal portion of said bag arranged to be grasped to draw said marginal portion taut around the exterior of the can and whereby the marginal portion of the bag may be manually held in close frictional engagement with the can while the body portion of the bag is inserted into the can; the marginal portion of the bag being formed with a series of apertures for venting air displaced on advancing the bag into the can while the margin of the bag is held taut on the latter.

2. A liner for cans comprising a rectangular bag formed of flexible sheet material having its open end of a diameter to receive the open end of the can to which the bag is to be applied, said bag having a hem on the margin of its open end adapted to be drawn taut around the outer periphery of the can, said hem being formed with venting apertures to permit escape of air displaced on inserting the bag within the can while the hem is maintained taut around the exterior of the can.

ARTHUR GUSTAFSON.
EDWARD JOHNSON.
THOR AHLIN.