Nov. 18, 1924.

1,516,073

R. E. BLACKFORD

METAL KEG

Filed Jan. 2. 1923

2 Sheets-Sheet 1

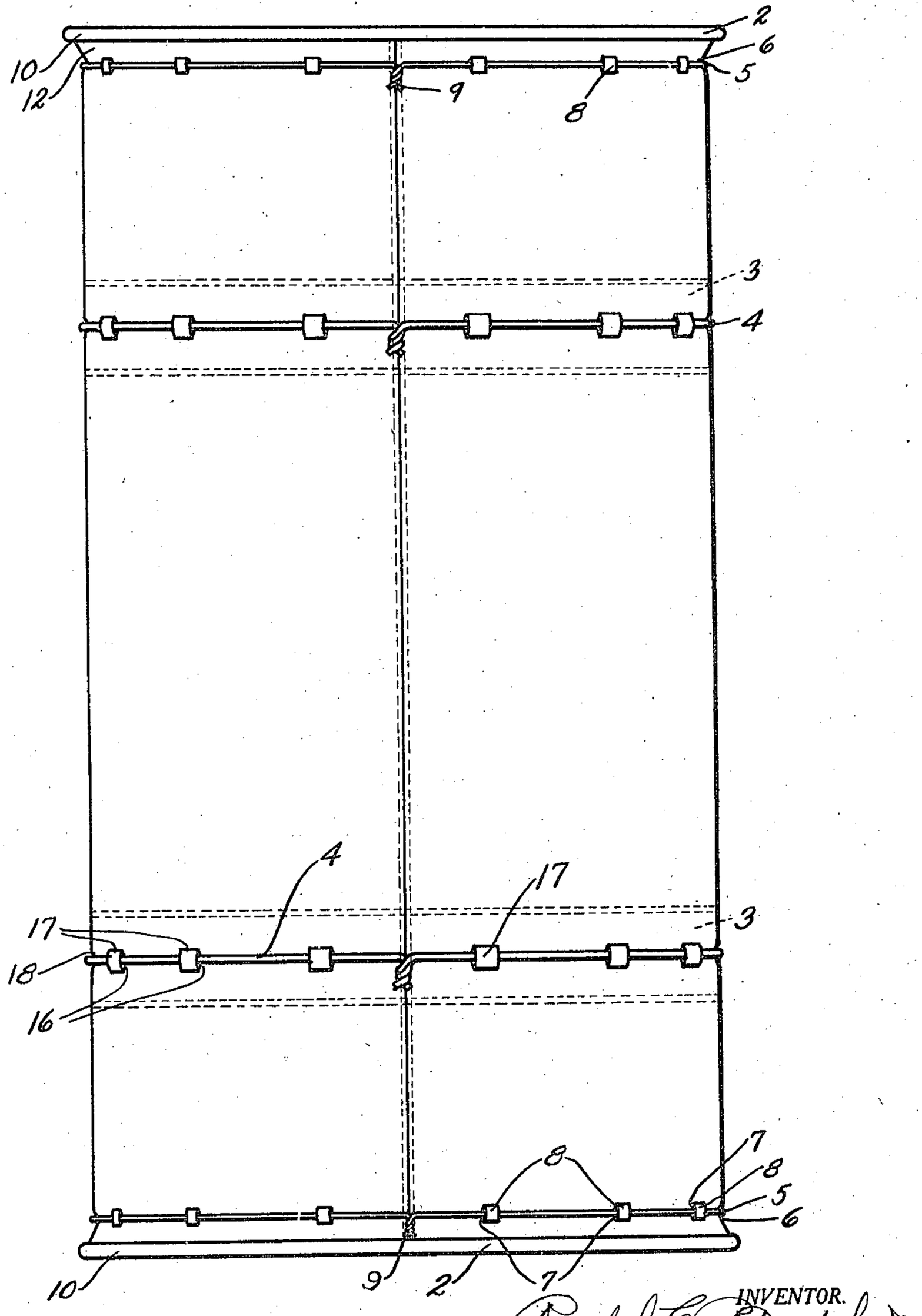

