J. F. BUDKE.

Barrel, Cask, &c,

No. 220,340. Patented Oct. 7, 1879.

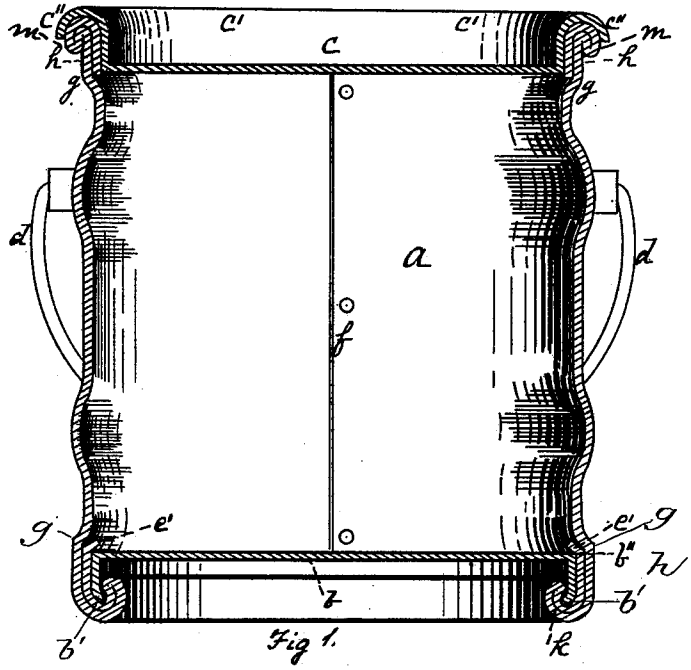



Fig 1.

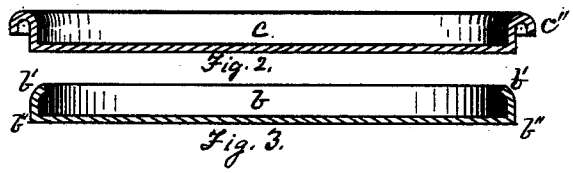



Fig. 2.




Fig. 3.

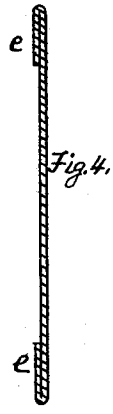



Fig. 4.

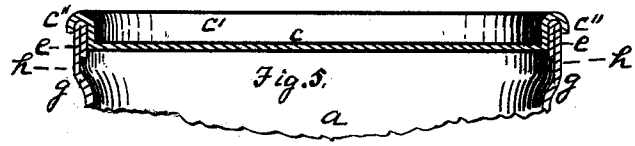



Fig. 5.

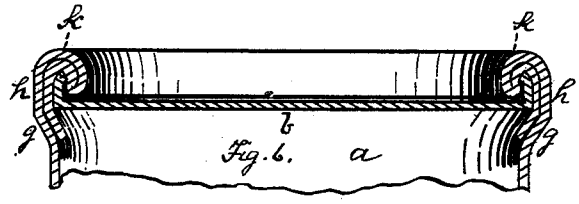



Fig. 6.

Witnesses

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# UNITED STATES PATENT OFFICE.

JOHN F. BUDKE, OF LEECHBURG, PENNSYLVANIA.

## IMPROVEMENT IN BARRELS, CASKS, &c.

Specification forming part of Letters Patent No. **220,340**, dated October 7, 1879; application filed July 28, 1879.

*To all whom it may concern:*

Be it known that I, JOHN F. BUDKE, of Leechburg, in the county of Armstrong and State of Pennsylvania, have invented a new and useful Improvement in the Construction of Barrels, Casks, &c.; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my improved sheet-metal bucket. Figs. 2 and 3 are views of the cover and bottom pieces.

My invention relates to the construction of sheet-metal barrels, casks, milk-cans, buckets, and other like vessels; and it consists in certain details of construction which result in the production of a superior vessel.

To enable others skilled in the art to make my invention, I will describe its mode of construction.

