

(No Model.)

C. L. MANN.
CYLINDRICAL STAVED VESSEL.

No. 503,055.

Patented Aug. 8, 1893.

Fig. 1.

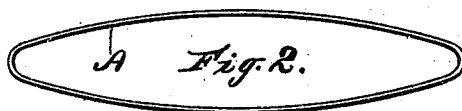
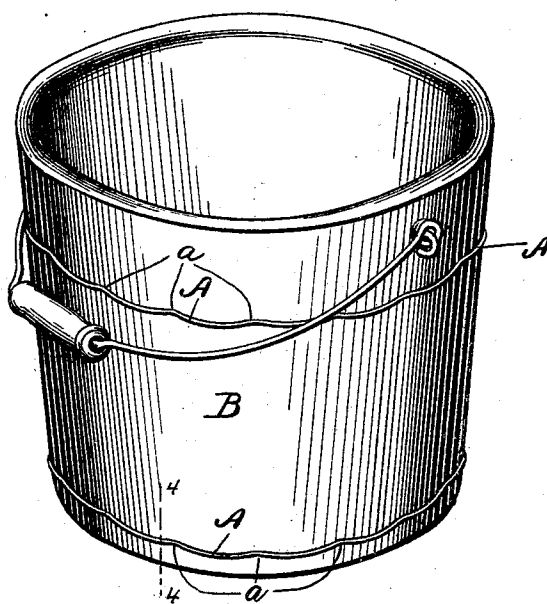
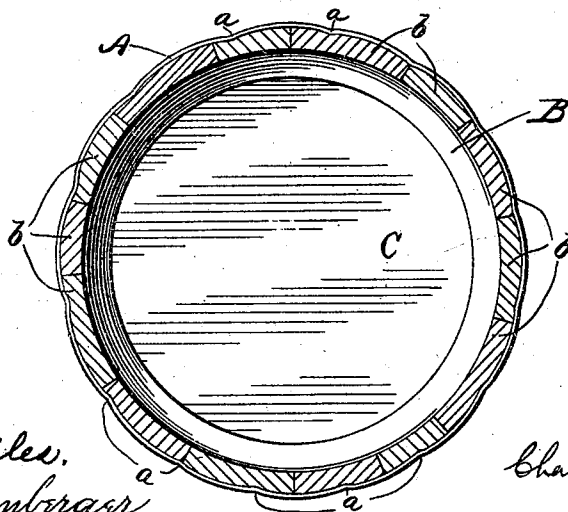
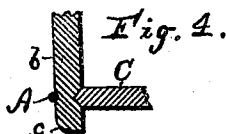


Fig. 3.



Witnesses,
John E. Wiles.
John U. Leunberger

Inventor,
Charles L. Mann.
By - H. G. Underwood.
Attorney.



UNITED STATES PATENT OFFICE.

CHARLES L. MANN, OF MILWAUKEE, WISCONSIN.

CYLINDRICAL STAVED VESSEL.

SPECIFICATION forming part of Letters Patent No. 503,055, dated August 8, 1893.

Application filed June 3, 1892. Serial No. 435,424. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. MANN, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Cylindrical Staved Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to cylindrical wooden vessels such as pails, tubs, and the like, formed of a series of staves and it consists in the combination therewith of an endless wire hoop or ring, preferably secured to the said vessel by indentations formed in the said wire hoop, at intervals, after the same has been placed on the vessel, all as will be fully set forth hereinafter, and subsequently claimed.

In the drawings: Figure 1 is a perspective view of a pail constructed according to my present invention. Fig. 2 is a like view of the hoop or ring. Fig. 3 is a horizontal sectional view of the vessel shown in Fig. 1, taken just above the line of the upper hoop. Fig. 4 is a detail sectional view, on line 4—4 of Fig. 1.

My present invention is an improvement on that set forth in United States Letters Patent No. 419,377, dated January 14, 1890, in which a similar cylindrical vessel is shown, with an indented wire hoop, but in said patent the ends of the wire forming the hoop are bent, and passed through holes in a piece of sheet-metal which is then bent into the form of a sleeve and then the said bent ends of the wire are driven into the wood of the vessel, and the hoop indented. This described method of hooping pails and other vessels has been found objectionable in practice, for several reasons: the hoop can not be driven up to place, easily, on account of the described projecting bent ends, and not at all without injuring the outer surface of the vessel, besides requiring more than ordinary time and expense in making, and adjusting, the said sleeve, and to obviate these objections is the purpose of my present invention, wherein I form a solid continuous endless ring or hoop A, of wire, as by welding the ends of a strip of wire together. This endless hoop A is then driven to place upon the vessel B, where it

may be secured as desired, but preferably by indenting the same, at intervals, so as to cause a portion of the wire to embed itself, at each of these points, into the vessel, as best shown at *aaa* in Fig. 3. This causes the staves *bb* of which the vessel is formed to be always closely united, and the wire of the hoop, being a solid continuous ring, is simply drawn more closely against and into the wood of the vessel by this indenting operation, instead of having a tendency to separate and draw apart as in the patent before named. By reason of the ends of the wires which form my hoops being welded together, as described, the said hoops present an unbroken interior surface, and therefore can be readily driven up to place on the vessel, without marring or scratching the surface, and to a higher point, than when either the ordinary rivets of flat hoops, or the described projecting bent ends and sheet metal sleeves of the patent on which this is an improvement, are used, thereby insuring a closer fit than with such devices, and obviating, consequently, the liability of the hoops dropping off.

In Fig. 4, I show the lower part of one of my staves, the same being a sectional edge view of the stave. It will be noticed that the lower outer edge is rounded, as shown at *c*. Heretofore, with pails, tubs, and other like vessels, the bottoms of the staves have been made with square edges to fit snugly against the flat bottom hoops. Such a construction, unless protected by such flat hoops, renders the staves liable to split off at their outer bottom edges, and to guard against this, I round off the outer edges, as shown, and place the lower endless round wire hoop about on a line with the center of the bottom C of the vessel, and considerably above the bottom edges of said staves.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A cylindrical vessel, formed of a series of staves having a smooth uniform outer surface in combination with a series of hoops, each formed of wire having its ends welded together to form an unbroken interior surface, substantially as set forth.

2. A cylindrical vessel, formed of a series of

staves having a smooth uniform outer surface in combination with a series of hoops, each formed of a wire having its ends welded together to form an unbroken interior surface, 5 indented and embedded into the staves of the vessel, at intervals, substantially as set forth.

3. A pail, tub, or analogous cylindrical vessel comprising a suitable bottom, and a series of staves having a smooth uniform outer surface, and rounded off on their outer bottom 10 edges and united by hoops, each formed of a wire having its ends welded together to form

an unbroken interior surface, the lower hoop being at a considerable distance above the bottom of the said staves and in line with the 15 bottom of the vessel, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

CHAS. L. MANN.

Witnesses:

H. G. UNDERWOOD,
HENRY MANN.