Fig. 1

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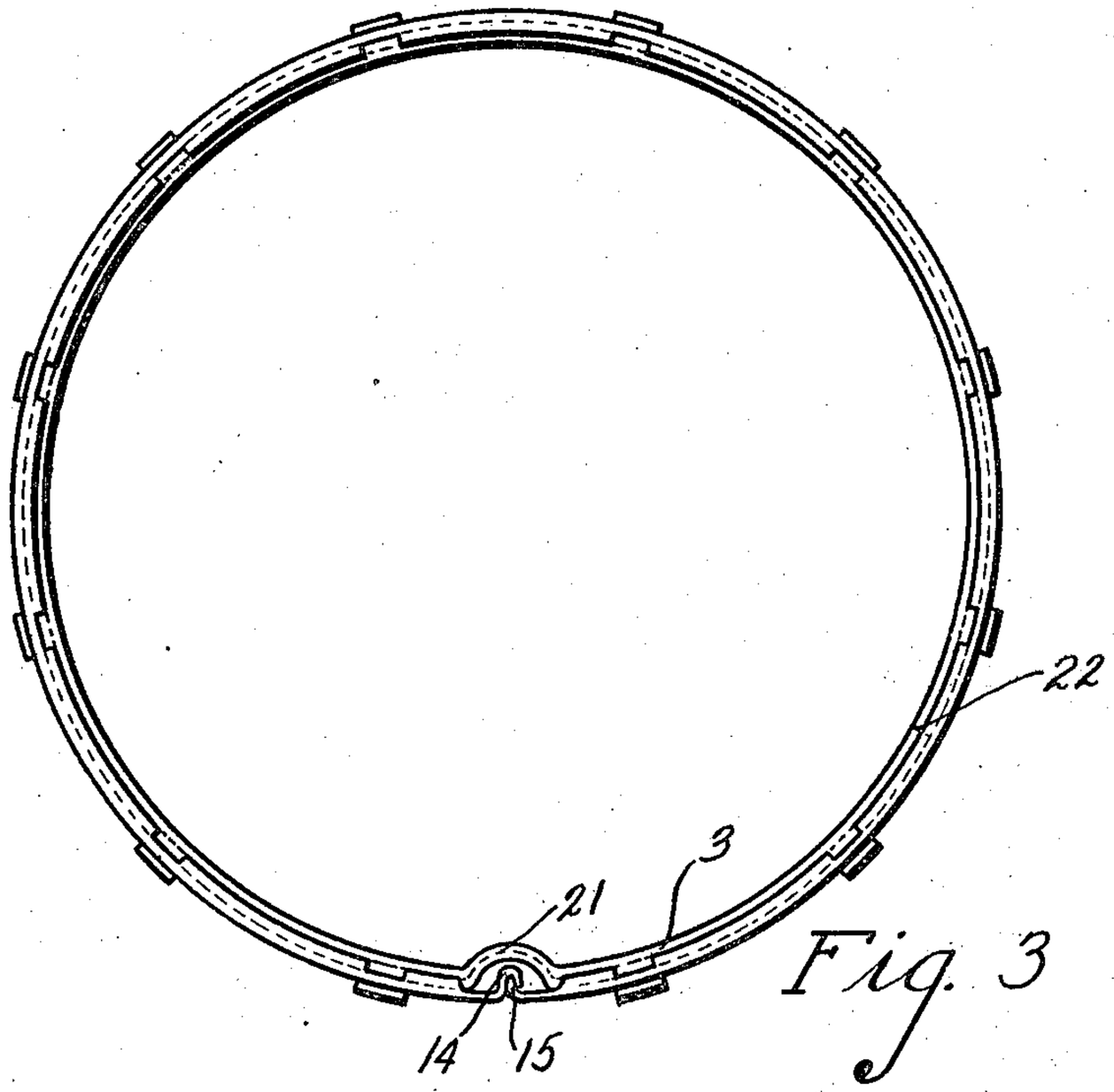

