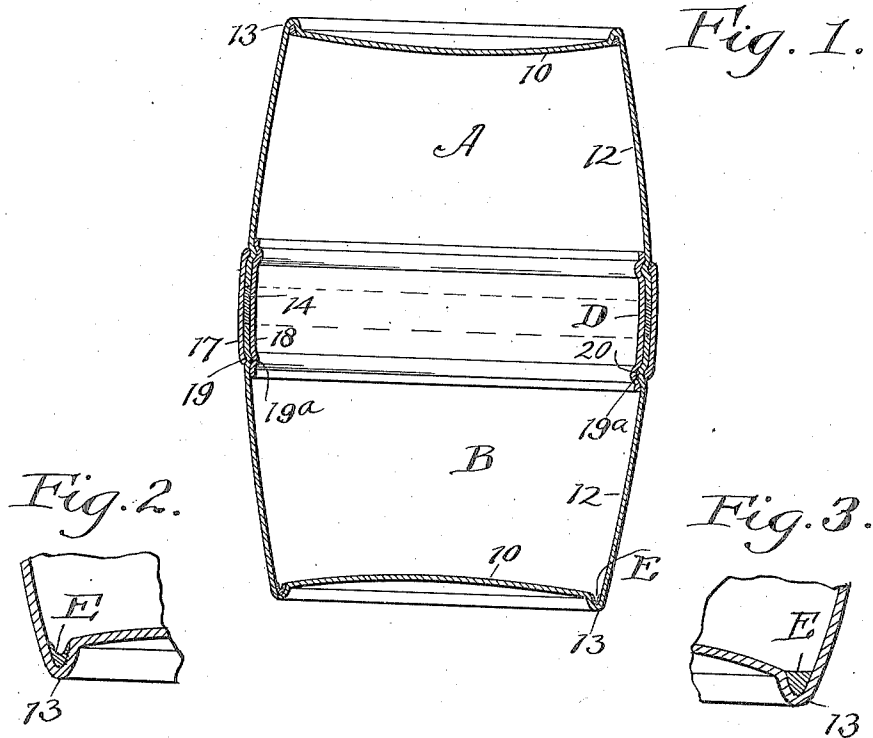


H. W. AVERY.
METALLIC BARREL.
APPLICATION FILED NOV. 27, 1914.

1,303,532.

Patented May 13, 1919.



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UNITED STATES PATENT OFFICE.

HENRY W. AVERY, OF CLEVELAND, OHIO.

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Specification of Letters Patent.

Patented May 13, 1919.

Application filed November 27, 1914. Serial No. 874,132.

To all whom it may concern:

Be it known that I, HENRY W. AVERY, 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 Metallic Barrels, of which the following is a full, clear, and exact description.

The object of this invention is to produce, at comparatively small cost, a metallic barrel which shall correspond substantially in shape and size to the ordinary wooden barrel, but which shall be sufficiently strong to stand the strains and jars of use.

The invention consists in the construction and combination of parts shown in the drawing and hereinafter described and definitely pointed out in the appended claims.

In the drawing Figure 1 is a vertical central section of a metallic barrel embodying the invention; Fig. 2 is a section through one of the chimes of the barrel showing one form of reinforcing ring therein; Fig. 3 is a similar section showing another form of reinforcing ring.

Referring to the parts by letters A and B represent the two end members, which are, or may be, exactly alike. Each includes a head 10, a body portion 12, and an intermediate outwardly projecting U-shaped annular chime 13, all of which may be formed from one piece of metal by drawing the same into the required shape with suitable dies.

The open ends of these two cylinder members A and B are united by a connecting ring D which is made of three pieces fitted one within the other and connected by brazing or otherwise. These pieces include a spacing ring 14 which is of such width that it fits between and engages the adjacent ends of the two members A and B; the outer ring 17 which is considerably wider than the ring 14 and which, when the parts are assembled, overlaps and tightly fits upon the adjacent ends of the two members A and B; and the inner ring 18 which is somewhat wider than the outer ring 17 and fits within and overlaps the adjacent ends of both members A and B.

The outer surface of the ring 18, that is, of the parts thereof which project above and below the spacing ring 14 are slightly convex, while the inner surface of the outer ring 17, that is, the parts thereof which project above and below the spacing ring 14, are

slightly concave. This leaves a space between the separated parts of these rings 17 and 18 which substantially fits the inner and outer surfaces of the two barrel members A and B.

To assemble these three parts the upper edge of the lower member B is driven in between the two flanges formed by the parts of the two rings 17 and 18 which project below the spacing ring, until said upper edge engages the lower edge of the spacing member 14. The lower edge of the upper member is driven down between the flanges formed by the parts of the rings 17 and 18 which project above the spacing ring until its said lower edge engages the upper edge of the spacing member.

