Nov. 13, 1923. 1,474,052

N. E. McLOON

COLLAPSIBLE BARREL

Filed Aug. 15, 1921

Fig. 1

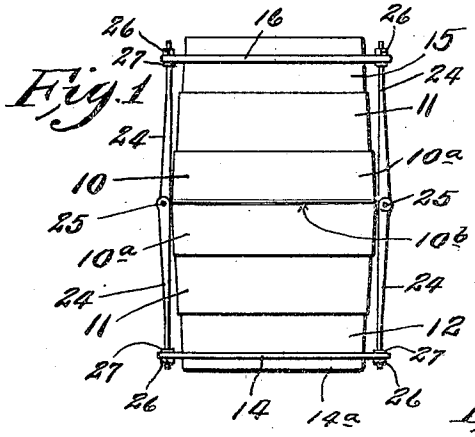


Fig. 2

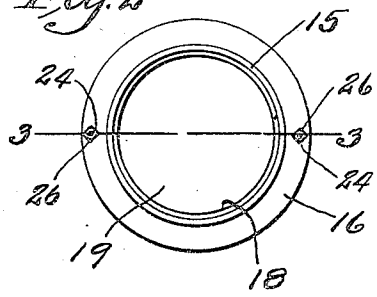


Fig. 5

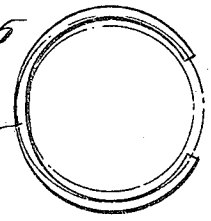


Fig. 3

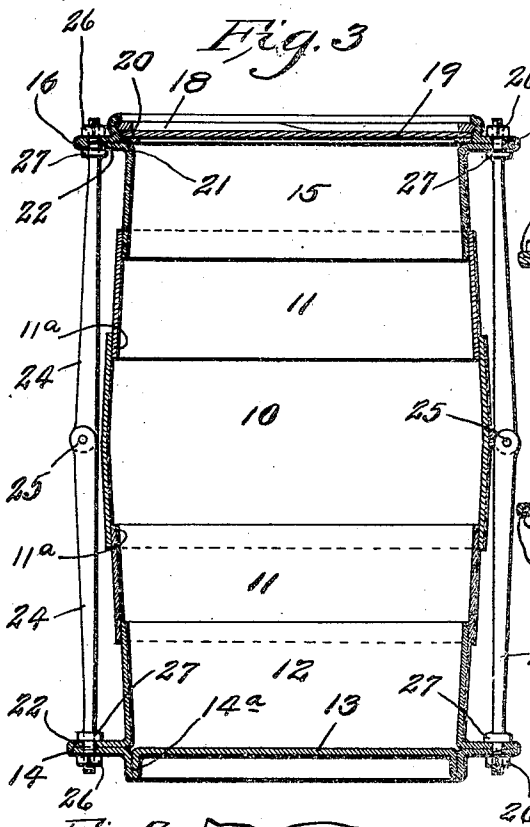


Fig. 4

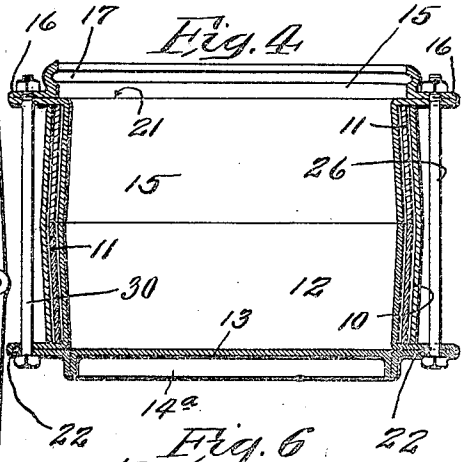


Fig. 6

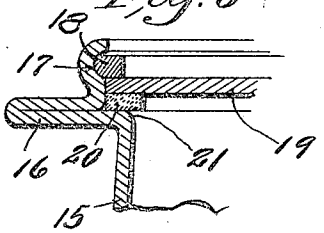
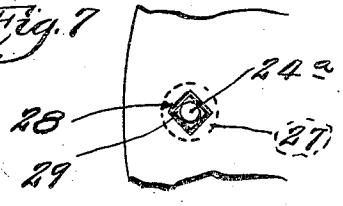


Fig. 7



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UNITED STATES PATENT OFFICE.

NELSON E. McLOON, OF GLENCOE, MISSOURI.

COLLAPSIBLE BARREL.

Application filed August 15, 1921. Serial No. 492,361.

To all whom it may concern:

Be it known that I, NELSON E. McLOON, a citizen of the United States, residing at Glencoe, county of St. Louis, and State of Missouri, have invented a certain new and useful Improvement in Collapsible Barrels, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this application.

This invention relates generally to collapsible containers, and more particularly to collapsible barrels. The objects of the invention are to provide a container of the class described which is light in weight and of strong and durable construction, and which when extended, can be advantageously used in shipping material such as cement any distance without danger of said container accidentally collapsing.

Still another object of my invention is to provide a container of the class described, which, when in collapsed position, occupies very little space so that it can be returned to the shipper at a small cost for shipping charges, and which can be manufactured at low cost.

With these and other objects in view, my invention consists in certain novel features of construction and arrangements of parts hereinafter described and claimed and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a barrel in its extended position.

Figure 2 is a plan view of the same.

Figure 3 is a vertical cross section taken on line 3—3 of Figure 2.