Fig. 3

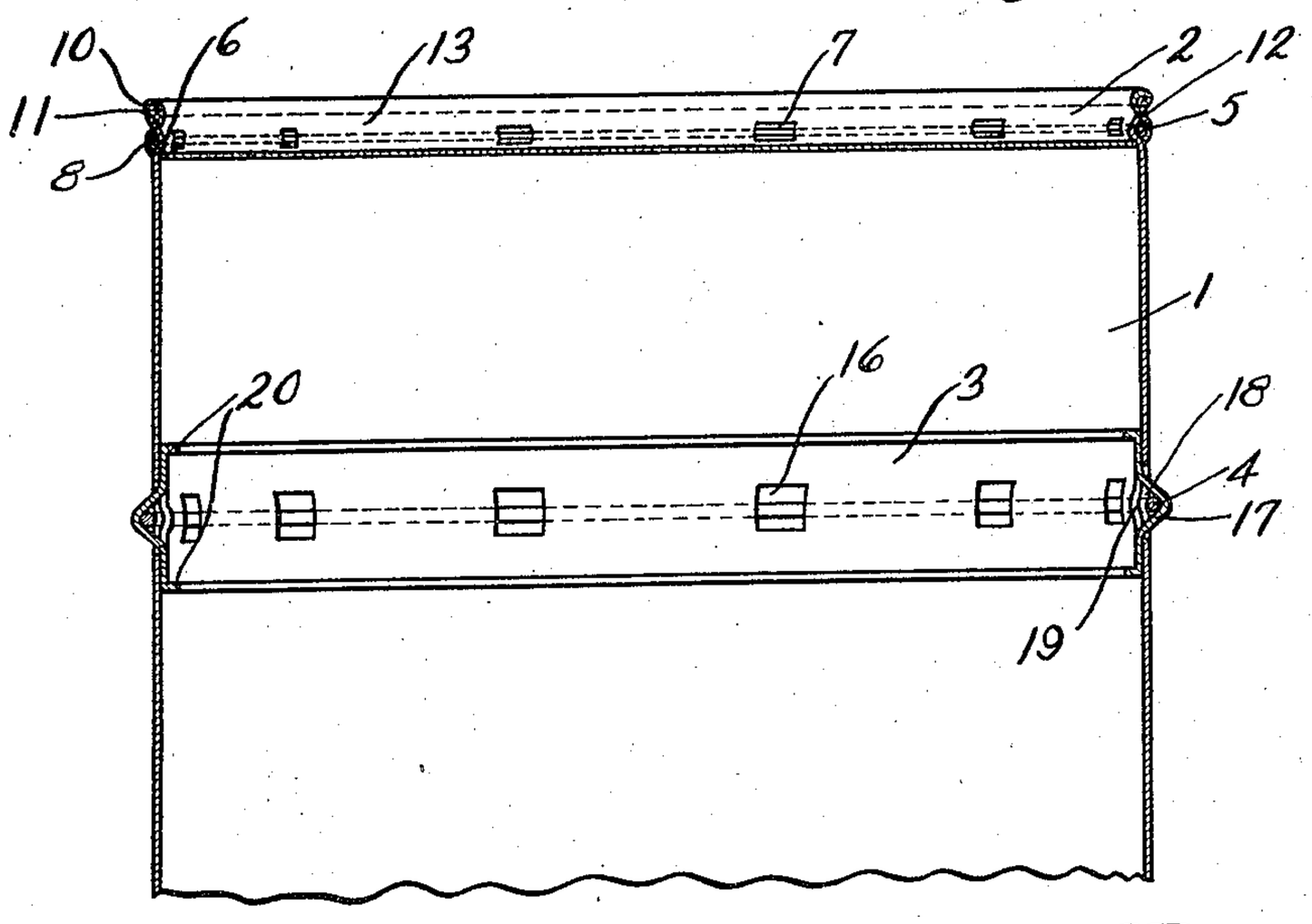

Fig. 2

INVENTOR

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ATTORNEY

Patented Nov. 18, 1924. 1,516,073

UNITED STATES PATENT OFFICE.

RALPH E. BLACKFORD, OF MIDDLETOWN, OHIO.

METAL KEG.

Application filed January 2, 1923. Serial No. 610,153.

To all whom it may concern:

Be it known that I, RALPH E. BLACKFORD, a citizen of the United States, residing at Middletown, in the county of Butler and State of Ohio, have invented certain new and useful Improvements in Metal Kegs and the like, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to improvements in metal kegs, or the like, having particular reference to metal kegs of the knock-down type.

An object of the invention is to provide a metal keg of novel, reinforced construction which will be better adapted to withstand the usage of kegs of this character, and which will be cheap to manufacture and easy to set-up from the knocked-down form.

To this end the metal keg of the present invention is provided with both exterior and interior reinforcements which serve to prevent either inward or outward collapse of the keg under the stress of heavy usage.

