Feb. 1, 1949. E. H. BENSON 2,460,410

BARREL

Filed Nov. 19, 1945

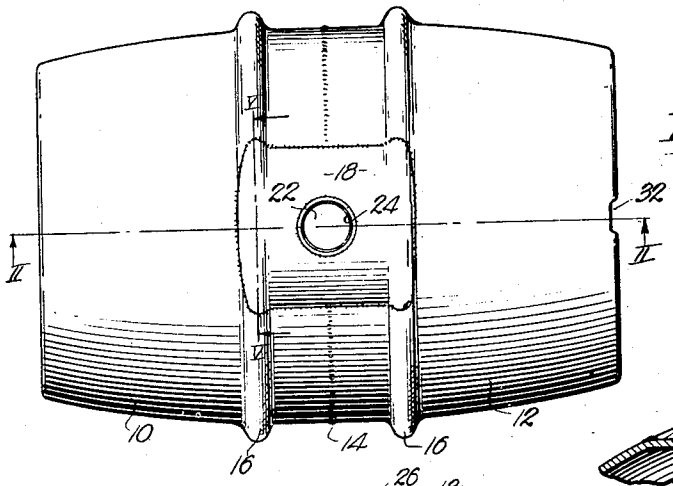


Fig. 1.

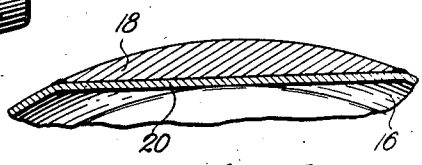


Fig. 5.

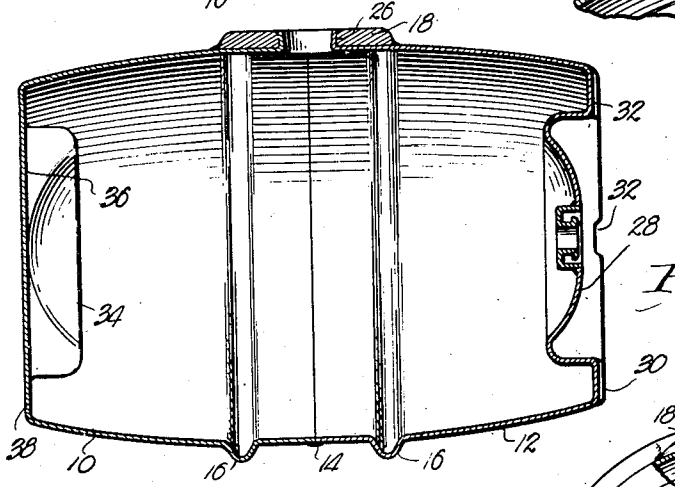


Fig. 2.

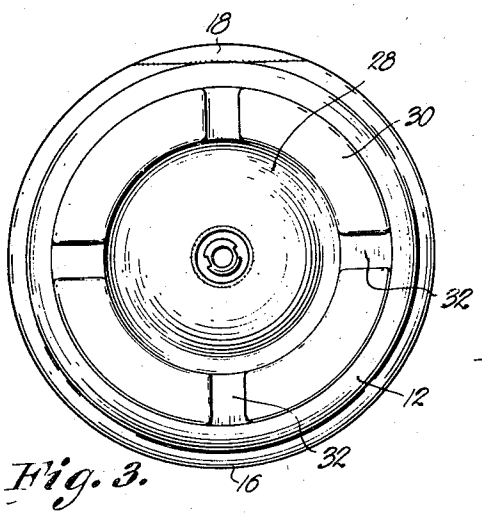


Fig. 3.

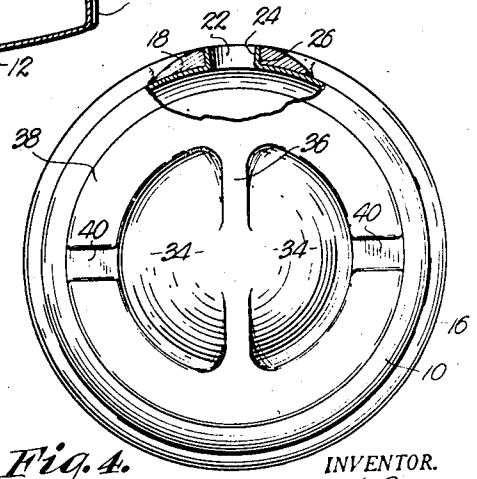


Fig. 4.

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BARREL

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1 Claim. (Cl. 220—1)

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This invention relates to receptacles in the nature of barrels produced from sheet material, and has for its primary aim to provide a container of the aforementioned character, the filler opening whereof is reinforced by unique and novel structure permitting the driving in of a plug after the barrel has been filled, ready for transportation.

One of the important aims of the invention is the provision of a barrel formed of aluminum or similar relatively light sheet material, the nature whereof would ordinarily preclude the placement of the conventional wedge-shaped plug in the filler opening, if the opening were not reinforced in the manner contemplated by this invention.

A yet further object of this invention is to provide a barrel formed of sheet aluminum, the filler opening of which is particularly designed to minimize construction cost, yet to insure that the customary rough usage to which the barrel is put, will not multilate the parts of the barrel adjacent to the said opening.