Some suitable means must then be employed to permanently secure these three parts together. This may be accomplished by brazing or welding, or any other analogous or well-known method. But the resulting barrel will be stronger and better whether or not the overlapping parts described are brazed or welded, provided said overlapping parts are made to interlock substantially, as shown.

That is to say, each of the end members A and B is formed with an inwardly bent annular groove 19 near its edge; and this also produces an internal annular rib 19^a. The flanges, that is to say, the upwardly and downwardly projecting parts of the ring 18 are likewise bent so that they will have the annular external grooves 20. These grooves 19 and 20 are so located on the said parts that when the open ends of the two members A and B have been driven in between the rings 17 and 18, the ribs 19^a will project into, and interlock with, the grooves 20. The parts of the ring 17 which project above and below the spacing ring 14 are made of such width that after the parts have been assembled, as stated, the outer edges of said parts may be bent inward so as to project into the external grooves 19 in the two bodies. Thus each end member is thereby made to interlock with the two flanges of the band between which it projects.

The U-shaped outwardly projecting chimes 13 may be reinforced internally by metal rings E which are fitted into them and substantially fill them, but do not project beyond the adjacent inner surfaces of the heads. These reinforcing rings may be crescent shape in section, as shown in Fig. 2,

or they may be solid and approximately half rounded, as shown in Fig. 3. They may be, and preferably are, secured in the chimes by spot welding. The reinforcing rings, as herein shown, can be put into the annular grooves which form the inside of the chimes just before the last drawing operation. They will, therefore, serve as a part of the inside die, and will thereby on their external surface conform exactly with the inner surfaces against which they engage.

Before assembling the three parts of the barrel, said parts may be galvanized or otherwise coated both inside and out. This coating material will certainly close the joints between the reinforcing rings and the inner surface of the chimes, and therefore the entry of any fluid between said reinforcing rings and the surface of the barrel will be prevented. When the band and the two parts of the barrel have been properly coated, and have been assembled and connected, as described, the barrel is completed so far as many uses are concerned. For some uses, and particularly for holding liquids, it may be desirable to galvanize the joints between the body members and the flanges of the band between which they lie. Generally speaking, this may be accomplished in a satisfactory degree by the application of the galvanizing or other coating material to the outside of the barrel, and particularly to the joints between the same and the two external flanges 15 and 17.

Having described my invention, I claim:

1. In a metallic barrel, the combination of two end members each comprising a head and a body part which is integral with the head and is open at the end opposite said head, and an intermediate annular band which includes a spacing member that fits between and abuts the ends of both body parts, and two pairs of concentric flanges which are connected with and project respectively up and down from said spacing member, the two upwardly extended flanges being respectively outside of and inside of the lower part of the upper body and in intimate contact therewith, and the two downwardly extended flanges being respectively inside and outside of the upper part of the lower body and in intimate contact therewith, and each inside flange having at a distance from its edge an external annular

groove, and each overlapping body part having at a distance from its end an inwardly pressed annular rib which fits in the groove in the associated inside flange.

2. In a metallic barrel, the combination of two end members each comprising a head and a body which is integral with the head, with an intermediate annular band that is composed of three connected annular pieces, viz.: a spacing member which fits between and abuts the ends of both bodies, and an inner annulus which fits within the spacing member and overlaps and fits within the open ends of the two bodies, and an outer annulus which fits over the spacing member and overlaps and externally fits the open ends of the two bodies,—and the overlapping parts of the two bodies and the inner annulus of the intermediate member being connected by interlocking external annular grooves on each inner annulus and by inwardly bent annular ribs on the overlapping parts of the bodies which project into and fit said annular grooves.

3. In a metallic barrel, the combination of two end members each comprising a head and a body which is integral with the head, with an intermediate annular band that is composed of three connected annular pieces, viz.: a spacing member which fits between and abuts the ends of both bodies, and an inner annulus which fits within the spacing member and overlaps and fits within the open ends of the two bodies, and an outer annulus which fits over the spacing member and overlaps and externally fits the open ends of the two bodies, and the overlapping parts of the two bodies and the inner annulus of the intermediate member being connected by interlocking external annular grooves on the inner annulus and by inwardly bent annular ribs on the overlapping parts of the bodies which project into and fit said annular grooves, and the outer annulus having its upper and lower edges bent inward into the annular external grooves on the bodies which are formed when the inwardly bent ribs are formed thereon.

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

HENRY W. AVERY.

Witnesses:

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L. I. PORTER.