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E. F. LEE
STEEL BARREL

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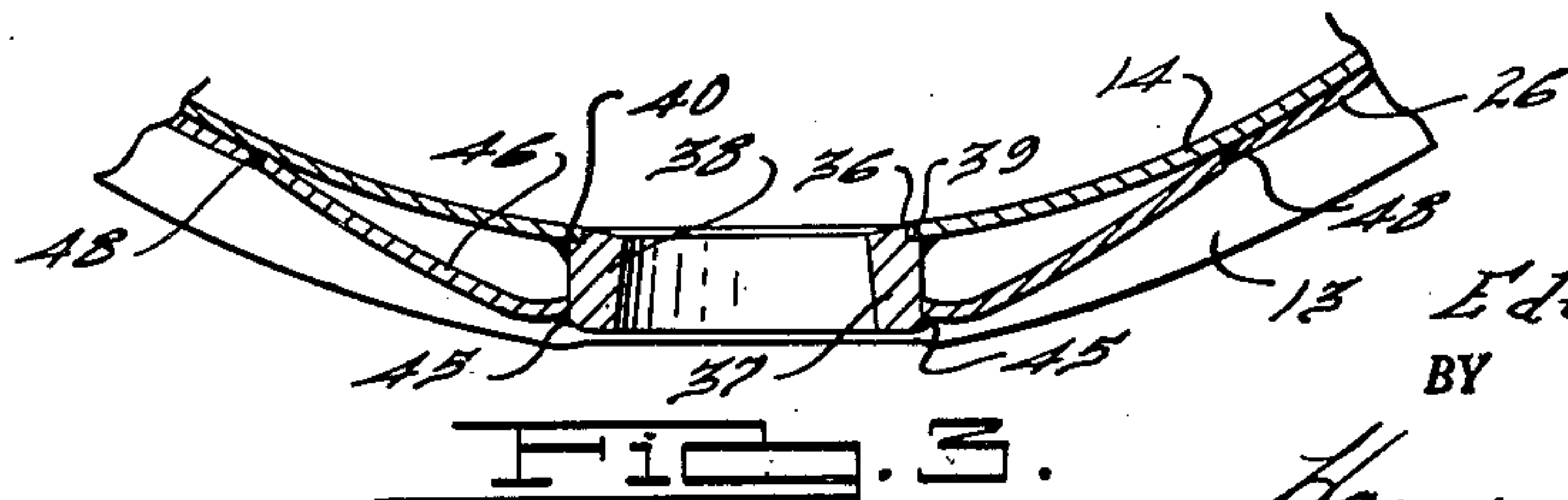
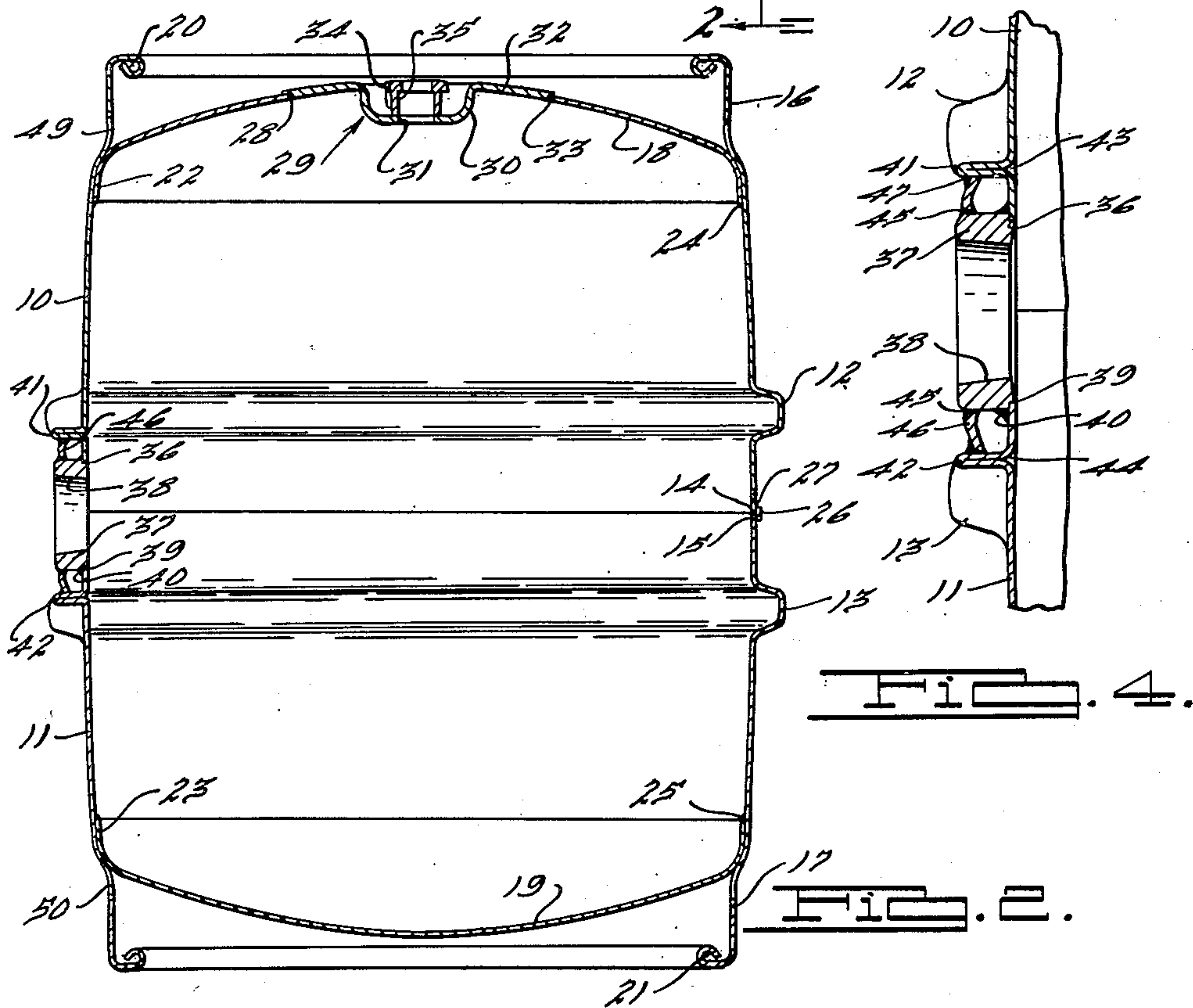
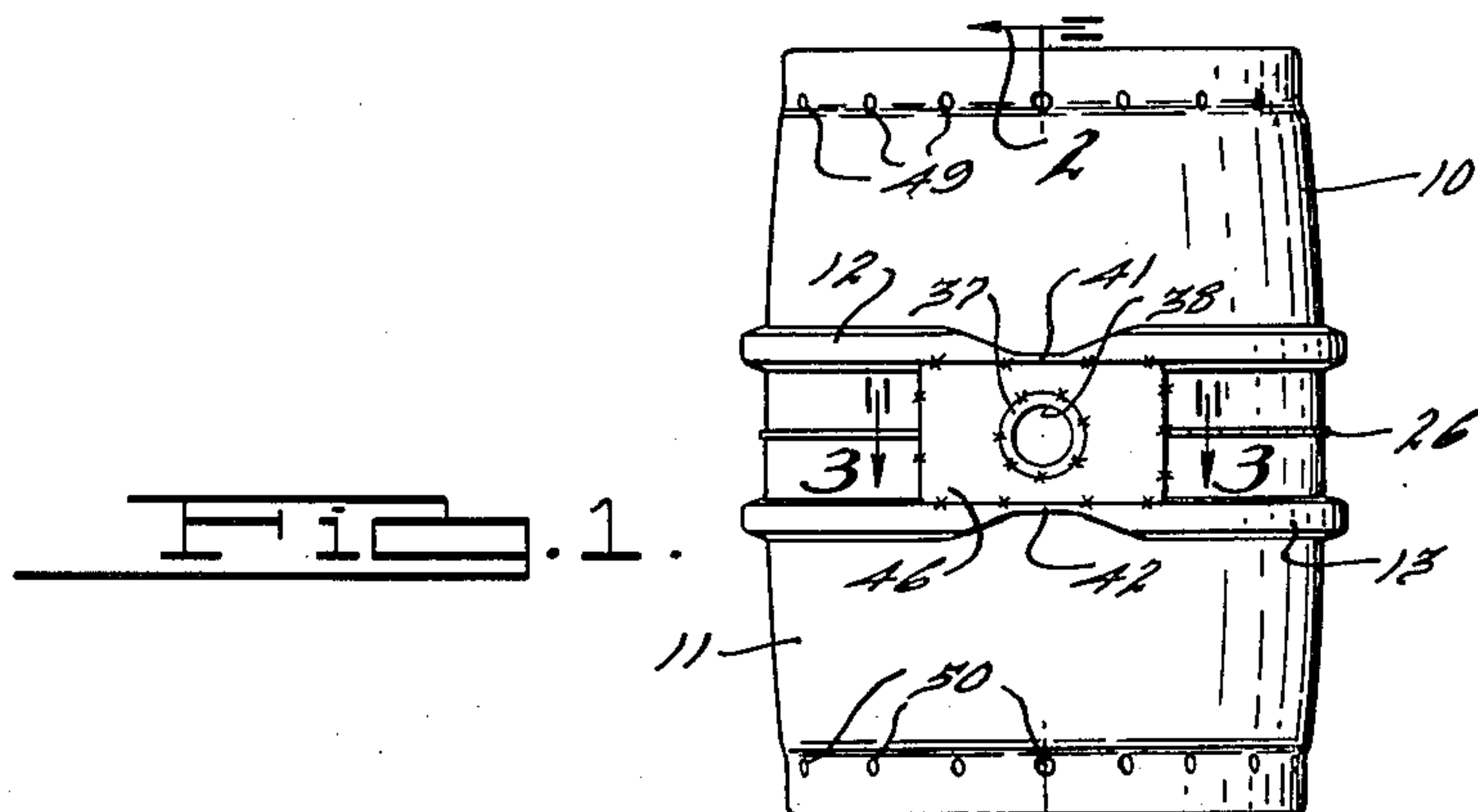