Additional aims of my invention are to produce a barrel having a cast or pressed plate welded to the outside of the barrel body around the bung hole thereof; to provide a specially formed barrel that will allow uninterrupted flow of liquid from the barrel through the bung hole even though the reinforcing plate is in place to strengthen the body; to form the barrel body and plate in complementary contours and in such fashion as to eliminate uneven inner surfaces to catch and hold liquids therein; and to apply a bung plate so as to eliminate all possible contact therewith.

Other aims of the invention are important and will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Fig. 1 is a top plan view of a barrel made in accordance with the present invention.

Fig. 2 is a sectional view taken on line II—II of Fig. 1.

Fig. 3 is an elevational view of one end of the barrel.

Fig. 4 is an elevational view of the opposite end; and

Fig. 5 is a fragmentary sectional view taken on line V—V of Fig. 1, on an enlarged scale.

Barrels produced of sheet aluminum are desirable not only from the standpoint of minimizing weight, but because of the ease with which the barrel may be formed during its manufacture. Aluminum sheet will not withstand the

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tremendous pressure usually exerted at the filler opening of the barrel when a bung is driven to place, and therefore, means has been provided for strengthening the barrel body at the zone of the bung or filler opening, to the end that a tapered plug may be inserted, as is now the custom, and later removed when the barrel is to be refilled—all without destructive results.

In the drawing, the preferred form of the invention has been illustrated and comprises a barrel formed of two opposed sections 10 and 12, each substantially cup-shaped in form and having their rims contiguous and in abutting relation when the barrel body is assembled.

Sections 10 and 12 are welded together as at 14 and each section has a bead 16 rolled or otherwise formed therein to strengthen the annular, practically cylindrical wall of the body and further to present narrow faces to support the barrel when it is rolled.

Each bead 16 is provided with a flattened section 20 near filler opening 22. This flattened section on each bead 16 is tangential to the wall of the section in which the respective bead 16 is formed and extends outwardly to each side of the longitudinal median of the barrel and which passes through filler opening 22.

An out-turned flange 24 forms opening 22 and block 18 has an opening 26 large enough to receive flange 24.

Block 18 is substantially the same thickness as the height of flange 24 and the opening 26 in block 18 is beveled to receive welding flux as clearly shown in Figs. 2 and 4. Opening 22 is tapered gradually from the inner surface of the barrel body to the outer face of block 18. Thus, a frusto-conical plug of conventional form, but not here shown, may be driven into the filler opening when the barrel has received its contents. Bending or otherwise mutilating flange 24 is prevented by plate 18 and liquid entering or leaving the barrel through bung hole 22 does not contact plate 18, nor does liquid standing in the barrel ever contact plate 18.

Block 18 is formed to have its outer face merge with the outer face of the walls of sections 10 and 12 on each side of filler opening 24. The block is substantially square and its ends terminate in alignment with beads 16. The underside of block 18 at its zones of juncture with the flattened section 20 in each bead, is flat but the block is arcuate in contour along its outer face to continue the outer edges of bead 16. The block is welded to the barrel body around its edges and

strength of high order is imparted to the zone or area whereupon block 18 is placed.

The relatively soft substance from which sections 10 and 12 are produced, is adequately strengthened where needed through the use of block 18. Its introduction into the assembly does not hinder the normal function of beads 16 either as strengthening elements or as rims upon which the barrel may be rolled, and when plugs are moved to and from their place in the filler opening 24—26, no destructive effect will be noticeable and long life of the barrel is insured.

With beads 16 flattened as clearly seen in Fig. 5, a smooth uninterrupted inner surface is presented for the flow of liquid toward opening 22 when the barrel is disposed with the opening at the lowermost point thereof. Thus no trapping of liquids within any part of the barrel is possible when it becomes desirable to drain the same.

One end of the barrel is dished as shown at 28 and an annular rim 30 around the dished portion is provided with a number of embossed, radial grooves 32. The opposite end of the barrel is strengthened by being pressed inwardly to form a well 34 on each side respectively of aligned, opposed ribs 36, the inner proximal ends whereof merge with the end of the barrel at its outermost point. An annular area 38 circumscribes the wells 34 and radial grooves 40 are formed in this area 38. So contouring the ends of the two sections 10 and 12 will establish a strong body having the ability to overcome blows due to handling and will likewise insure against bulging either inward or outward to alter the fixed capacity of the barrel which is determined when the barrel is made.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

In a barrel of the character set forth, a body formed of sheet metal, provided with a filler opening in the side thereof and a bead on each side of the said filler opening; an out-turned flange integral with the barrel body and defining the edges of the filler opening; a flattened section in each bead having portions extending to each side of a longitudinal line passing through the axis of the filler opening; and a relatively strong reinforcing block secured to the outer face of the body, provided with a hole for receiving the out-turned flange, said block having its inner face contoured to rest against the outer face of the barrel body, including the flattened sections of the beads, and having its outer face contoured to form an uninterrupted, concentric, continuation of the outer faces of the ribs, the inner face of that portion of the block between the flattened portions of the ribs, and extending laterally from the opening being in snug contact with the underlying face of the barrel.

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The following references are of record in the file of this patent:

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