R. L. DOUGHERTY.

METAL PACKAGE.

APPLICATION FILED JAN. 26, 1915.

1,174,833. Patented Mar. 7, 1916.

Fig. 1.

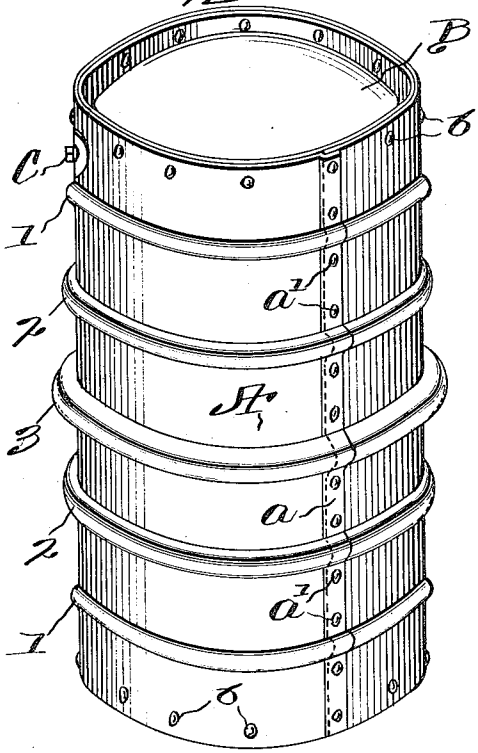


Fig. 2.

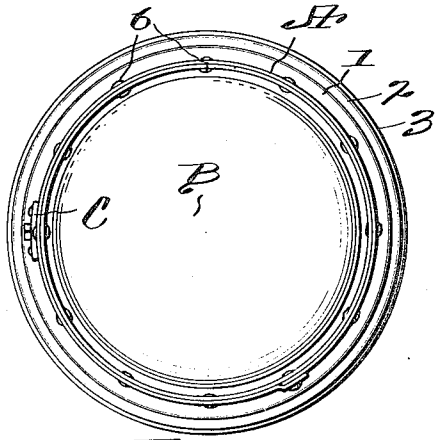


Fig. 3.

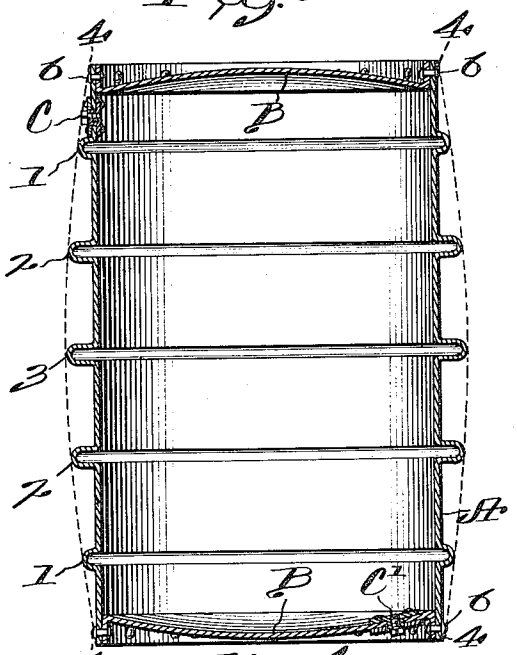
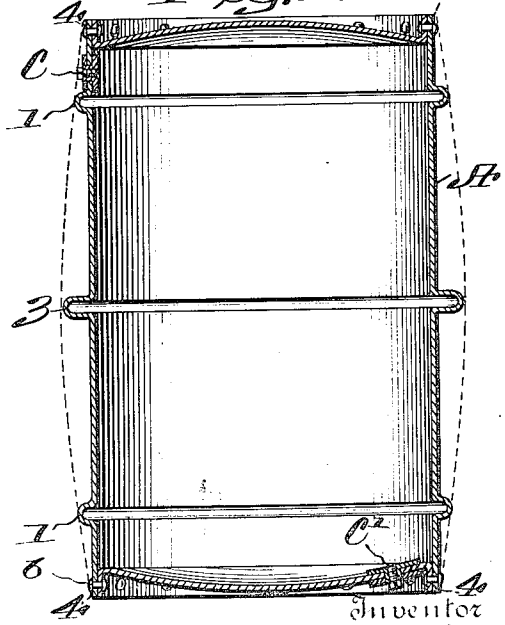


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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METAL PACKAGE.

