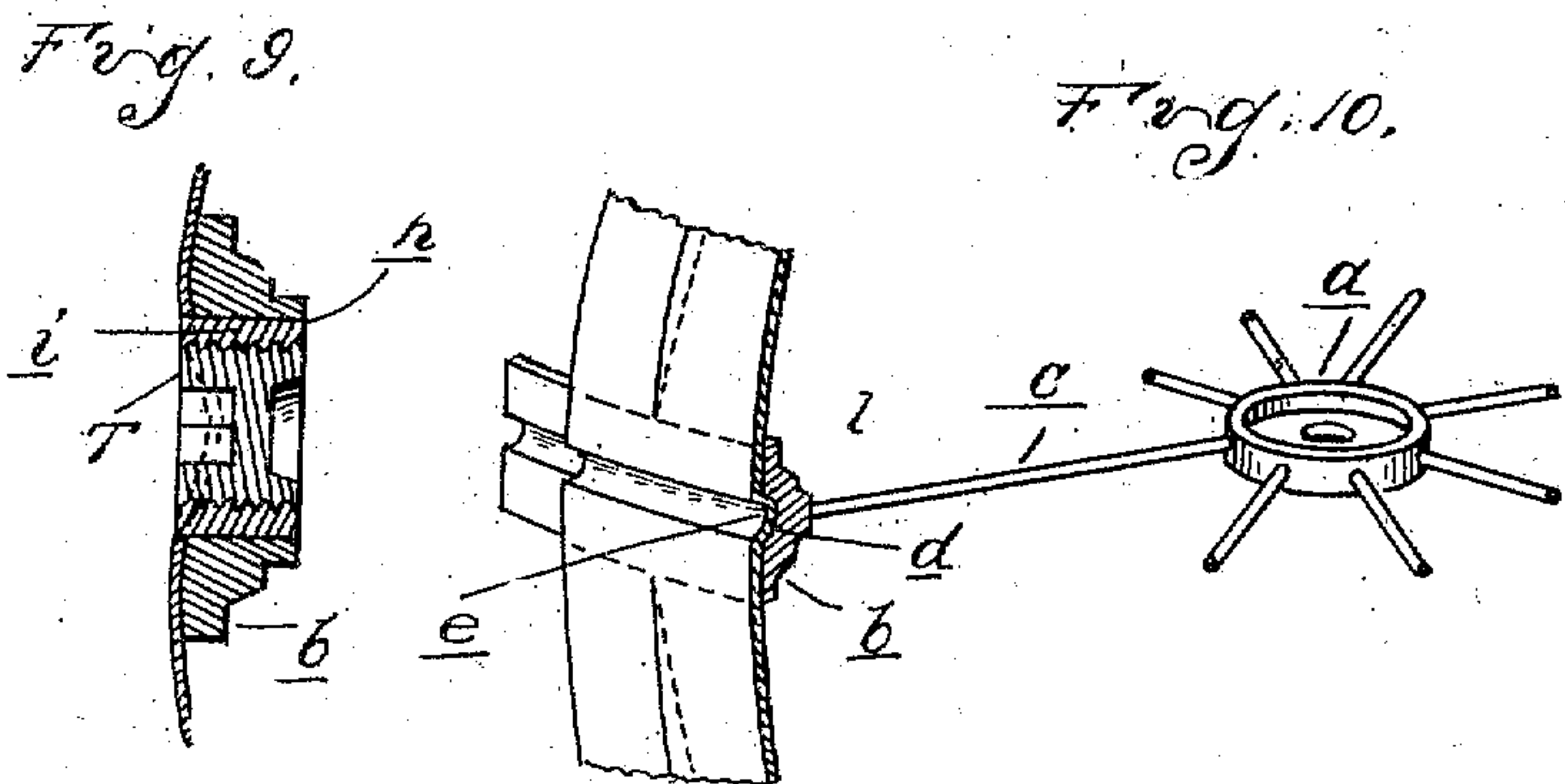