FIG. 4.

FIG. 2.

FIG. 3.

INVENTOR.

Edward F. Lee.

BY

Harnes Dickey - Purcell
ATTORNEYS.

UNITED STATES PATENT OFFICE

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STEEL BARREL

Edward F. Lee, Detroit, Mich., assignor, by mesne assignments, to Serrick Corporation, a corporation of Ohio

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This invention relates to fluid containers generally and more particularly to steel barrels adapted for handling liquid beverages such as beer, for example.

Barrels of this general character have heretofore been constructed with the upper and lower body sections thereof butt-welded and have had their upper and lower head covers inserted from the outside of the barrel. The problem encountered with the butt-welding of the two body sections of the barrel has been one of proper alignment of the sections prior to and during the welding operation, especially where the edges of the two adjoining body sections do not abut perfectly at all points of their circumference, while the disadvantage with the welding of the upper and lower head covers to the barrel from the outside of the barrel is that by such procedure crevices are developed between the outer edge of the head covers and the body section of the barrel preventing proper drainage of the barrel especially where such a crevice is at the inner periphery of the bottom of the barrel. The present invention contemplates the provision of a novel barrel in which the foregoing drawbacks have been eliminated and whereby a stronger and more desirable barrel has been provided thereby.

An object of the present invention, therefore, is to provide a novel and improved steel barrel adapted for handling liquid beverages.

Another object of the invention is to provide a steel barrel of novel construction wherein, during a welding operation of the upper and lower body sections of the barrel for forming the body of the barrel, the two sections are automatically maintained in proper alignment.

A further object is to provide a novel steel barrel which has added metal at the point of juncture of its two body sections whereby added strength is imparted to the barrel in a desirable manner at the juncture point.

Another object is to provide a novel steel barrel in which both the upper and lower body sections are of the same diameter with the inner edge of one section being provided with a radial outwardly extending flange telescopically receiving the inner edge of the other section, the two sections being welded at their point of contact thus eliminating any problem which would otherwise arise as a result of the inner edge of one section not contacting the inner edge of the other section at all points of its circumference.

A further object is to provide a steel beer barrel of novel construction in which the top and bottom covers or heads are inserted in the upper

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and lower body sections of the barrel from the interior of the body sections and welded to the sections at the interior thereof, thereby providing the barrel with reinforced shoulders and also preventing the formation within the barrel of undesirable crevices which would otherwise trap liquid dirt or bacteria therein and prevent their proper removal from the barrel.

