

(No Model.)

T. H. JACOBS.
BARREL, BUCKET, OR TUB.

No. 393,833.

Patented Dec. 4, 1888.

Fig. 1.

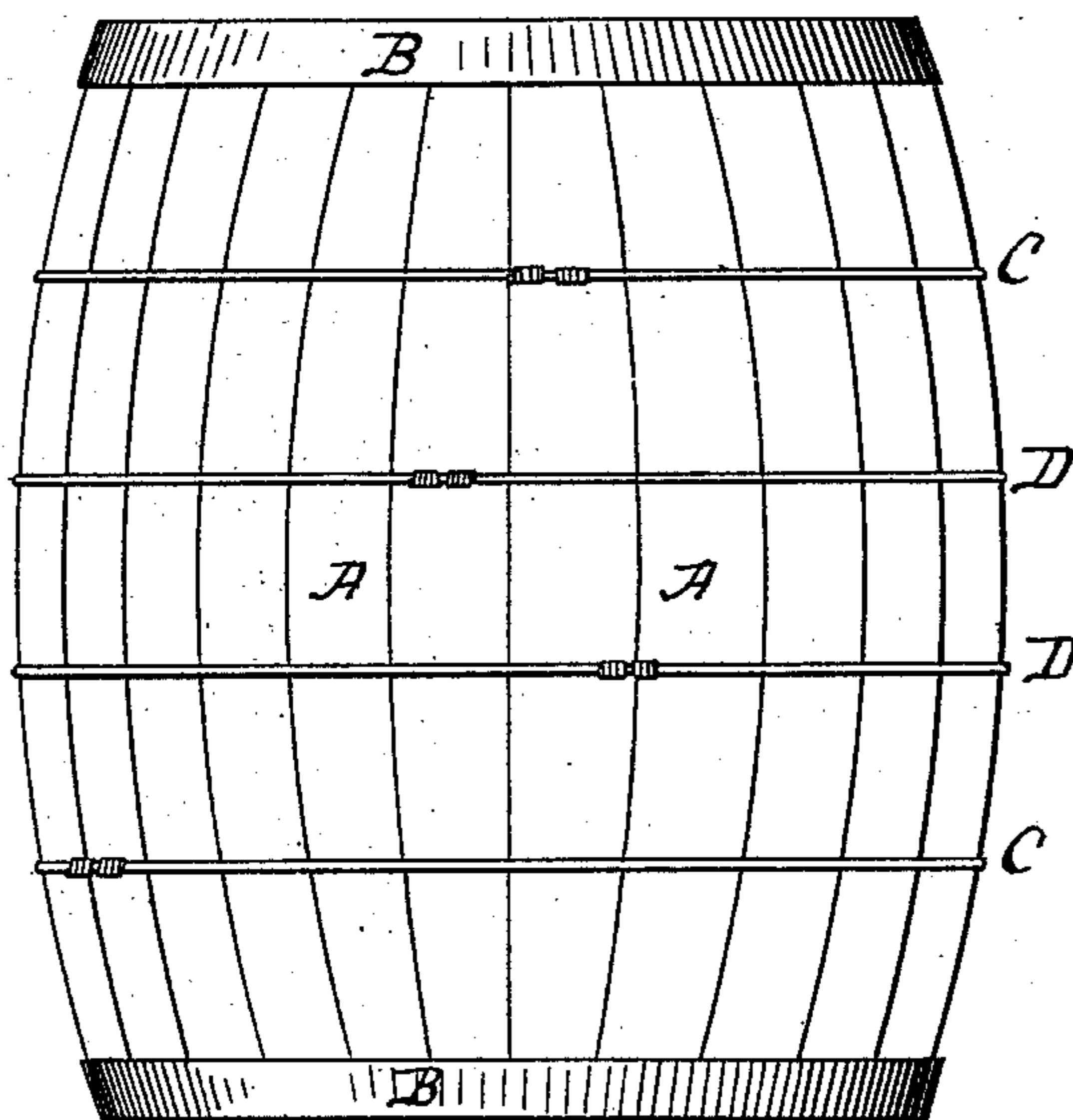


Fig. 3.