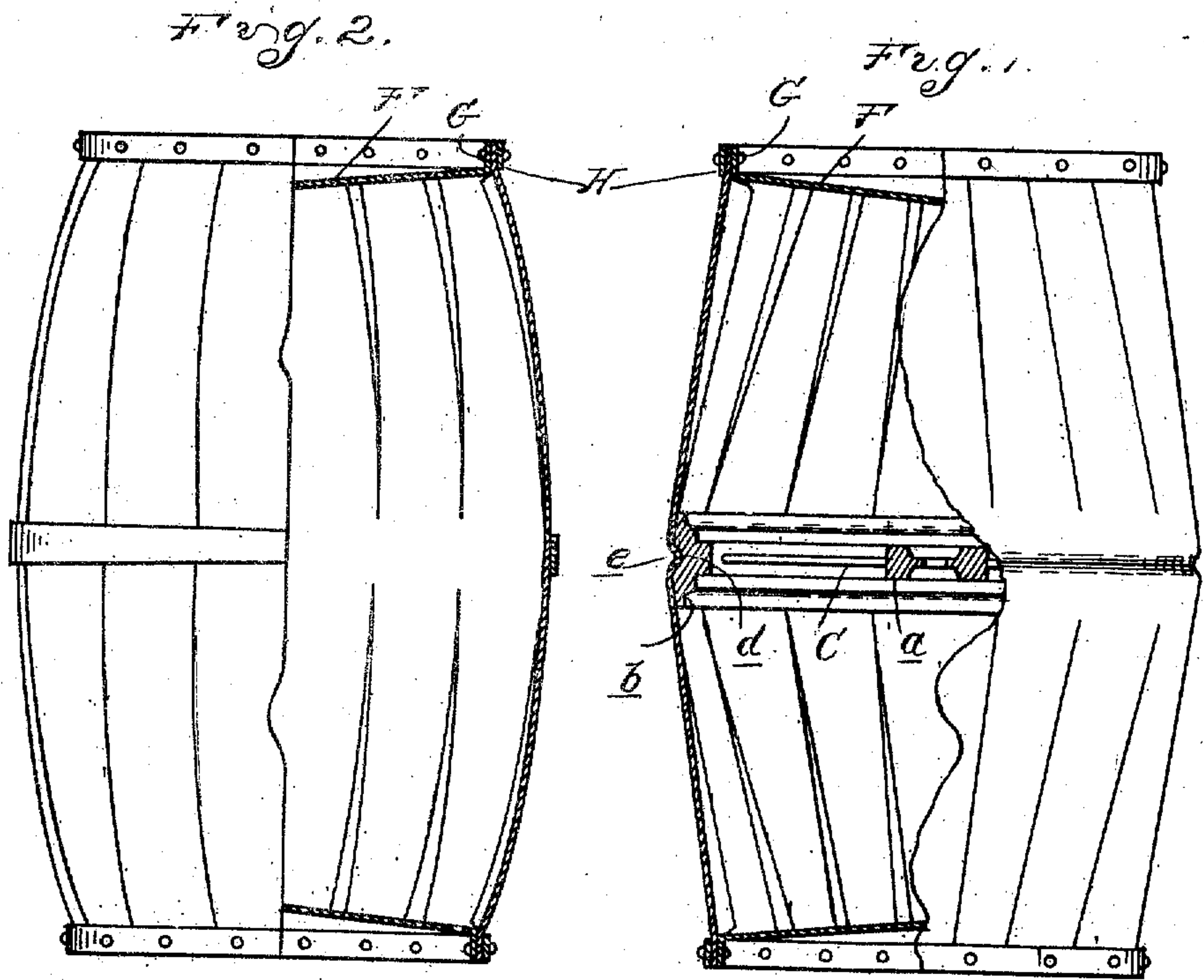


