

(No Model.)

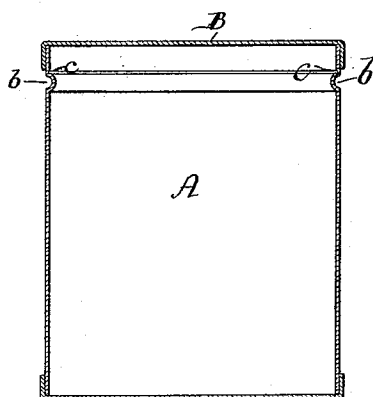
G. A. WAEBER & A. KLEINFELDT.

SHEET METAL VESSEL.

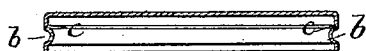
No. 466,993.

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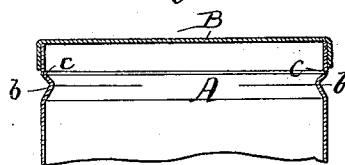
*Fig. 1*



*Fig. 2*



*Fig. 3*



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# UNITED STATES PATENT OFFICE.

GUSTAVUS A. WAEBER AND ARTHUR KLEINFELDT, OF NEW YORK, N. Y.

## SHEET-METAL VESSEL.

SPECIFICATION forming part of Letters Patent No. 466,993, dated January 12, 1892.

Application filed November 27, 1891. Serial No. 413,248. (No model.)

*To all whom it may concern:*

Be it known that we, GUSTAVUS A. WAEBER and ARTHUR KLEINFELDT, both citizens of the United States, residing in the city of New York, in the county and State of New York, have made certain new and useful Improvements in Hermetically-Sealed Sheet-Metal Vessels; and we hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings which accompany and form part of this specification.

This invention relates to that class of metallic receptacles which, after being hermetically sealed, are opened by being ruptured along a definite circumferential weakened line by means of sharp blows or other sudden force applied to one of the heads or covers of the vessel.

The object of our improvement is to provide a sheet-metal receptacle of this character which shall be extremely simple in form and construction and shall be adapted to serve as a satisfactory substitute for hermetically-sealing metallic vessels which are opened by stripping off a portion of their material, while at the same time it dispenses with certain parts essential to all strip-vessels and therefore can be produced much more cheaply than they are able to be.

All strip-vessels require to have the blanks out of which their bodies are formed so cut that one end of the strip-section shall be prolonged beyond the actual diameter of the vessel, in order to constitute what is generally termed a "tongue," which is to be grasped by the opening-instrument to start the stripping operation. This necessitates a very great waste of material, since in every vessel a piece of metal equal in width to the length of the tongue and in length to the height of the vessel-body must be cut away to form the tongue and then becomes worthless. In addition, there must be provided with every vessel a suitable tool, usually termed a "key," which is necessary for tearing off the strip-section. The value of this waste metal and the expense of keys for a large number of strip-vessels amounts to a very considerable sum and adds materially to the cost of such receptacles. We have endeavored to do away with these sources of expense, and with this

object in view our invention consists in a sheet-metal vessel or receptacle provided with a somewhat deep circumferential bead, rib, or corrugation at any convenient point between the extremities of its body or between the top and bottom edges of its head or cover, in combination with a groove or incision made partly through the metal in or upon or closely adjacent to the said bead, rib, or corrugation, but without any strip-section or tongue or other prolongation of a strip-section, and without any key or other device for tearing out any portion of the material.

To enable others to put our improvement into practice, we will proceed to describe them in detail.

In the drawings, Figure 1 is a central vertical section of a sheet-metal can which embodies the first part of our invention. Fig. 2 is a vertical central section of a head or cover suitable for the can shown in Fig. 1, and illustrates the application of our invention to such a cover. Fig. 3 shows another form of our invention which will be found very desirable for practical use.

A, Fig. 1, represents the body of a cylindrical sheet-metal can, and B is its head or cover, which in the can here shown is constructed and secured to the body A in the usual manner.

In carrying out our improvement as represented in Fig. 1 we make a somewhat deep corrugation, rib, or bead *b* at any convenient point between the extremities of such a can-body as is shown in the figure, though preferably quite near one end thereof, as seen. This corrugation is carried circumferentially around the can-body, and we combine with it a groove or incision *c*, made partly through the metal closely adjacent to the corrugation, and preferably in the angle or corner thereof nearest to the end of the can-body, as shown in the figure. This completes this form of the can, and in order to open it after its contents have been placed in it and it has been hermetically sealed, it is only necessary to strike a few sharp blows upon either of its heads with a hammer or any suitable instrument which may be conveniently at hand, or to apply a quick force or pressure to either of the heads, whereupon the body of the can will at once be ruptured along the weakening

line of the incision *c* and the head or cover can then be readily taken off with the fingers.

No description of the cover illustrated in Fig. 2 will be needful, as the corrugation *b* and incision *c* are precisely the same as are represented in Fig. 1, and the operation of them is the same as in said figure, the cover being included in the drawings solely for the purpose of showing that our improvement is equally as well applicable to the covers as to the bodies of sheet-metal vessels.

Neither will it be necessary to describe the form of the invention illustrated in Fig. 3, as the only difference between that figure and Figs. 1 and 2 consists in a change in the contour or shape of the corrugation or channel *b*. We have, however, found in practical experience that the particular form of said corrugation *b* (shown in Fig. 3) is extremely well adapted for successful use. The incision *c* in this figure is of course the same as in Figs. 1 and 2. It will of course be obvious that the incision *c* may be made on the outside of the metal, and that the corrugation may, if preferred, be made from the inside outward instead of as represented in the drawings.

The can here described will be found in practice to operate with entire satisfaction. At the same time the decided economy with

which it can be manufactured on a large scale, as compared with strip-vessels and many other kinds of cans, renders it especially desirable for packers and others who require air-tight receptacles in great quantities.

Having thus described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

A sheet-metal vessel or receptacle provided with a somewhat deep circumferential corrugation at any convenient point between the extremities of its body or between the top and bottom edges of its head or cover, in combination with a groove or incision made partly through the metal along or adjacent to the line of the said corrugation, whereby the vessel is rendered capable of being opened by rupturing it in the manner described, so as to dispense with both a strip-section and tongue or other prolongation of a strip-section and with a key or other device for tearing out a portion of the material, substantially as set forth.

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