A still further object of the invention is to provide a novel steel barrel in which the runners thereof are pinched together adjacent the side bung and lined with some suitable material such as pitch or weld metal so as to provide a smooth inner surface for the barrel near the bung whereby during a washing and draining operation there is no possibility of entrapping undesirable liquid within the barrel.

Another object is to provide a novel steel barrel which possesses but a minimum number of parts, is simple in construction and relatively inexpensive in manufacture and which, moreover, is reinforced at its various junction points so as to make it extremely durable thereby adapting it for a long period of use.

A further object is to provide a novel method for constructing a barrel of the character described above.

The above and further objects and novel features of the invention will more fully appear from the following detailed description when the same is read in connection with the accompanying drawing. It is to be expressly understood, however, that the drawing is for the purpose of illustration only and is not intended as a definition of the limits of the invention.

In the drawings, wherein like reference characters refer to like parts throughout the several views;

Figure 1 is a side elevation view of the novel steel barrel of the present invention;

Figure 2 is a sectional view taken substantially along line 2—2 of Figure 1;

Figure 3 is a sectional view taken substantially along line 3—3 of Figure 1; and

Figure 4 is an enlarged view of the side bung and surrounding elements thereof of the novel barrel hereof.

The novel steel barrel of the present invention is more clearly shown in Figure 1 of the drawing and comprises suitably formed upper and lower cylindrical shells or body portions 10 and 11, open at each of their ends, each of the body portions having runners 12 and 13 stamped or rolled therein near their inner and cooperating edges 14 and 15. As will be observed from the

drawing the side walls of the shells or body portions 10 and 11 slope inwardly somewhat from their inner to their outer ends and at their outer ends have formed integrally therewith chimes 16 and 17 which flare inwardly somewhat to form an abutment for heads or covers 18 and 19, to be more fully described hereafter. The central body portions of the chimes are substantially cylindrical and terminate at their outer ends in beads 20 and 21 which not only adds strength to the barrel at its point of support when standing but facilitates stacking of the barrels on one another as well as manual handling of the barrels.

In accordance with one novel feature of the present invention the heads or end covers 18 and 19 which are concave or dish-shaped and have flange or skirt portions 22 and 23 formed therewith at their outer peripheries, are inserted and pressed into body portions 10 and 11, from the inside thereof, with the outer ends of the skirt or flange portions facing the interior of the barrel, until the outer periphery of the end covers abuts with the inner periphery of the inwardly flared portions or chimes 16 and 17. Thereafter the outer end or circumference of the flange portions of the end covers are welded as at 24 and 25 from the inside of the body portions to the interior periphery or wall of the body portions.

The advantages gained with such construction will now be apparent. By inserting the heads or end covers 18 and 19 from the interior of the shells or body portions 10 and 11 and by welding them at the interior of the body portions to the inner walls thereof, all possibility of undesirable crevices which would otherwise hinder complete withdrawal of the liquid from the barrel, has been eliminated. Moreover, by such construction the barrel is provided with desirably reinforced shoulders at the junction point of the heads or end covers with the shells or body portions of the barrel.

In accordance with a further feature of the present invention, the inner edge 15 of the shell or body portion 11 is provided about its entire circumference with a radially extending endless flange 26 within which the inner edge 14 of body portion 10 may nest. By this provision, the upper shell or body section 10 is automatically maintained in alignment with the lower shell or body section 11, the inner edge 14 of the former abutting the inner end of the latter. The two body sections are thereafter welded together as at 27 to form the barrel, the weld being provided from the outside of the barrel at the point where the upper body portion meets with the lower body portion. By this construction the two shells or body sections are automatically aligned in abutting relation for welding purposes and the weld provides added metal at juncture point thereby reinforcing the barrel at such point.

The upper head or end cover 18 is provided with a central aperture 28 which receives therein a cover member 29 having a cup-shaped central portion 30 provided at its lower end with an orifice 31 and at its upper end with an extending flange portion 32 whose outer end, in turn, is grooved or channeled as at 33 to fit about opening 28. The cover at its flanged outer end is thereafter suitably welded to head 18. A forged member 34 having a central opening 35, which is aligned with orifice 31, is suitably welded, such as by a projection weld, to cover member 29, the opening 35 thereof being adapted for receiving a suitable stopper (not shown) therein. Where previously the cover member 29 constituted a

forging and member 34 was generally butt-welded thereto, it is preferable to form the cover member 29 as a stamping and join the member 34 thereto by way of a projection weld.