No. 880,080.

PATENTED JULY 16, 1907.

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APPLICATION FILED SEPT. 22, 1906.

2 SHEETS—SHEET 1.



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APPLICATION FILED SEPT. 22, 1906.

2 SHEETS—SHEET 2.

Fig. 3.

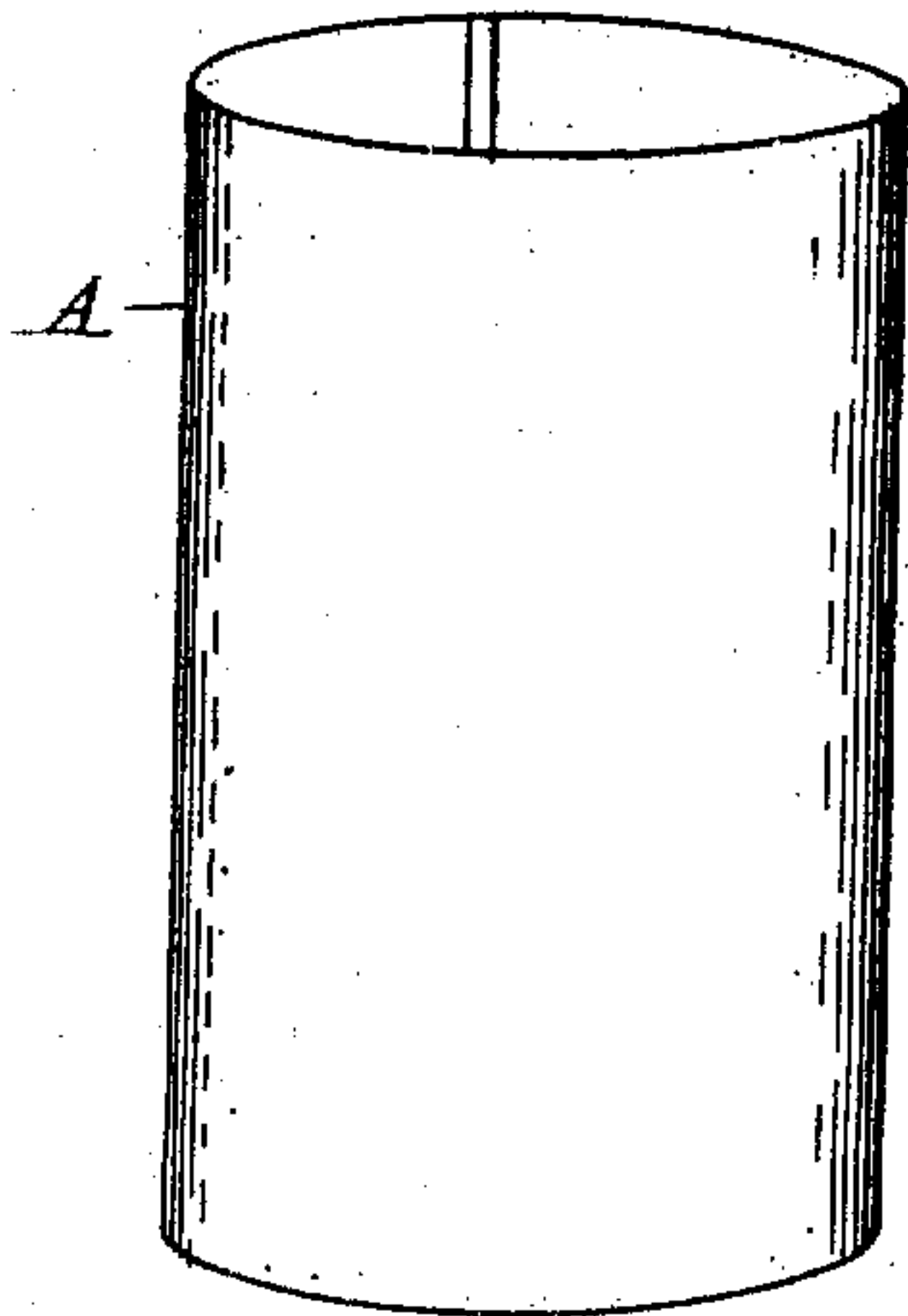


Fig. 4.



Fig. 5.

