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JAMES I. BARD.

Improvement in Metallic Barrels.

No. 122,796. Patented Jan. 16, 1872.

Fig. 1.

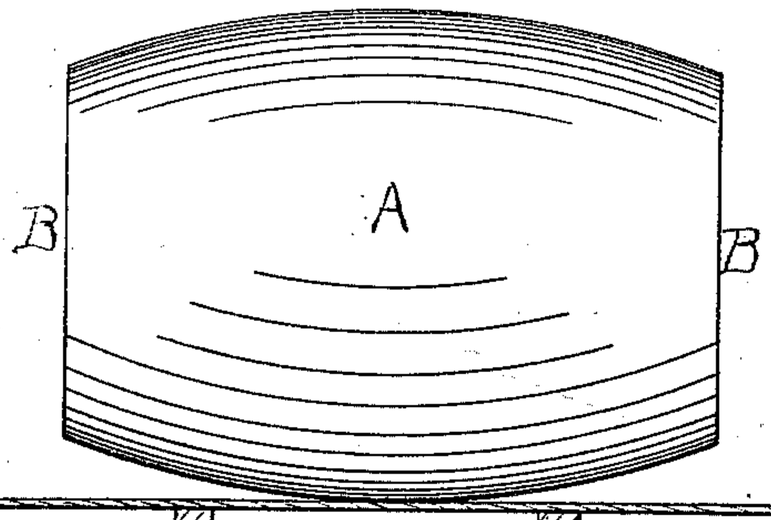


Fig. 2.

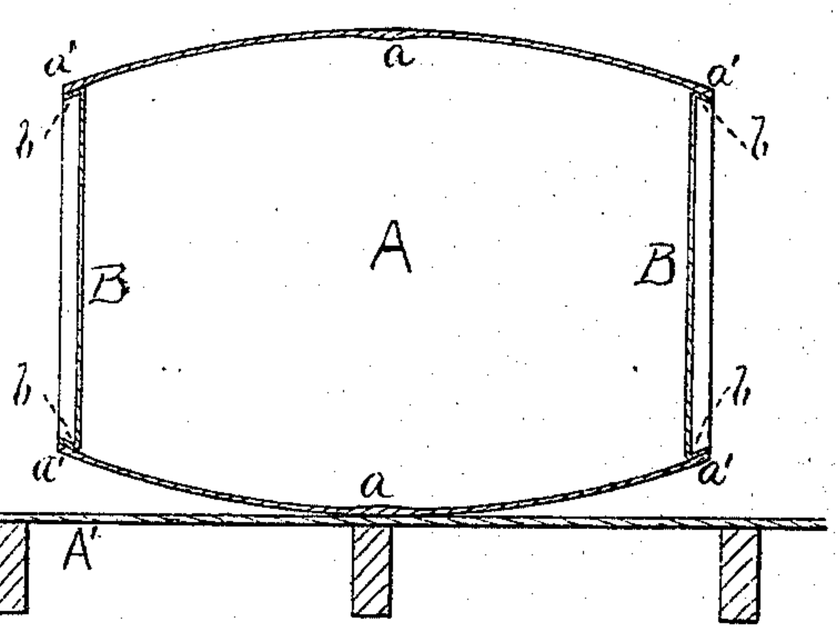


Fig. 3.

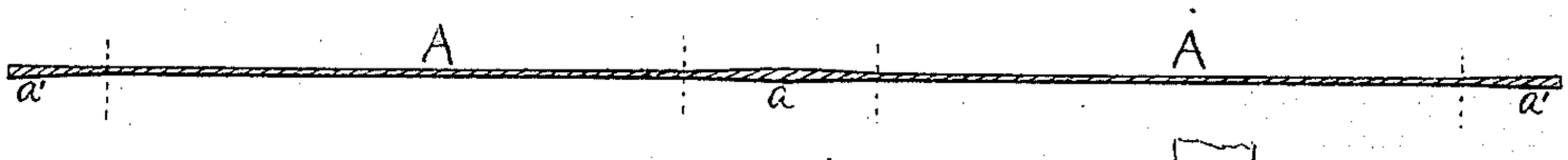


Fig. 4.