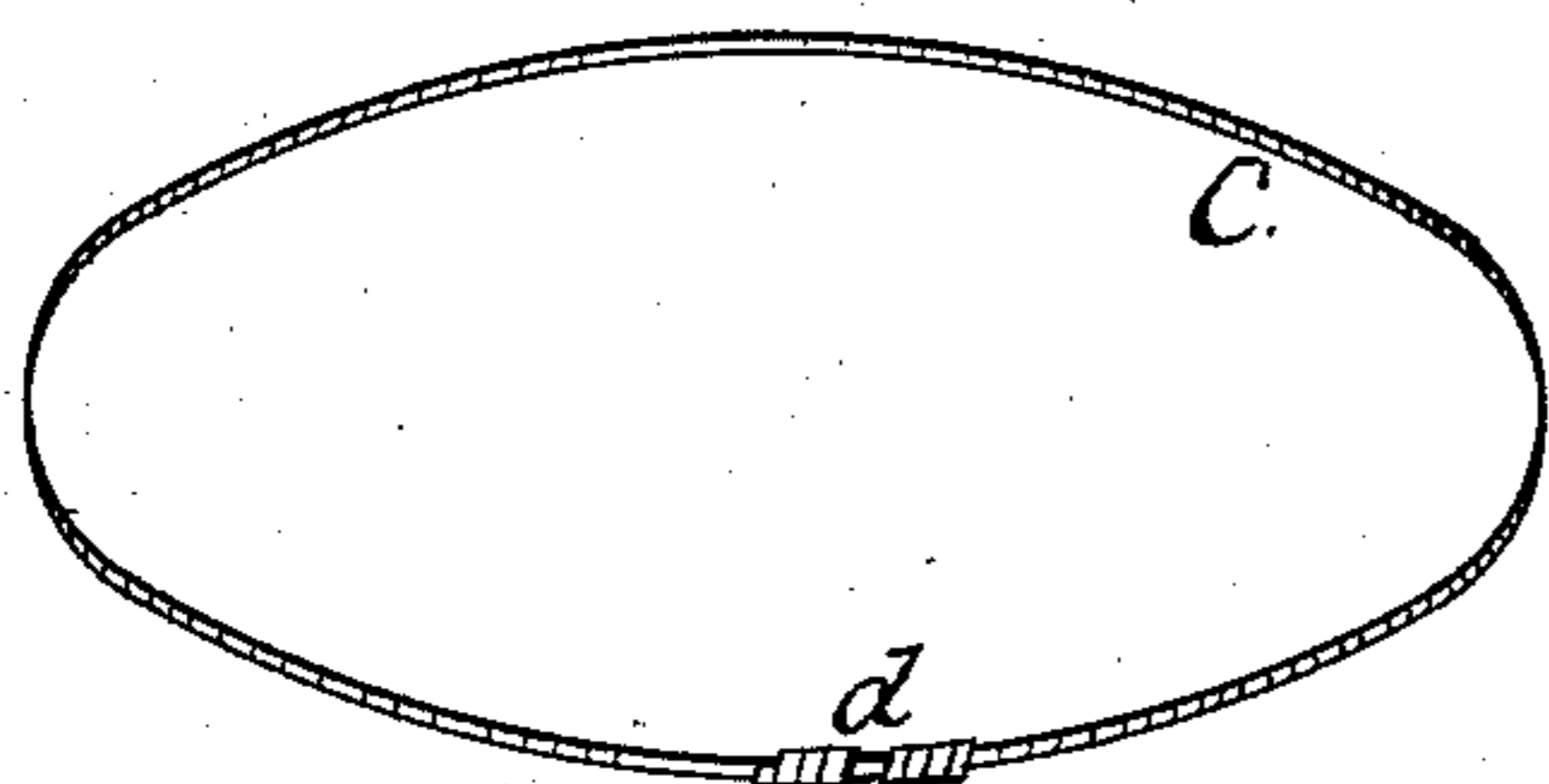


Fig. 2.