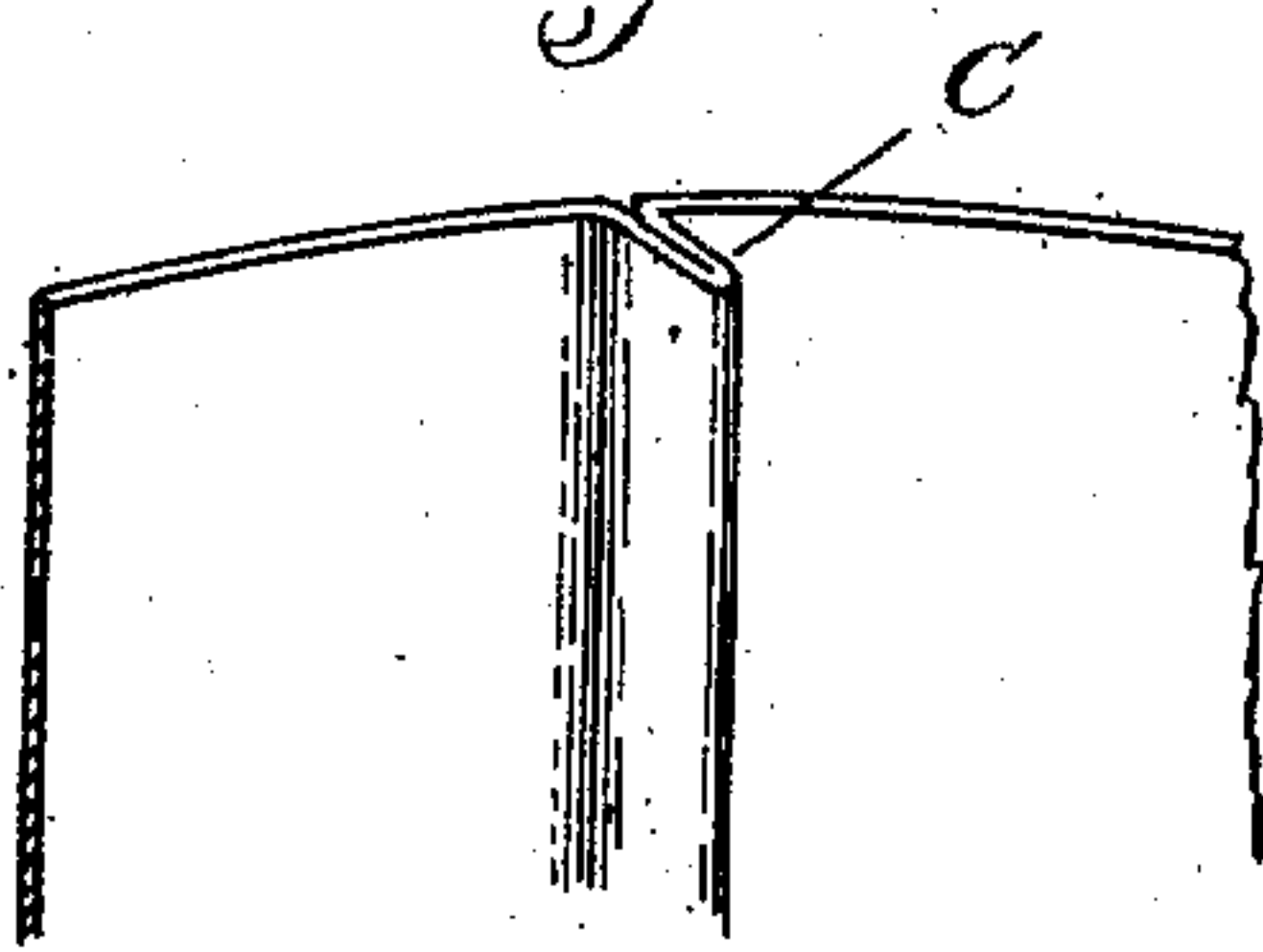


Fig. 6.

