E. G. BARNETT.

CAN BOTTOM.

APPLICATION FILED NOV. 24, 1917.

1,315,941.

Patented Sept. 16, 1919.

Fig. 1.

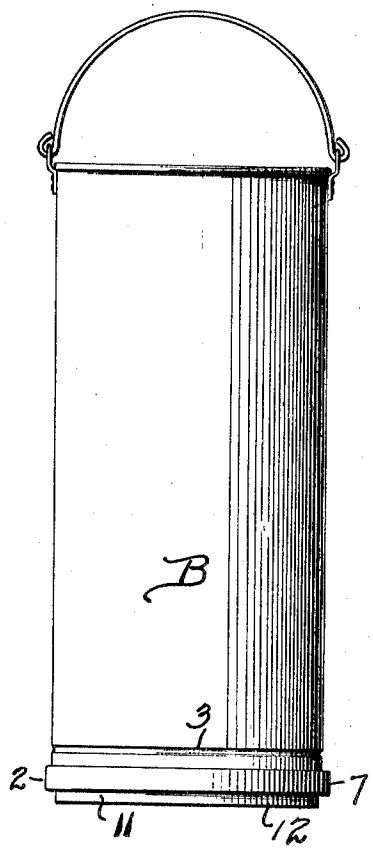


Fig. 2.

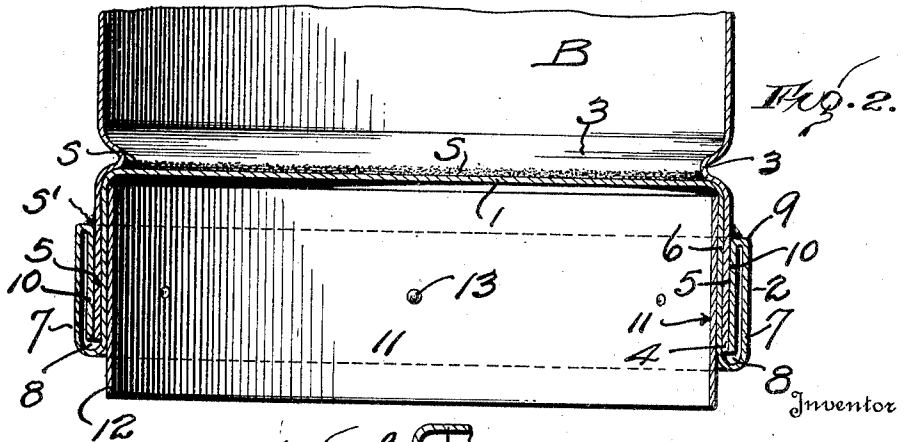
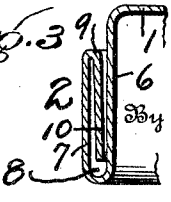


Fig. 3.



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CAN-BOTTOM.

1,315,941. Specification of Letters Patent. Patented Sept. 16, 1919.

Application filed November 24, 1917. Serial No. 203,772.

To all whom it may concern:

Be it known that I, EDWARD G. BARNETT, citizen of the United States, residing at Concordville, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Can-Bottoms, of which the following is a specification.

This invention relates in general to metallic containers or vessels and more especially to a novel improvement in bottoms therefor.

In the making of cheese and other dairy products, it is customary to use cans of relatively great depth as compared with their diameter, thereby rendering the same of considerable capacity, and consequently very heavy when filled. Thus, a great weight is imposed upon the bottom of the can, and the same usually becomes worn out before the body. As cans of this sort often represent a considerable investment, and their maintenance and repair becomes a factor in the cost of production, it is desirable to provide a bottom which may be readily fitted to the body without involving the use of expensive machinery or difficult labor, to thus save the otherwise good body.

Accordingly, the present invention has primarily in view a can bottom construction which, although susceptible of embodiment in cans being manufactured, is of special utility in repairing cans with worn out bottoms. In this connection it is proposed to provide a repair bottom which may be made up independent of the body and of such a character that it may be readily fitted thereto by simple and convenient means, without subjecting the body to any difficult machine operations.

A further object of the invention is to provide a substantial and durable can bottom which may be rigidly united to the body and easily made water tight. That is to say, it is contemplated to provide a can bottom which is so constructed as to provide a novel and effective joint which not only seals the bottom of the can but at the same time materially strengthens and reinforces the same, thus rendering it capable of better withstanding the severe service conditions to which it is usually subjected.

With the above and other objects in view which will more readily appear as the nature of the invention is better understood, the same consists in a novel construction, combination and arrangement of parts, hereinafter more fully described, illustrated and claimed.

A preferred and practical embodiment of the invention is illustrated in the accompanying drawings in which:—

Figure 1 is an elevation of a can embodying the present improvements.

Fig. 2 is an enlarged vertical sectional view of the lower portion of the can showing more clearly the formation of the bottom, and its application to the can body.

Fig. 3 is a detail sectional view of the attaching flange portion of the can bottom showing the set and disposition of the clutch flange thereof before the bottom is fitted to the body.

Similar references designate corresponding parts throughout the several figures of the drawings.