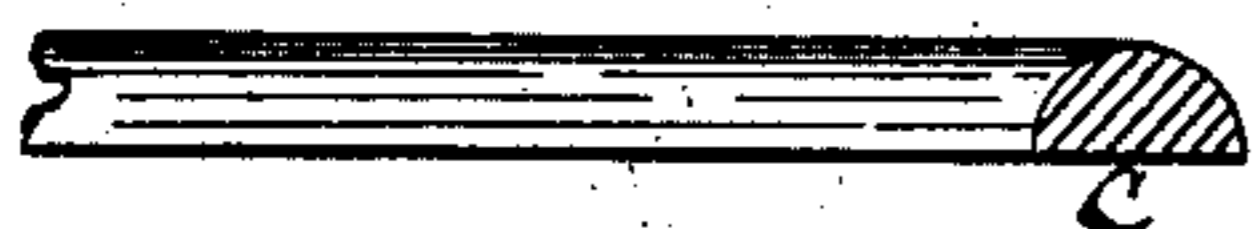
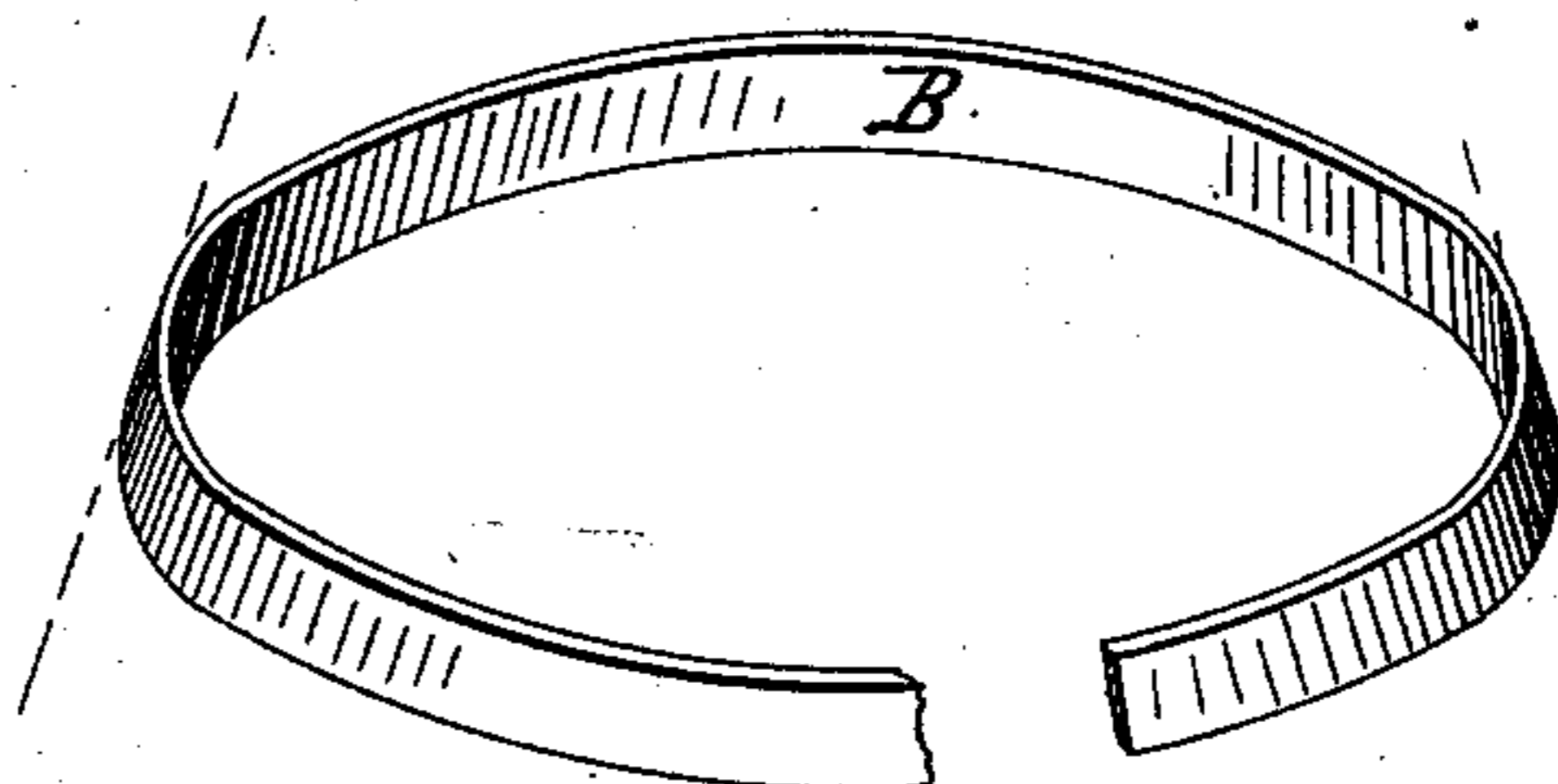
