

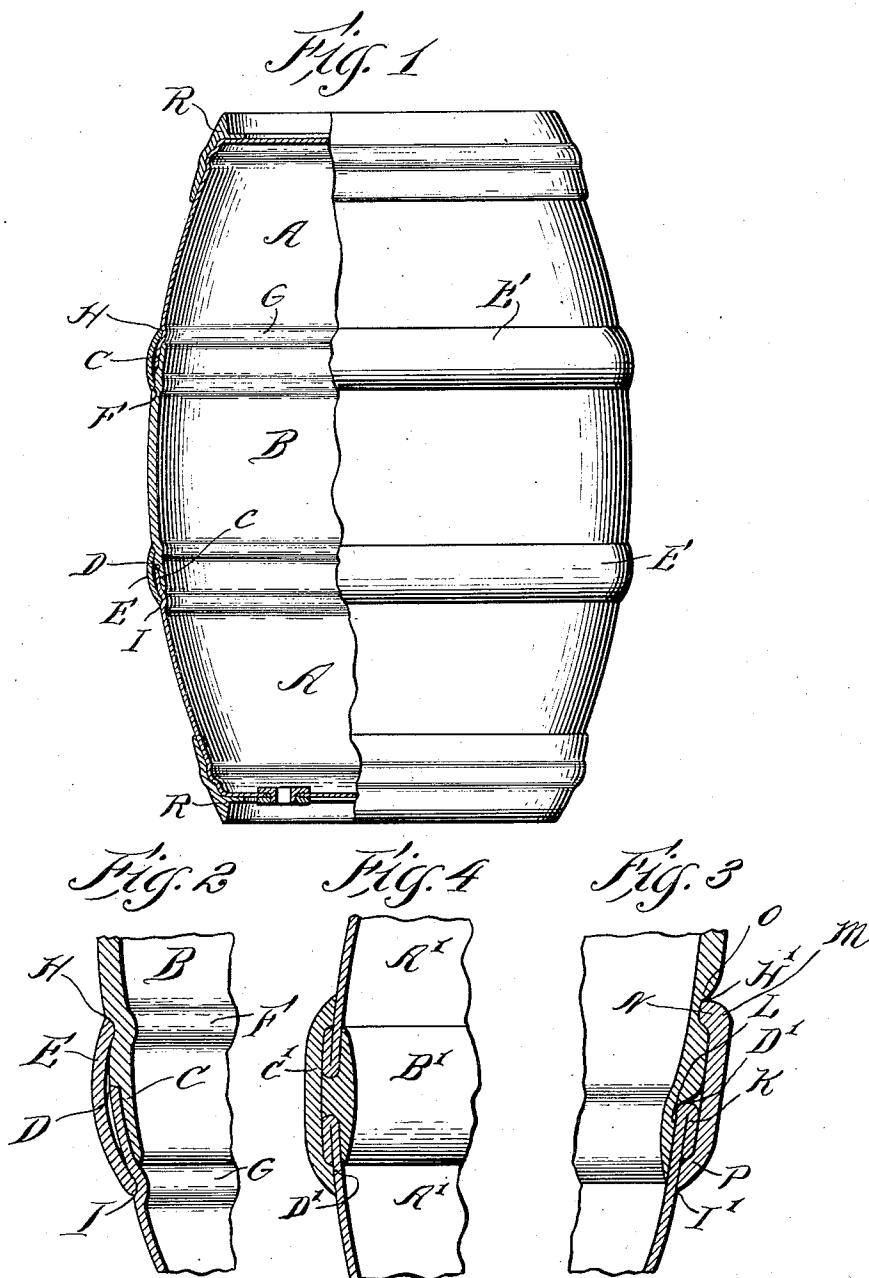
April 29, 1924.

1,492,415

E. E. BELL

SHEET METAL BARREL

Filed May 23, 1918



UNITED STATES PATENT OFFICE.

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SHEET-METAL BARREL.

Application filed May 23, 1918. Serial No. 236,088.

To all whom it may concern:

Be it known that I, ERNEST E. BELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Sheet-Metal Barrels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates generally to sheet metal barrels and more particularly to a sheet metal barrel of the bilge type.

The object of the invention is to provide an inexpensive sheet metal barrel of the bilge type which can be easily handled and another object of the invention is to provide a barrel which can be quickly and easily manufactured and will when completed, be leak-proof and capable of containing volatile and non-volatile liquids.

Another object of the invention is to provide a bilge barrel of such construction that the greatest strength will be placed at the points where the strain is greatest.

Another object is to provide a barrel composed of a plurality of parts so united as to eliminate the formation of ridges or shoulders upon the interior.

With these various objects in view the invention consists in the novel features of construction hereinafter fully described and set forth in detail in the appended claims.

In the drawings forming part of this specification I have shown one embodiment of my invention in which Fig. 1 is a side elevation partly in section; Fig. 2 an enlarged detail sectional view of the joint between the end and intermediate section; and Fig. 3 is a similar view showing a slight modification; Fig. 4 shows a still further modification.

In carrying out my invention I employ end portions A and a central or intermediate portion B. Each end portion is formed from a single piece of sheet metal and comprises a head and the sides, these sides being curved or flared outwardly as shown on the proper arc according to the size and shape of the barrel. The central or intermediate portion is in the form of a wide band but this also is given a curve which corresponds to the curve of the sides of the end portions, producing when the parts are united a continuation of the said sides so that the barrel as a whole will have the proper curvature or bilge.