Figure 4 is a vertical cross section of the barrel in its collapsed position.

Figure 5 is a plan view of the expansion ring used to hold the cover of the barrel in position.

Figure 6 is a detail cross section taken vertically through the upper portion of the barrel.

Figure 7 is a fragmental view of one of the barrel flanges showing a modified construction.

Referring by numerals to the accompanying drawings, 10 indicates a tubular middle section which tapers towards both ends, and is preferably made of two pieces 10^a secured together in any suitable manner, such as by welding, along their inner contiguous edges 10^b. 11 are intermediate sections tapering outwardly and having their inner ends 11^a arranged within the outer ends of the middle section 10. A bottom section 12 provided with a bottom wall 13 has telescopic engagement with the lower one of the intermediate sections 11, and is provided with an outwardly projecting flange 14 and downwardly projecting annular flange 14^a. The top section 15 has telescopic engagement with the upper one of the intermediate sections 11 and is provided with an outwardly projecting flange 16. The marginal flange of said top section is transversely curved to form an inwardly disposed annular groove 17 which forms a seat for a split expansion ring 18, the latter being arranged when occupying groove 17 to lock a circular cover plate 19 in position in said top section 15.

In order to form a snug fit and seal the joint between the cover plate 19 and section 15, a washer or gasket 20 of felt or analogous material is arranged on the upwardly presented annular shoulder 21 formed in the upper end of section 15 to form a seat for the cover plate 19.

When the barrel is made of pressed sheet metal the flanges can be formed by bending the metal upon itself and the sections can be pressed in any suitable shape after they are assembled together, so that said sections will have telescopic interengagement with each other. Flanges 14 and 16 are each provided with diametrically disposed openings or seats 22, which are designed to receive the ends of the folding braces 24. These braces are preferably hinged together, as indicated at 25, and their upper ends are threaded to receive the nuts 26 which are designed to engage the outer faces of flanges 14 and 16, while shoulders or lugs 27 formed integral with braces 24 and spaced inwardly from the threaded ends thereof are designed to bear against the inner faces of said flanges so that by tightening nuts 26 on braces 24, flanges 14 and 16 will be clamped between said nuts and shoulders 27. A set of these braces is provided with each barrel, and when it is desired to use the barrel said braces are placed in position and will hold the barrel sections in extended position and prevent the collapsing of said container.

In Figure 7, a portion of a flange of a

barrel is shown provided with a non-circular seat 28 to accommodate a portion 29 of a brace, which portion is non-circular in cross-section so that when the nut 26 is threaded on the threaded end 24^a, said brace will be held against rotation.

In order to hold the barrel in collapsed position, or in nested relation, comparatively short bolts 30 are placed in position in openings 22, to hold the end sections 12 and 15 in engagement with each other, thereby clamping the middle section 10 and intermediate sections 11 between flanges 14 and 16. When it is desired to use the barrel, the bolts can be removed from openings 22 by unscrewing the nuts from the threaded ends of said bolts and moving the end sections 12 and 15 away from each other, whereby the inner flared end of each section will engage the outer tapered end of the section in which said inner end is arranged.

When shipping material in the extended barrel, bolts 30 can be placed within the barrel; and when shipping the barrel in a collapsed condition, braces 24 can be placed within the collapsed barrel.

Split ring 18 forms an effective lock which secures the cover plate in position upon the barrel, and the felt portion 20 provides a seal between the cover plate and shoulder 21 so that no material can escape from the barrel.

A collapsible container of my improved construction is simple, light in weight, and being collapsible can be returned to the shipper at low shipping charges so that it can be used again for shipping purposes, thereby reducing the cost of the containers and effecting a great saving to the shipper.

What I claim is:

1. A collapsible container of the class described comprising a plurality of sections having telescopic interengagement, and removable hingedly connected sectional members having shouldered ends for engaging the end sections and locking all of said sections in extended position.

2. A collapsible container comprising a plurality of tubular sections having telescopic interengagement including a bottom section, a cover plate adapted to be removably positioned on the top section, and detachable hinged bars having flanged ends adapted to engage said top and bottom sections whereby said container is held in extended position.

3. A collapsible container comprising a plurality of tubular sections having telescopic interengagement including a bottom section, a cover plate adapted to be removably positioned on the top section, hinged bars adapted to have their outer ends detachably engage said top and bottom sections whereby said container is held in extended position, and means for removably securing said cover plate in position on said top section.

4. A collapsible container of the class described comprising a plurality of sections having a telescopic interengagement including a bottom section and a top section, said top section being provided with an inwardly disposed annular seat, a cover plate adapted to be removably positioned on said seat, packing means interposed between said cover plate and said seat, a split expansion ring adapted to be seated in said top section to hold said cover plate against its seat, and hinged bars having their ends adapted to detachably engage the top and bottom sections and maintain said container in extended position.

5. A collapsible container of the class described comprising a plurality of sections in telescoping interengagement including a bottom wall section and a top section, said bottom and top sections being provided with outwardly projecting horizontal flanges, a cover plate adapted to be seated in said top section, hinged members the ends of which are provided near their outer ends with enlarged portions for engaging the inner sides of said flanges, and having their extreme ends adapted to project outwardly through apertures formed in said flanges and hold said container in extended position, and means for engaging said projecting ends and securing them in position on said flanges.

In testimony whereof I hereunto affix my signature this 10 day of August, 1921.

NELSON E. McLOON.