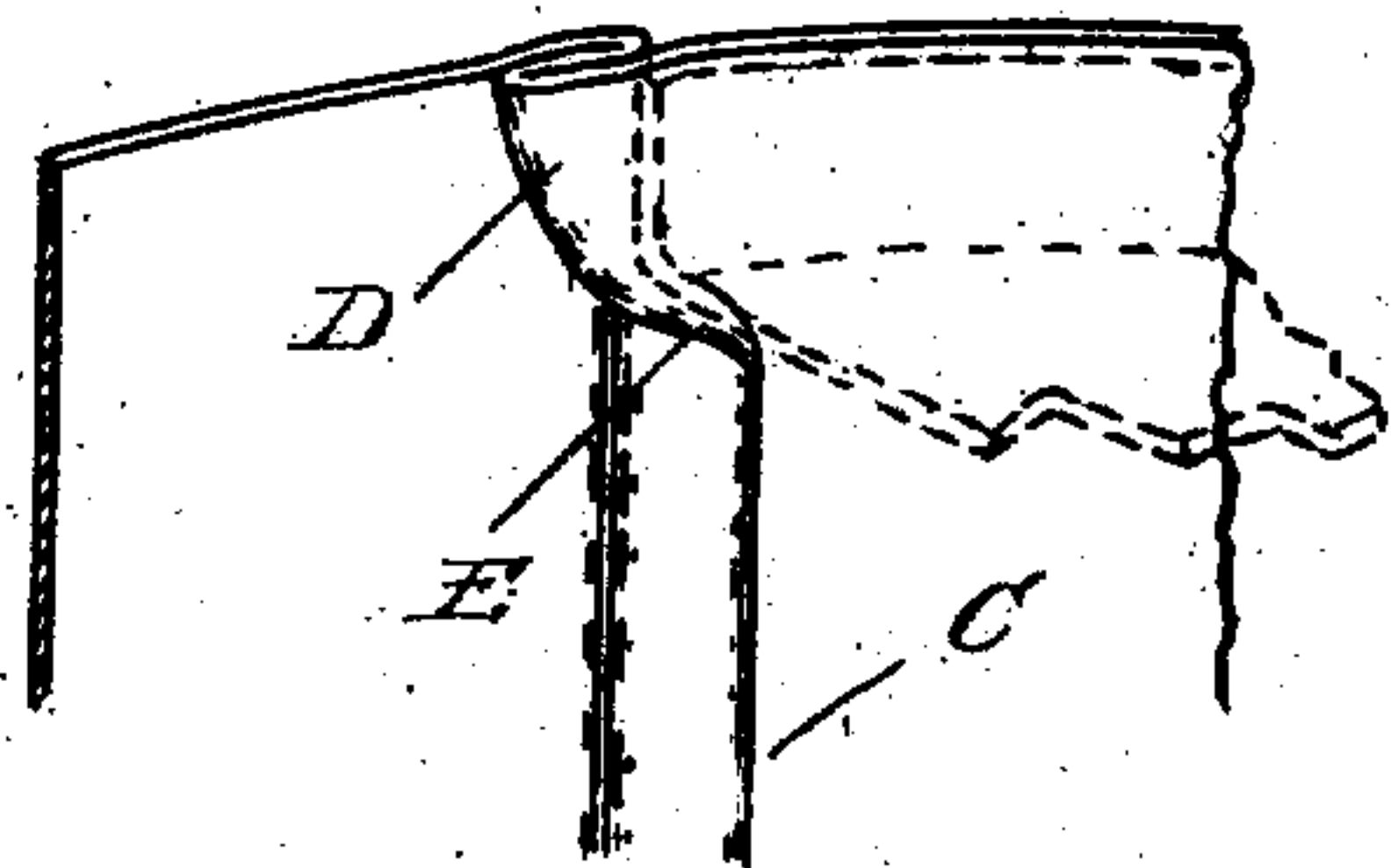


Fig. 8.