1,174,833. Specification of Letters Patent. Patented Mar. 7, 1916.

Application filed January 26, 1915. Serial No. 4,522.

To all whom it may concern:

Be it known that I, RALPH L. DOUGHERTY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Metal Packages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in metal packages, such as barrels, kegs, or the like, in which it is desired to use as light a metal shell as is practicable and at the same time to provide such shell with the requisite rigidity.

Various devices have hitherto been suggested, in which a cylindrical shell was used, provided with strengthening ribs of various kinds, but these devices were unsatisfactory, in that the general cylindrical contour of the package was maintained and the package lacked those two desirable features of the bilged barrel, in that it could not be conveniently up-ended or turned on either head, nor could it be conveniently swung about the center of the barrel or package for the purpose of sluing same around corners, or for other purposes.

According to my invention I provide a cylindrical shell for a barrel, or keg, or other package, having the usual heads, and in this shell I provide a series of arched ribs, U-shaped in cross section, pressed outwardly to form stiffening braces for the shell, and also to form ribs on which the shell may be rolled, and also to protect the shell proper from contact with projections on the roadbed which are likely to deform or distort the said shell. These stiffening ribs project from the shell proper at the center of the barrel and decrease in height toward the ends thereof, thus adding increased stiffness to the central portion of the barrel which is not reinforced by the heads, and at the same time providing the bilged construction; the advantages of which have been hereinbefore referred to.

My invention will be understood by reference to the accompanying drawings, in which:—

Figure 1 shows a barrel made of a single plate of metal, having a series of reinforcing ribs pressed out therein; Fig. 2 is a plan view of the device shown in Fig. 1; and Fig. 3 shows a central vertical section through the device shown in Fig. 1; while Fig. 4 shows a similar section of a similar barrel provided with three only of such ribs.

Referring to Figs. 1–3, A represents a sheet of metal which is bent into cylindrical form to compose the body of the barrel, the ends of which sheet overlap as at *a* and are fastened together in any convenient way, as by means of the rivets *a'*. In the ends of the barrel thus formed, the heads B are secured in any convenient way, as by the ribs *b*. Pressed out of the metal sheet A are a series of arched ribs, U-shaped in cross section, 1, 2, 3, spaced apart at any desired distance according to the thickness of the plate and the strength required of the package; the central rib 3 being of greater depth than the adjacent ribs 2, and these being of still greater depth than the ribs 1 which are nearest the heads of the barrel. The outer edges of these ribs are preferably in a continuously-curved surface indicated by the dotted line 4—4, see Fig. 3.

In the form of device shown in Fig. 4, only three ribs are provided, the central rib 3, and two ribs 1 near the heads of the barrel, the outer edges of which again lie in the curved surface indicated by the line 4—4. With this form of construction, the barrel may be rolled along on its bilge as usual. This bilge is reinforced by an arched rib, U-shaped in cross section, of comparatively great depth, which affords a rigid bearing surface for the bilge of the barrel, and the lower ribs between it and the heads of the barrel permit the barrel to be conveniently tipped up on its head, or to be conveniently swung around corners while the barrel is being rolled on its bilge from one place to another.

The number of the ribs may be varied to suit the varying requirements, but I prefer not less than three, or, for ordinary purposes, more than five ribs, the central rib being of greater depth than the others, and the depth of the various ribs decreasing toward the heads of the barrel.

Instead of using a single sheet of metal with overlapping edges, a series of sheets or staves may be used if desired.

The barrel should preferably be provided with suitable vents C and C'.

It will be obvious that various modifica-

tions might be made in the herein described construction, which could be used without departing from the spirit of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

A metal package comprising a cylindrical metal shell with heads secured therein, and a central rib U-shaped in cross section, having its side parallel and substantially at right angles to the sides of said plate forming a rigid central reinforcing tread adapted to support the weight of the barrel when being rolled, the said shell being also provided with ribs U-shaped in cross section of less height located toward the heads of said barrel, all of said ribs being pressed out of the metal and projecting outward from the cylindrical shell, and the outer edges of said ribs being included in a bilged surface, substantially as and for the purposes described.

In testimony whereof, I affix my signature, in presence of two witnesses.

RALPH L. DOUGHERTY.

Witnesses:
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FRANCIS E. HAMILTON.