The improvements of the present invention relate especially to the construction of the body of the keg, and are adapted to any suitable head construction. However, the head construction shown in my copending application for Letters Patent for improvements relating to metal kegs—Ser. No. 589,291, filed Sept. 20, 1922, is especially adapted to be used in connection with the improvements of the present invention, and a similar head construction is shown in the accompanying drawings to illustrate the complete construction of the keg.

In the drawings:

Fig. 1 is a side elevation illustrating a metal keg of the improved construction:

Fig. 2 is a longitudinal sectional view of the keg:

Fig. 3 is a view illustrating a detail of construction relating to the inner reinforcement of the keg.

As here shown, the parts of the keg consist of the body —1, heads —2, inner reinforcing bands —3, outer interlocking wires —4, and head interlocking wires —5.

Adjacent its opposite ends, the keg has a series of externally arranged annular grooves —6, formed therein to receive the interlocking wires —5, and intersecting the grooves a series of apertures or slots —7 are formed in the metal which serve to receive outwardly projecting bands, or loops, —8, formed integrally with the heads —2, through which the interlocking wires —5 pass,—the wires as here shown, being of a suitable gauge to effect a substantial construction and convenient assembly of the keg.

The heads of the keg, as here shown, consist of circular pieces of metal adapted to be produced as punchings, the opposite heads being interchangeable one with the other. As the keg is assembled the heads are set in the ends and the loops —8 are pressed outwardly through slots —7, by any suitable means, as a special tool for the purpose,—the wires —5 being then threaded through loops —8 and their opposite ends twisted together as shown at —9, to interlock the heads with the body of the keg. To open a keg at one end the adjacent wire —5, is cut and withdrawn which permits of ready removal of the head.

As shown in the construction illustrated in my copending application for patent herein referred to, the rims —10 of the heads are rolled outwardly to form a smooth edge and also to form the seat for the heads of the keg as shown at —11, the ends of the body of the keg being flared outwardly slightly, as indicated at —12. The heads as here shown are sunk inwardly, thus forming relatively wide flanges —13, which serve to protect the heads and also as a means for engaging the kegs in handling the same. Also as shown in the earlier construction referred to, an improved lap joint of similar arrangement is employed for uniting the coacting ends of the body piece —1, the arrangement being of particular advantage in setting-up the keg from its knocked-down form. The construction as shown, consists of a compound flange —14 formed on one edge, and a single flange —15 formed on the opposite edge of body piece —1, the joint being formed by dove-tailing flange —15 in flange —14, the outward spring of the metal acting to hold the edges together as the heads and the interlocking wires —4 are placed on the keg.

The features of particular novelty comprised in the present invention are the inner reinforcing bands —3, the interlocking wires —4, and the manner of assembling these parts on the keg.

As here shown, a double series of apertures —16 is formed in the body piece —1, the apertures being arranged circumferen-

tially of the body as the keg is assembled. Coacting with the apertures —16 is a corresponding double series of loops —17 formed on bands —3, which project outwardly through the apertures to the required extent to receive the interlocking wires —4, a series of annular grooves —18 being formed in body piece —1, on the outer surface thereof, in which wires —4, are partially imbedded, the grooves acting as a means to locate bands —3 centrally relative to apertures —16 and to retain the bands and wires —4 in their normal relation one with the other on the keg. To accommodate the inward turn of the metal, caused by grooves —18, a corresponding turn of the metal is made on bands —3, as at —19, which serves to seat the bands relative to the body piece —1, and also to more effectively locate the bands, longitudinally of the keg, relative to apertures —16. To stiffen bands —3, in-turned flanges —20, are here shown formed on the opposite edges thereof, the arrangement permitting of using flanges of any depth to effect the required strength of construction. As shown at —21, a depression is formed in bands —3 to provide clearance for the lap joint —14—15, the ends of the bands being joined together as at —22, in any suitable manner, as by riveting or welding, or by a suitable disconnectable joint, as may be desired, to effect strength of construction and convenience in assembling the kegs.

It will be obvious that any desired number of reinforcing bands —3 and interlocking wires —4 can be used, two sets being here shown to illustrate a practicable construction for kegs adapted for ordinary use. The wires —4 and loops —17, serve the further practicable purpose of constituting means upon which the kegs will be supported when the same are rolled in handling.

From the illustrations of the drawings and the herein detailed description, it will be seen that the improved metal keg comprises a construction which will withstand both inward and outward pressures of great force, that the construction is simple being especially well adapted for cheap production, and for setting-up from the knocked-down form.