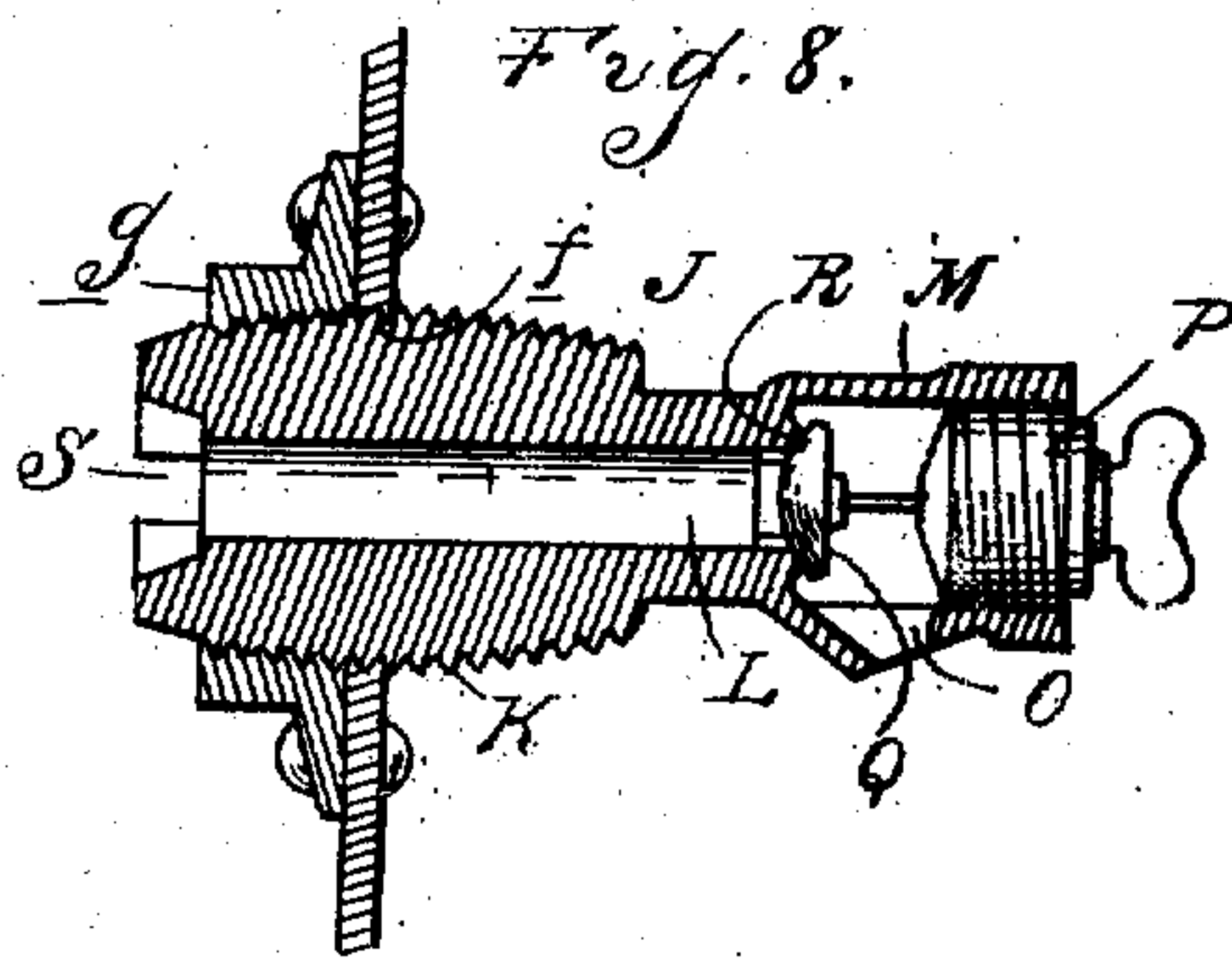


Fig. 7.



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METALLIC VESSEL.

No. 860,080.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed September 22, 1906. Serial No. 335,748.

To all whom it may concern:

Be it known that I, LOUIS O. BROWN, a citizen of the United States of America, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Metallic Vessels, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates particularly to metallic barrels, and consists in a novel and simple construction of barrel, and in certain details of construction, as will be more fully hereinafter set forth and illustrated.

In the drawings,—Figure 1 is a view in elevation, partly in section, of a barrel made in accordance with my invention; Fig. 2 is a similar view of a barrel, without reinforcement; Fig. 3 is a perspective view of the blank from which the barrel body is formed; Fig. 4 is a similar view, showing the crimped blank; Fig. 5 is an enlarged sectional perspective view, showing the formation of the rib or fold; Fig. 6 is a similar view, showing the method of inserting the head; Fig. 7 is a section through the seam of the blank; Fig. 8 is an enlarged detached sectional view of the tap; Fig. 9 is a similar view of the bung; and Fig. 10 is a sectional perspective view of the reinforce.

In the manufacture of metallic barrels, the bilge type is usually found the most desirable, and in this instance constitutes the preferred form, but other types, as for instance, a cylindrical construction, can as well be manufactured and still embody the principles of my invention.

The body of the barrel or shell is formed in all instances from a tubular blank, as A, made preferably from a single sheet of metal, the meeting edges of which are united by a seam, as B (Fig. 7), but it will be understood that the blank may be drawn, stamped, or otherwise constructed, if desired. The blank thus described is then crimped longitudinally so as to form a circumferential series of ribs or folds of metal, as C (Fig. 5). In the cylindrical form of barrel, these folds of metal may extend substantially the entire length of the body, as indicated in Fig. 4, the ribs projecting inwardly, thus materially strengthening the body or shell, and giving to its exterior the appearance of the ordinary stave construction. In forming the bilge barrel, the end portions of the body only are crimped, and the crimping so effected that the folds of metal taper, increasing in width from the central portion or bilge to the body extremities, as plainly shown in Fig. 1, the crimping described contracting the ends and giving the desired bilge appearance to the article. After the body is formed, the ends are headed, and in the operation of heading the extreme end portions of the folds C are turned or bent over by suitable roller mechanism (not herein shown) in the manner indicated in Fig. 6, the bent portions D being rolled tightly against the end