As previously indicated, while the present construction is susceptible of use in connection with the original manufacture of metallic cans or similar vessels, it is especially useful as a repair bottom, since its structural features are such that they may be readily applied to can bodies without the aid of special machinery or tools, which obviates the necessity of returning the cans to the original manufacturer for new bottoms. My former Patent No. 1,237,151 dated Aug. 14, 1917, shows a can bottom construction which has proved to be very successful and durable, but naturally after a long period of time, under severe service conditions, it becomes necessary to repair or replace the same. And, since the construction shown in this patent is made by machinery which is not available to the purchaser and user of the cans, it is desirable to furnish a so-called repair bottom which may be fitted to the can body by simple manual manipulation after the old bottom has been cut off.

Accordingly, as will be observed from the drawings it is proposed to provide a can bottom including a suitable floor portion 1 having formed at the periphery thereof a can body engaging flange designated generally as 2, and possessing special features of construction whereby it may be readily telescopically fitted within the open end of the can body B to form a closure therefor.

As shown, the said can body after having the old can bottom removed is preferably formed with an inwardly projecting annular bead 3 at a suitable distance back from the lower edge 4, to form an interior shoulder or abutment which may be engaged by the crown of the angle formed by the junction of the floor 1 and flange 2, while the portion of the can between the bead 3 and edge 4 constitutes a receiving band or ring 5 which lies in the same plane as the sides of the body B.

Referring to the attaching flange 2, it will be seen that the same includes a ring engaging wall 6 disposed at right angles to the floor 1, and having adjacent its end opposite the latter a cuff portion 7 which is doubled backwardly over the outer face of the wall 6 in such a manner as to provide an annular socket 8, while at the same time the metal of the cuff is turned as at 9 into the socket 8 to provide a yielding clutch flange 10. This clutch flange 10 is therefore located between the outer wall of the cuff 7 and the band or ring engaging wall 6, and is spaced a sufficient distance from the latter to provide clearance for the reception of the end portion 5 of the can body B. Initially this clutch flange 10 may have the set or inclination shown in Fig. 3 whereby the lower end thereof is in relatively close proximity to the wall 6 so that the gripping or clutching effect thereof is materially increased.

The formation of the attaching flange 2 of the can bottom above described provides a bottom which is capable of telescopically fitting over the open end of the can body B, thereby providing an effective joint since both the inner and outer faces of the receiving end portion 5 of the can body are engaged by the wall 6 and flange 10. When the bottom is applied to the can body as shown in Fig. 2 it will be apparent that the angle between the floor and flange 2 abuts against the bead 3 thus preventing the entrance of the bottom into the can any further than the bead, which is further desirable since it prevents the bottom of the can being driven up into the body when the can is dropped with a sudden jar.

For the purpose of further strengthening the can bottom and generally prolonging its life it is proposed to utilize in connection therewith a suitable wear-ring 11 which may be forced into the hollow side of the bottom to assist in maintaining close contact between the parts of the attaching flange and the lower end of the can bottom. The said ring as shown, is made of sufficient length to project below the lower edge of the cuff portion 7 as indicated at 12 to thereby provide a convenient base or stand which will further assist in shielding the interlocked parts of the body and bottom from undue wear. While under more moderate conditions of use the wear-ring 11 might be frictionally held in place, it is preferred, owing to the severe conditions to which cans of this character are subjected to rivet the wear-ring to the attaching flange 2 of the bottom by suitable rivets or equivalent fastenings 13. Furthermore, in order to insure an absolute water tight union between the bottom and body it is preferred to distribute solder in the crevice formed between the crown of the bead 3 and the floor 1 of the bottom, thus providing an interior soldered joint S while at the same time providing an exterior soldered joint S′ by flowing solder around the upper edge of the cuff and against the lower end of the can body B.

From the foregoing it will be apparent that the present can bottom may be made as a complete unit and readily fitted to a can body with but little preparation of the latter. For instance a can whose bottom is worn out may have the same sheared or cut off and then an inwardly projecting bead, such as the bead 3, formed at a suitable distance back from the cut edge. Then the can body is ready to receive the bottom constructed according to the present invention. That is to say, this bottom is telescopically fitted within the open end of the can which has had the old bottom cut off, whereby the wall 6 of the flange 2 will engage the inner surface of the receiving ring 5 of the can body, while the outer surface of the latter is engaged by the clutch flange 10 and housed within the socket 8 of the cuff 7. This fitting of the bottom to the can body may obviously be accomplished in an expeditious manner, and then the wear-ring 11 may be forced into the hollow side of the bottom and secured thereto as previously indicated.

Without further description it is thought that the features and advantages of the present invention will be readily apparent, and it will of course be understood that modifications may be resorted to within the scope of the appended claims.

I claim:

1. A removable can bottom construction comprising in combination with a can body having an inwardly projecting annular shoulder and a bottom depending flange extending below said shoulder, a bottom unit engaging said shoulder and including a floor member provided with a depending annular flange having an outer up-turned member forming an exterior cuff adapted to receive the flange at the bottom of the can body and provided within the socket of the cuff with a resilient clutching element having a binding engagement with the flange of the can body.

2. A removable can bottom construction

comprising in combination with a can body having an inwardly projecting annular bead and a bottom depending flange extending below said bead, a bottom unit engaging said bead and including a floor member provided with a depending annular flange having an outer up-turned member forming an exterior cuff adapted to receive the flange at the bottom of the can body and provided within the socket of the cuff with a frictional clutching element in the form of an inclined flange adapted to have a binding engagement with the flange of the can body.

EDWARD G. BARNETT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."