The upper and lower shells or body portions 10 and 11, moreover, are provided at their adjoining inner ends 14 and 15 with a side opening 36 which receives therein a bung member 37 having a central orifice 38 and which is channeled at its outer periphery as at 39 for adapting it to fit within opening 36. Once so assembled, bung member 37 is thereafter joined to the outer wall of the barrel by a suitable weld, as shown at 40 (Figures 2 and 4). Inasmuch as some of the liquid used for cleaning or rinsing the barrel would be entrapped within the channels or grooves formed by runners 12 and 13 when the barrel is being drained through bung member 37, the runners are pinched or drawn together, as shown in Figure 1, at 41 and 42, adjacent the bung member. In this manner, while relatively small crevices 43 and 44 remain, these too are eliminated when the interior wall of the barrel is lined with some suitable substance, such as pitch or weld metal, to prevent contamination of the beer or other beverage by contact with the steel barrel.

For reinforcing the bung member 37 and for avoiding damage which would otherwise occur due to jars imparted to the end of the bung member, the outer periphery of the latter is joined through a weld 45 with a protective plate 46 which is centrally apertured to receive the free end of the bung member 37 therein, the upper and lower ends of the plate being joined to the inner side of runners 12 and 13 by a suitable weld 47, and the outer side ends of the plate being joined to the outer wall of the barrel by way of suitable weld 48.

In the event of a washing operation, some of the cleansing fluid may become trapped within chimes 16 and 17 and in order to avoid this and to permit proper drainage, a series of spaced apertures 49 and 50 are provided in the wall of the chimes for facilitating proper drainage of the chimes.

It will now be apparent to those skilled in the art that a new and novel steel barrel has been provided hereby in which there are no internal crevices which would prevent proper drainage of the barrel and which, moreover, is so formed that its two shells or body sections are properly aligned when joined permanently and which, furthermore, is reinforced at its central and shoulder portions so that a more desirable and durable barrel is provided than that heretofore available.

Although but a single embodiment of the present invention has been illustrated and described in detail, it is to be expressly understood that the invention is not limited thereto. Various changes may be made in the design and arrangement of the parts without departing from the spirit and scope of the invention, as will now be understood by those skilled in the art.

What is claimed is:

1. A steel barrel comprising lower and upper cylindrical shells, each shell being open at both its top and bottom ends, an annular head member having a peripheral skirt portion engaging the inner wall of said upper shell for closing the top end thereof, means comprising an internal weld joining said head member to the internal wall of said upper shell, a second annular head member having a peripheral skirt portion facing the skirt portion of said first head member and engaging the inner wall of said lower shell for

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closing the bottom end thereof, means comprising a second internal weld joining said second head member to the internal wall of said lower shell, an endless radial outwardly extending flange carried by the top end of said lower shell, the bottom end of said upper shell abutting the top end of said lower shell and nested within said flange whereby both of said shells are maintained in alignment, means comprising a weld between said flange and the outer wall of said upper shell whereby said shells are permanently joined together at their abutting ends, a runner carried by each shell adjacent their abutting ends and defining two internal circumferential channels, and a drain outlet for said barrel intermediate said runners, each of said runners being pinched together adjacent said outlet to eliminate said channels in the vicinity of said outlet to thereby expedite complete draining of the barrel.

2. A steel barrel comprising butt welded upper and lower generally cylindrical body sections, each section being provided with a runner adjacent its inner end and said runners defining circumferential channels inside the barrel, a drain outlet for said barrel intermediate said runners, and an annular headpiece closing the outer end of each section provided with a depending skirt portion engaging with the inner wall of each section and extending toward the center of the barrel, the edge of said skirt portion being welded by an internal weld to the inner wall of the associated section, each of the runners being pinched together adjacent said outlet to eliminate

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said channels in the vicinity of said outlet to thereby expedite complete draining of the barrel.

3. A formed metal barrel having axially spaced runners defining internal annular channels and a drain outlet intermediate said runners, the sides of each runner being pinched together adjacent said outlet to eliminate said channels in the vicinity of said outlet and to expedite complete draining of the barrel.

EDWARD F. LEE.

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