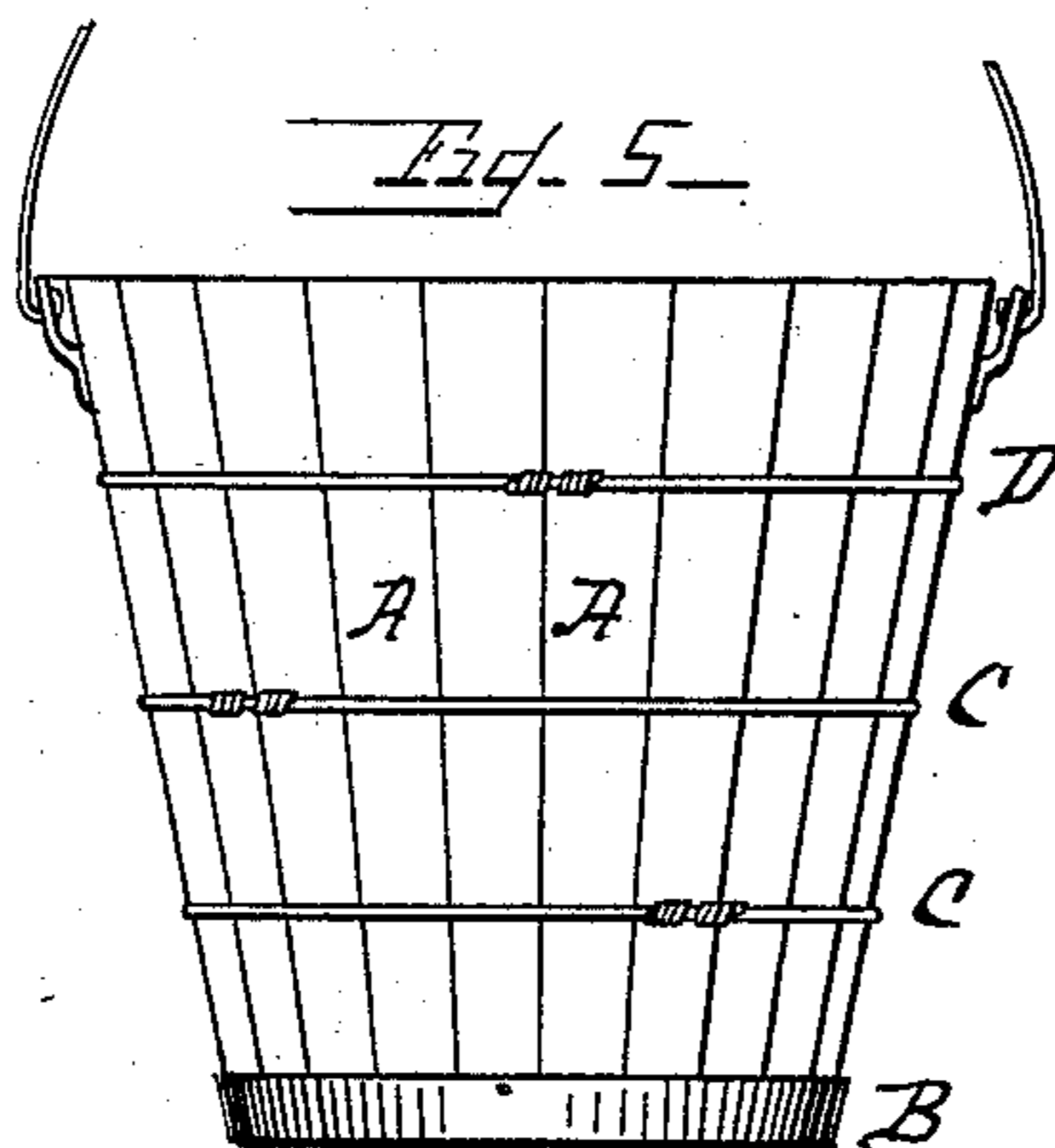