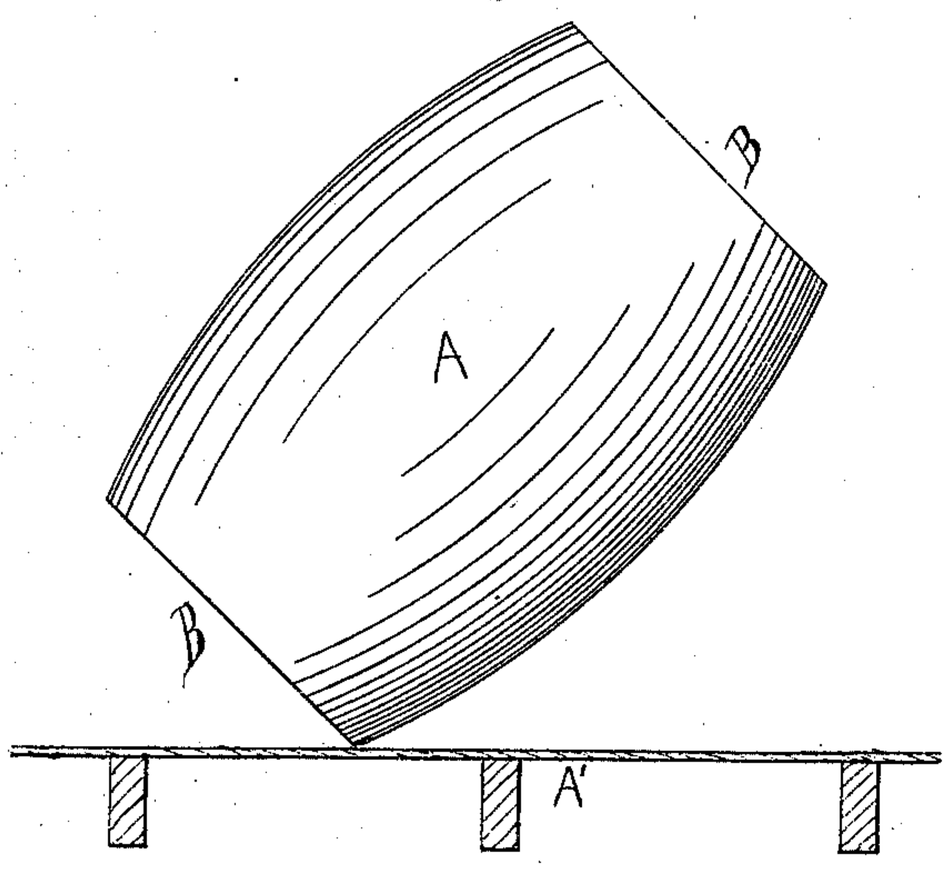
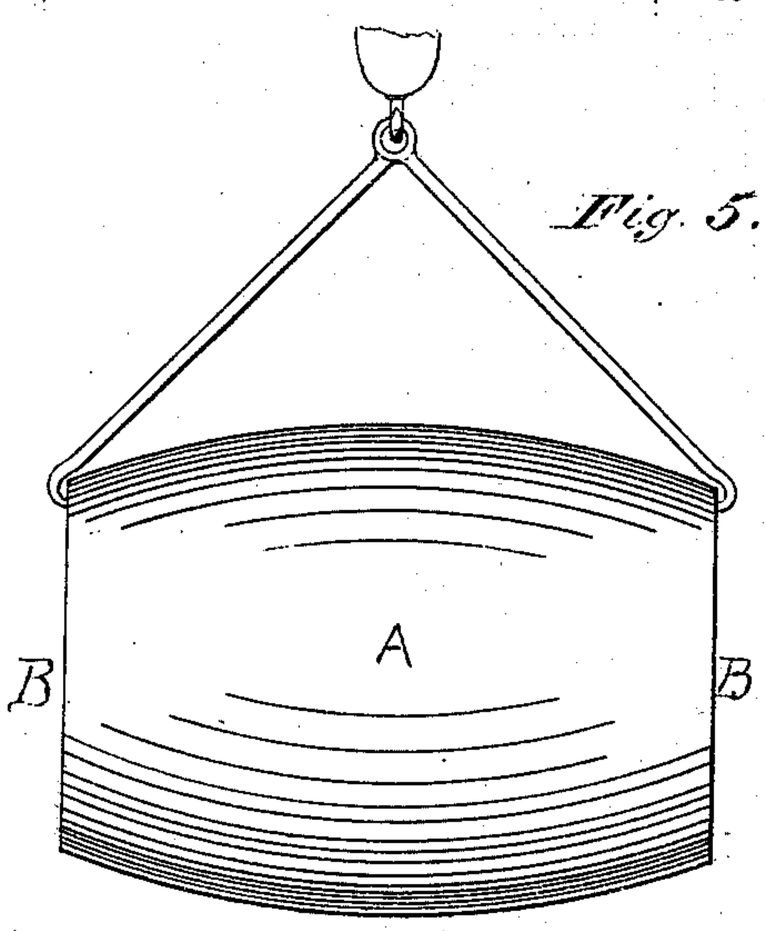


Fig. 5.



Witnesses:
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Inventor:
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Attorney

UNITED STATES PATENT OFFICE.

JAMES I. BARD, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN METALLIC BARRELS.