of the body, so that the body periphery at these points will not be of any appreciably greater thickness than at other points. In this way, a space is provided for the barrel head, and a seat, as E, is formed, on which the head if desired may rest. F represents the head inserted within the barrel end, and preferably, though not necessarily, resting upon the seat described, the head being provided with the usual outwardly extending annular flange G riveted to the extreme end of the body, as illustrated in Figs. 1 and 2. Ordinarily, a hoop, as H, is placed about each end of the body, and is held in place by the head rivets, as shown.

In practice, I preferably reinforce the barrel by the insertion of a reinforcement, as I, consisting in this instance of a head or hub section *a*, an annulus *b*, and connecting members in the form of spokes *c*, preferably cast into the head and annulus. This reinforcing frame is preferably inserted within the tubular blank before any crimping has been effected, and after it has been fixed in place the ribs or folds are formed, producing the desired contraction to form the taper, and at the same time holding the reinforcement in place. As a further means of locking the parts, a groove, as *d*, is formed in the periphery of the annulus, and an inwardly extending engaging member in the form of a bead *e* is rolled in the bilge section of the barrel to engage the groove, thus locking the parts, as plainly indicated in Figs. 1 and 10.

From the construction of the barrel as set forth, it will be observed that, while the barrel is internally reinforced, it is also seamless circumferentially, thus producing a more rigid structure than any heretofore produced, and one better able to withstand the rough usage to which the barrel is subjected; furthermore, the barrel can be easily manufactured and at a minimum labor and expense.

In one of the barrel heads, a threaded opening, as *f*, is formed, reinforced marginally by a threaded annular fitting *g* riveted about the opening, as indicated in Fig. 8. Threaded within this opening is a reversible tap J, comprising an oppositely tapered and externally threaded body portion K having a central bore L extending entirely therethrough, a discharge section M having a discharge opening O, a threaded plug P fitting the casing M and carrying a valve Q adapted to engage a seat R on the body K, and close the discharge there-through. This tap is so proportioned that in use it may be inserted as indicated in Fig. 8, and the tap used as a faucet to draw off the barrel contents. When the barrel is not in use or to be shipped, the tap may be withdrawn, reversed, and again inserted, so that only a small portion thereof will project beyond the bung opening. To remove the reversed tap, a suitable slot or keyway S is formed in the end opposite the valve. A bung-hole is also formed in the side of the barrel in the usual manner

by boring through the shell and annulus of the reinforcement, the opening thus made being indicated by the reference-letter *h* (Fig. 9). A threaded bushing *i* is preferably inserted within the bung-hole, and a bung, as T, in the form of a threaded plug, is screwed within the bushing, as illustrated, the bung being provided with a square hole or opening in which a key may be fitted for removing or inserting it.

The reinforcement for the barrel interior, as will be noticed, is of a strut type, the strut in this instance being in the form of the spider frame within the annulus previously described. By this method of reinforcement, the crushing or staving in of the barrel sides in the event that the barrel is dropped on its bilge portion is prevented. While I have shown a particular form of reinforcement of this character, I do not desire to be limited to the same, as many other types may be employed without departing from the spirit of the invention.

What I claim as my invention is;—

1. In a metallic barrel, the combination with a bilged body section formed of a single sheet of metal, of a rigid circular strut frame arranged within the body corresponding in diameter to the internal diameter of the bilge portion, and contacting therewith, and retaining means integral with the body extending inwardly in engagement with the strut member, and locking the latter against relative movement.

2. In a metallic barrel, the combination with a bilged body section formed of a single sheet of metal, of a rigid strut member arranged centrally within the body comprising a central section, a peripherally-grooved annulus contacting with the bilge portion of the body, and rigid radial connections between the annulus and central section, and a central annular bead rolled in the body and extending inwardly in engagement with the groove in the annulus.

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

LOUIS O. BROWN.

Witnesses:

JAS. T. CROOKS,
LIZZIE SHOUP.