Fig. 4.

Fig. 5.



Witnesses,

G. A. Faubuschmidt
Edwin S. Clarkson

Inventor,

Thomas H. Jacobs
By his Attorney *F. W. Ritter*

UNITED STATES PATENT OFFICE.

THOMAS H. JACOBS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE NATIONAL WIRE HOOP COMPANY, OF NASHVILLE, TENNESSEE.

BARREL, BUCKET, OR TUB.

SPECIFICATION forming part of Letters Patent No. 393,833, dated December 4, 1888.

Application filed April 18, 1887. Serial No. 235,219. (No model.)

To all whom it may concern:

Be it known that I, THOMAS H. JACOBS, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented
5 certain new and useful Improvements in Barrels, Buckets, Tubs, and Like Hooped Vessels; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying
10 drawings, wherein—

Figure 1 is an elevation of a barrel embodying my invention. Fig. 2 is a detached view of the chine-hoop. Fig. 3 is a detached view of a hoop for use as a quarter and bilge
15 hoop. Fig. 4 is a section of the hoop shown in Fig. 3, and Fig. 5 is an elevation of a bucket which embodies the invention.

Like letters refer to like parts wherever they occur.

20 My invention relates to the construction of barrels, tubs, buckets, and like hooped wooden vessels, and has for its objects to facilitate the "setting up" or putting together of the vessel, to secure a neater, stronger, and cheaper
25 vessel—one wherein the joints between the staves can be readily made tight and will remain tight—a vessel which, in the case of casks and barrels, will permit of the ready removal and replacement of the heads with the
30 least separation of the staves, and which will remain tight notwithstanding all the rough handling incident to transportation.

Generally stated, the invention consists in a barrel, tub, or like article, constructed with
35 broad or band chine-hoops and wire quarter and bilge hoops, as will hereinafter more fully appear.

In order that the nature and advantages of my present invention may be more apparent,
40 I will first briefly review the present state of the art.

In dry coopering, or the manufacture of flour and like barrels, wooden hoops are commonly employed; but such a construction is
45 objectionable for several reasons: first, owing to the growing scarcity of suitable hoop material and the necessary destruction of young timber for hoop-poles; second, because of the difficulty experienced in making and preserving tight joints in the barrels, the hoops being naturally inclined to slip on the taper of

the barrel under rough handling incident to transportation; third, lack of strength and durability in the barrel, and, fourth, necessity for employing skilled labor and the consequent cost of production. 55

In wet or tight coopering hoops of metal or "hoop-iron" are commonly employed, and while tight joints and strong work are thus obtained it is at a greatly-enhanced cost and weight, which renders the vessel unsuitable
60 for many purposes.