Specification forming part of Letters Patent No. 122,796, dated January 16, 1872.

To all whom it may concern:

Be it known that I, JAMES I. BARD, of New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Metallic Casks or Barrels, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing and the letters of reference marked thereon making part of this specification, in which—

Figure 1 is a side view of the barrel. Fig. 2 is a vertical sectional view. Fig. 3 is a vertical sectional view of the metal of which the barrel is formed. Fig. 4 is a side view of the barrel when being rolled on its chime. Fig. 5 is a side view of the barrel when being hoisted by the bail.

The nature of my invention consists in manufacturing a metallic vessel, whether the same shall be a tierce, hogshead, barrel, keg, &c., the body of which shall be constructed out of one piece of metal and secured by a single longitudinal seam, and which shall correspond exactly in form to the ordinary wooden barrel now in use, and which shall possess the great advantage of having a double thickness of metal at its center or the arch of its bilge and at its chimes, thus securing a greatly-increased degree of strength at the points where the greatest strain occurs and where the greatest pressure is consequently to be resisted. While my improvement is admirably suited for the numerous articles of commerce now invariably shipped in vessels constructed of wood, it is peculiarly and especially adapted to the transportation of all combustible and inflammable substances and liquids, such, for instance, as coal-oil, kerosene, paraffine, &c.

I will now proceed to describe the process by which vessels of any size can be manufactured according to my improvement.

The rollers used to roll the sheet A out to the desired dimensions to form the body of the vessel in the construction of which it is to be employed are of such contour that, after the process is finished, the form of the sheet shall be such as is clearly shown in Fig. 3—that is, at its immediate center *a*, or what in the manufactured article will be the arch of the bilge, as shown in Fig. 2, there shall be a double thickness of metal, so distributed that, from the center of the arch in each direction toward the edges of the sheet, there is a gradual taper, say from two to four inches, according to the size of the vessel. The rollers, also, owing to their contour, as the sheet is being prepared, leave at its edges *a' a'*, or what in the manufactured article will be the chimes of the vessel, as shown in Fig. 2, a like increased or double quantity of metal, and which extends from each outer edge toward the center of the sheet a distance from two to four inches, according to the size of the vessel. Thus in the manufactured article from one-fourth to one-third of its entire length is provided with an increased weight of metal, and this is distributed at the bilge and chimes, so that I have a double weight of metal for a resisting surface at the points where most of the strain and pressure fall, and where all the wear and tear incident to its transportation and use are to be borne. And these important advantages, owing to the tapering manner in which this increased thickness is distributed, are secured without leaving any shoulder, ridge, or other abrupt obstruction. The sheet A being thus prepared and rolled to the desired dimensions and form, as shown in Figs. 2 and 3, while hot, soft, and perfectly pliable, is rolled around a metallic former of proper shape to secure the configuration of an ordinary wooden oil or other barrel, as clearly illustrated in Figs. 1, 2, 4, and 5. The sheet is then removed from the former, and its ends fastened and secured in any ordinary manner to insure a close and durable seam-joint. The heads B B of the vessel are also constructed out of single pieces of metal, of circular form, their edges being so turned or otherwise struck up as to leave an annular flange, *b b*. The heads are inserted in the chimes and secured in the usual manner.

In general practice I have not found it necessary to apply any artificial coating upon the interior surface of my cask, such as varnish or shellac, which are so commonly employed in wooden casks for coal-oil and turpentine; but should it be found essential, for any purpose, to apply an interior or even an exterior coating of any material whatever, I wish to reserve this privilege.

From the foregoing detailed description the advantages of my invention will readily be un-

derstood. When the barrel is in the position shown in Figs. 1 and 2, and which is its position when being rolled over the floor or other surface A′, the entire weight of the contents centers at the bilge, and the wear and tear incident to its being thus moved from point to point necessarily falls on this section, and, with my construction, on the section *a* of the sheet, Figs. 2 and 3, where there is the greatest weight of metal. In raising the barrel from a horizontal to a vertical position, as shown in Fig. 4, and also in hoisting the barrel with cam-hooks, as illustrated in Fig. 5, the entire heft of the contents is to be supported at one or both of its chimes; and here, too, with my improvement there is also the increased weight of metal, as clearly shown at *a′ a′*, Figs. 2 and 3. Thus it will be seen that with my improvement the only portions of the barrel that are ever called upon, under any circumstances, to support an undue proportion of the weight of its contents are exactly those portions where the increased weight of metal is distributed.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

A metallic vessel of the form stated, constructed out of a single sheet, rolled so as to leave a double thickness of metal at the bilge and chimes, substantially as described, as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAS. I. BARD.

Witnesses:
W. A. Boss,
Edwin James.

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