Also it will be obvious from the construction here shown that suitable modifications can be made relative to the inner and outer reinforcing bands in the detail arrangements of the same for using one independently of the other, such a construction being somewhat cheaper where kegs having less strength than the construction here shown will meet the requirements.

Having described my invention, I claim:

1. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of circumferentially arranged apertures formed therein, a band inside the keg adjacent said apertures, reinforcing said body, and having a corresponding series of looped projections formed integrally with said band and extending outwardly through said apertures and means outside the keg interlocked with said projections.

2. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of circumferentially arranged apertures formed therein, a band inside the keg adjacent said apertures, reinforcing said body, and having a corresponding series of looped projections extending outwardly through the apertures, and means interlocking with said projections outside the keg to interlock said band with the body of the keg.

3. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of circumferentially arranged apertures formed therein, a band inside the keg adjacent said apertures, reinforcing said body, and having a corresponding series of looped projections extending outwardly through the apertures, and a band extending through said loops outside the keg and acting to interlock said inner band with the body of the keg.

4. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of circumferentially arranged apertures formed therein, a band inside the keg adjacent said apertures, reinforcing said body, and having a corresponding series of looped projections extending outwardly through the apertures, and a wire extending through said loops outside the keg, having the ends joined together to draw the wire firmly to the body of the keg whereby to interlock said inner band therewith.

5. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of external grooves arranged circumferentially thereon and a series of apertures intersecting said grooves, a band inside the keg adjacent said apertures, reinforcing said body and having corresponding series of looped projections extending outwardly through the apertures, and a wire in said groove, extending through said loops and having its ends joined together to draw the wire firmly to the body of the keg whereby to interlock said inner band therewith.

6. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of circumferentially arranged apertures therein, a band inside the keg adjacent said apertures, having its opposite edges flanged to stiffen the band, and having a corresponding series of looped projections extending outwardly through said apertures, and a band outside the keg interlocked with said projections.

7. A metal keg, including in combination with the heads of the keg, an integral piece shaped to form the body of the keg, having its coacting edges joined one to the other and turned inside the keg, and having a series of circumferentially arranged apertures formed therein, a band inside the keg adjacent said apertures, reinforcing said body, having a corresponding series of projections extending outwardly through the apertures, and an inturned portion coacting with said joint to provide clearance therefor, and means coacting with said projections to interlock said band with the body of the keg.

8. A metal keg, including in combination with the heads of the keg, the body of the keg having a series of external grooves arranged circumferentially thereon and a series of apertures intersecting said grooves, the grooves lying within the periphery of the keg, a band inside the keg, adjacent said apertures, having a series of grooves formed thereon to correspond to the grooves on the body of the keg whereby to seat the band relative to said body, said band having a series of projections extending outwardly through said apertures, and means coacting with said projections whereby to interlock said band with the body of the keg.

9. A metal keg, including in combination with the heads and body of the keg, an inner and outer band, arranged circumferentially of the keg one adjacent the other, apertures in the body of the keg between said bands, and said bands having parts coacting through said apertures whereby to interlock the bands one with the other to reinforce the construction of the keg.

10. A metal keg, including in combination with the heads and body of the keg, a band, flanged inwardly to stiffen the same, and having means for locating the band in predetermined relation within the body of the keg, intermediate said heads, and further means to interlock the band with said body as the body of the keg is formed over the band whereby to strengthen the construction of the keg.

11. A metal keg, including in combination with the heads and body thereof, inner and outer bands arranged opposite one to the other on to the body of the keg intermediate said heads, means interlocking one hand with the other and both bands with the body of the keg.

12. A metal keg, including in combination with the heads and body thereof, inner and outer reinforcing members for the body of the keg arranged circumferentially thereon opposite each other intermediate said heads, said inner member being adapted to have the body of the keg formed thereover, and said outer member to be drawn taut to said body so formed, and coacting interlocking means between the body and said members.

13. A metal keg, including in combination with the heads and body thereof, inner and outer reinforcing members for the body of the keg arranged circumferentially thereon opposite each other intermediate said heads, means coacting between said inner member and the body of the keg whereby to effect a predetermined locating relation therebetween, and said outer member to be drawn taut to said body so formed, whereby said body and members are firmly held in friction contact relation one with the other.

In testimony whereof, I affix my signature.

RALPH E. BLACKFORD.