The end portions A are preferably made of thin sheet metal and the intermediate portion B is made of somewhat thicker metal. In practice it is preferred to have the central or intermediate portion about double the thickness of the metal of the end portions. The edges of the end portions are intended to telescope over the edges of the central or intermediate portion and these intermediate portions are cut away or rabbeted as shown at C, this cut-away portion or rabbet being substantially of the same depth as the thickness of the end portion edge. Thus, when the parts are telescoped, the edge of the end portion snugly fits over the reduced edge of the central or intermediate portion and provides upon the exterior, a substantially unbroken surface. The joint is made smooth upon the interior to prevent the lodging of sediment within the barrel at these points. If desired a weld can be made at the point D in order to prevent leakage.

The joint between the parts A and B is made as close and accurate as it is possible to do commercially, and in order to protect these joints, I provide sheet metal hoops E which encircle the barrel at the points where the end portions and intermediate portions meet. In practice this hoop is heated before being placed upon the barrel and is properly positioned before it cools and by this means a perfectly rigid joint between the sections is obtained.

It will be noted that the hoop E is curved slightly in cross-section and the innermost end thereof is adapted to fit into a slight annular depression or groove F produced in the exterior face of the intermediate portion and the outer end is also adapted to similarly engage an annular groove or depression G formed in the sides of the end portions, these depressions being provided to enable the hoop E to envelop the joint of the sections as closely as possible.

Furthermore these annular depressions or corrugations tend to strengthen the end and intermediate portions at the points adjacent thereto and also enable the said portions to be brought into approximate accurate shapes for interfitting or telescoping.

As a matter of additional precaution welds can be made at the points H and I where the ends of the hoop contact respectively with the intermediate and end portion of the barrel.

A sheet metal barrel constructed as herein shown and described will be inexpensive and can be quickly and easily manufactured and assembled. It is only necessary to shape up the end portions, roll the central band or portion into proper cross-sectional shape and then fit the opposite end portions on to the same from opposite sides. The hoops are then heated, forced into place, and the barrel as a whole completed.

As previously stated, welds can be made at the points where the end portions and intermediate portion unite and also where the hoops contact with the central and end portions.

The central or intermediate portion being thicker than the end portions, is able to stand the additional strains placed thereon and the annular corrugations impart considerable rigidity to the device as a whole, and the metal hoops shrunk thereon add materially to the strength and rigidity of the sheet metal container.

In Fig. 3 I have shown a slight modification in which the edges of the end portions are bent outwardly back upon themselves as indicated at K and this reenforced or beaded edge is brought into engagement with the rabbeted edge L of the intermediate or central portion and the hoop M is formed with an inwardly projecting portion N adapted to fit in the groove O while the other end of this ring or hoop is curved as shown at P to fit under the reenforced or beaded edge of the end portion. If desired a weld can be made at the point D' and also at the points H' and I' in order to secure an absolutely tight barrel.

Upon the exterior of each end portion there is fitted a chime R, this chime being formed of metal and rigidly connected to the exterior of end portion to provide a suitable means for heading or lifting the barrel. The details of the chime and the manner of connecting the same form the subject matter of a separate application filed at even date herewith and consequently detailed explanation of this chime is unnecessary herein. In Fig. 4 I have shown a still further modification in which the end portions A' are made considerably deeper or longer than those shown in Figs. 1, 2, and 3 and the intermediate portion B' considerably shorter but the opposite edges of the intermediate portion are reduced and the edges of the end portions are brought into telescopic engagement therewith and then welds can be made at the joints between the end portions and intermediate portion if desired. A single hoop C' is employed, this hoop encircling the barrel at the juncture of the end with the intermediate portion and

annular depressions D' are produced in the end portions and into which the edges of the hoop are adapted to seat. So far as the fundamentals of construction are concerned this device is substantially the same as those previously described the only difference being that the intermediate portion is shorter and a single hoop is employed. If desired encircling hoops could be arranged upon the barrel between the central hoop and each end.

Having thus described my invention what I claim is:

1. A sheet metal barrel comprising an intermediate portion and end portions, the walls of said parts being curved to provide a bilged barrel, the edges of the end portions being telescoped over the edges of the intermediate portion, the edges of said intermediate portion being reduced to receive the edges of said end portions, said intermediate portion having annular depressions spaced from said reduced edge portions and bands encircling the joints between the intermediate and end portions, one edge of each band engaging the adjacent annular depression in the intermediate portion, the other edges of said bands being held in locked relation with the adjacent edges of the end portions.

2. A sheet metal barrel comprising end portions and an intermediate portion curved to provide a bilged barrel when assembled the edges of the end portions telescoping upon the edges of the intermediate portion, said end portions and intermediate portions being formed with exterior annular grooves or depressions upon opposite sides of the joint between the end portion and intermediate portion and a hoop encircling said barrel and enveloping the joint between the end and intermediate portions, the edges of said hoop being in engagement with the annular depressions in the intermediate and end portions.

3. A sheet metal barrel comprising an intermediate portion and end portions the walls of said parts being curved to provide a bilged barrel, the edges of the end portions being telescoped over the edges of the intermediate portion, said intermediate and end portions having exterior annular grooves adjacent their meeting edges, a weld at the exterior joint of said end and intermediate portions and a hoop fixed upon said barrel the edges of said hoop engaging the exterior annular grooves adjacent the edges of the intermediate and end section.

In testimony whereof, I hereunto affix my signature.

ERNEST E. BELL.