In the drawings, *a* represents the bucket, having a bottom, *b*, a lid, *c*, and a bail or handle, *d*. In constructing this bucket *a*, I take a plain sheet of iron of proper gage, and fold the upper and lower edges, as at *e*, Fig. 4, to obtain a double thickness of metal in which to form the shoulder for the support of the head, and as in the finished article the fold *e* is within the body of the can, I term the same the "infold." I then form the sheet into a cylinder, jointed at *f*, the double thickness of metal being at the end thereof. I then corrugate the cylinder thus formed on a corrugating-machine, the construction of which is well known to those skilled in the art. The form of the corrugating-dies is such as to make a shoulder, *g*, of any desired width at the ends of the cylinder, at the depth of the infolds *e*, so as to form a chine, *h*, of any desired size. The bottom *b* is made in a die under a press, or in other suitable way, and has an inwardly-curved flange, *b'*. It is set in the lower end of the cylinder, with its corner *b''* resting on the shoulder *g*, and then the chine *h* is folded inward upon it, as shown at *k*. This folding operation causes the edges of the infold *e* to curve inwardly from the shoulder *g*, as at *e'*, thereby affording an additional support for the bottom *b*.

The upper end of the cylinder is prepared for the lid or cover *c* by folding the double thickness of metal at the end of the can-body backward and outward, as at *m*, making an outer band around the upper end, which, as the metal does not stretch, causes the mouth of the vessel to contract or draw slightly in. The lid *c* is formed by turning its flange *c'* outward, so as to make a reverse flange or an overlap, *c''*, for the edge of the bucket. The lid is then forced into place in the mouth of the can, the folded thickened edge of which has a kind of spring action upon the lid, and compresses its flange slightly after the disk of the lid has passed it. The result of this construction of lid and edge is a joint sufficiently tight for all practical purposes, so that it requires no further operation than putting on the lid to close the head.

The lid *c* may be used on vessels having a singly-folded edge, as in Fig. 5.

In the construction of powder and other cans, casks, and packages where both ends are to be tightly closed, the construction described with reference to the bottom *b* of the bucket is to be used at both ends. (See Fig. 6.) In case of a powder-keg a suitable bung-hole and bung are to be provided.

In making the fold *k* over the edge of the head *b*, I make it rounding, and in that way avoid the shearing action of the edge of the head upon the fold, which a more abrupt and closer fold would cause. I am thereby enabled to use a poorer variety of iron without lowering the quality of the can.

It sometimes happens that the heads of powder-kegs are stood upon or dented in by the fall of tools or heavy articles. A straight-flanged head is liable to be forced from its fastenings into the kegs. This danger is entirely obviated by my improved head, in which the curved edge *b'* hooks into the folded edge of the can and sustains the head under downward pressure.

When the vessel is designed to hold butter, lard, or similar substances, I deem it best to solder the joints on the inside of the head smooth, so that the vessel may be readily cleansed.

The advantages gained by my invention are, its great simplicity of construction, strength, and cheapness.

The ends of kegs, cans, &c., are known in

the trade as "heads," and when I speak of the bottom *b* in this description, such description relates with equal pertinency to the heads of kegs and other like articles.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A sheet-metal can the body of which has a shoulder for the reception of the head, said shoulder having a double thickness of metal, consisting of the folded-in end of the body and of the free edge of the infold bent inwardly away from the body, in combination with a head supported by said shoulder and edge of the infold, substantially as specified.

2. A sheet-metal can the body of which has an infold or double thickness of metal at the end and a rounded inwardly-bent edge to secure the head, in combination with a head having a flange bent inwardly at its edge, said inwardly-bent portion of the flange engaging with or hooking into the rounded inwardly-bent edge of the can-body, substantially as and for the purpose specified.

3. A can-body having at its end the folded, outwardly-bent, and doubled edge, forming a band thereon, in combination with a cover consisting of a disk having a reverse flange, the disk of the cover fitting within the doubled edge and supported thereby against internal pressure, the reverse flange of the lid supporting the same against external pressure, substantially as specified.

In testimony whereof I, the said JOHN F. BUDKE, have hereunto set my hand.

JOHN F. BUDKE.

Witnesses:

JAMES H. PORTE,

T. B. KERR.