In both the foregoing constructions shrinkage of the staves is a fruitful element in rendering the vessel useless. 65

All the above-recited objectionable features can be measurably remedied by the use of wire for hooping purposes; but as the wire hoops used at the chine must necessarily be substantially the diameter of the vessel at
70 its end great difficulty is experienced in putting on the hoops originally or in setting up, and also in replacing them after filling the barrel. Furthermore, the crozed and chamfered ends of the vessel are constantly liable
75 to be broken and defaced in handling and transportation.

For the above reasons wire-hooped vessels as heretofore constructed have not been considered practicable or desirable, though conceded to be lighter, tighter, neater, and
80 cheaper than other constructions.

I will now proceed to specifically describe my invention, so that others may apply the same. 85

In the drawings, A indicates the staves composing the barrel or other vessel, which are shaped, "set up," leveled, chamfered, and crozed after the manner commonly practiced in the art, according to the particular wooden
90 vessel to be produced.

B indicates the chine-hoop, which may be of metal or wood, but is preferably of wood, as the same is more readily secured than a metal hoop and adds less to the weight of the
95 vessel, while in some respects it protects the end of the vessel better. It should be sufficiently broad to fully protect the chine—say an inch and a half wide, more or less, so that it may, if desired, be loosened or driven up
100 far enough to allow the head of the vessel to be taken out and replaced without entirely

removing such chine-hoop from the vessel while the wire hoops below remain in place and undisturbed, and it should have a proper taper on the inside surface to fit the end of the vessel on which it is driven.

The outer edge of the chine-hoop B may be flush with the end of the vessel, or may project slightly beyond the same to protect the ends of the vessel from injury in handling and transportation.

The quarter-hoop C and the bilge-hoop D are made of suitable wire, preferably flattened on one side, as indicated at *c*, to enable it not only to hug the vessel closely, but also to embed itself in the staves A when driven home, all of which causes the quarter and bilge hoops to firmly retain their places and facilitates the making and preserving of tight joints, as the shrinking of the staves will not loosen the hoops. The plane or flat sides *c* of the wire quarter and bilge hoops C D lie against the barrel.

A neat appearance and good result will be obtained if the hoop-wire is flattened at the ends and a ribbon wrap-joint made, as indicated at *d*, Fig. 3.

The wire quarter and bilge hoops C D may be readily passed over the broad flat chine-hoop B, and should then be driven home so as to fit tightly on the vessel, and if this is properly done no staples or like devices will be required, owing to the fact that the chine is properly supported by the broad chine-hoop B, and the wire hoop will embed itself in the staves of the vessel.

Two broad chine-hoops, B, two quarter-hoops, C, and two bilge-hoops, D, or a total of six hoops, will be adequate for any barrel, thereby securing greater strength and neatness than can be done by wooden hoops alone—a much lighter, cheaper, and neater barrel than can be done with iron hoops, and a more

serviceable and durable barrel than can be obtained by any number of wire hoops alone.

Among the advantages incident to my invention are, first, the combination of the broad or band chine-hoops with the wire quarter and bilge hoops renders it practicable to use wire as hooping material; second, it produces a neater, cheaper, stronger, and better finished vessel; third, it enables the vessel to be set up more easily and rapidly by first pressing together the ends of the staves and applying the broad or band chine-hoops and then passing the wire quarter and bilge hoops over the chine-hoop; fourth, it enables wire-hooped barrels to be readily filled and closed, and, finally, it enables cheap barrels and like vessels to be made with close joints.

Having thus described the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a barrel or like hooped vessel, the combination, with the staves thereof, of a band chine-hoop and wire quarter and bilge hoops, substantially as and for the purposes specified.

2. In a barrel or like hooped vessel, the combination, with the staves thereof, of a wide chine-hoop and quarter and bilge hoops made of wire flattened on one side or of semi-elliptic cross-section, substantially as and for the purposes specified.

3. A hooped vessel having a band chine-hoop and wire quarter and bilge hoops, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 14th day of April, 1887.

THOMAS H. JACOBS.

Witnesses:

RIPLEY D. SAUNDERS,
CHAS. G. HOPKINS.