J. W. Weston.

Barrel.

No. 110,096. Patented Dec. 13, 1870.

Fig. 4.

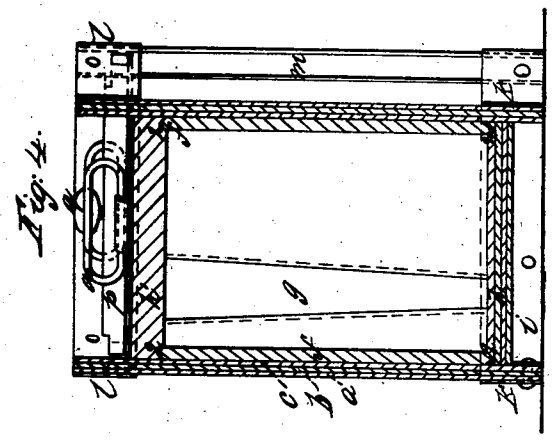


Fig. 5.

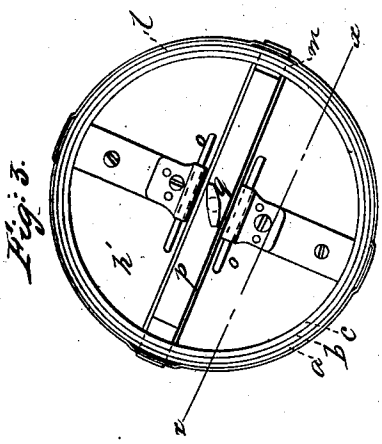


Fig. 1.

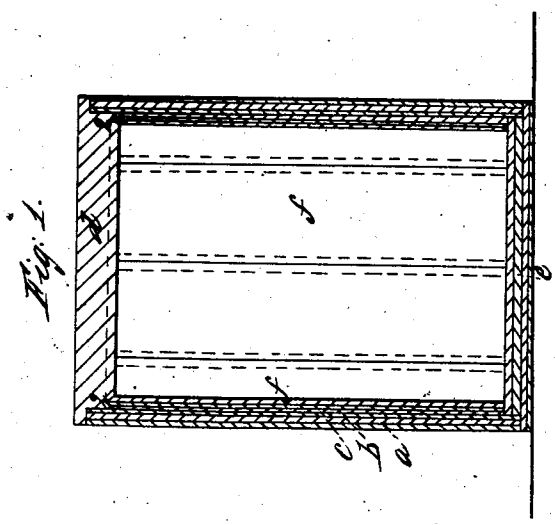
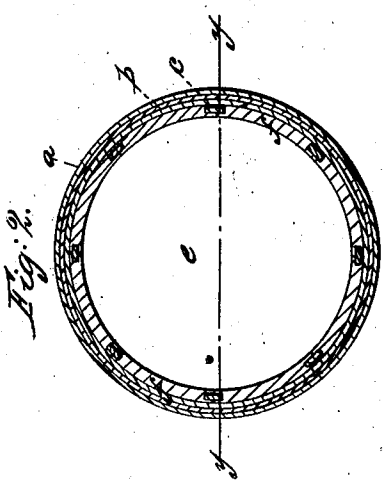


Fig. 2.



Witnesses:

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Atty

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JAMES W. WESTON, OF NEW YORK, N. Y.

Letters Patent No. 110,096, dated December 13, 1870.

IMPROVEMENT IN BARRELS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JAMES W. WESTON, of the city and State of New York, have invented, made, and applied to use a certain new and useful Improvement in Barrels and other Vessels; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawings making part of this specification, wherein—

Figure 1 is a vertical section of my improved barrel at the line *y y*, fig. 2;

Figure 2 is a plan of the same with the head removed;

Figure 3 is a plan of a barrel or vessel with a movable head; and

Figure 4 is a section of the same at the line *x x* of fig. 3.

Similar marks of reference denote the same parts.

The nature of my said invention consists in a barrel or other vessel formed of two or more layers of veneers with the grains of the wood running in different directions, and such veneers fastened together by glue or other adhesive material, so as to form cylindrical barrels or vessels of other shapes, possessing great strength and lightness, and easily rendered very tight, so as to dispense with the staves heretofore employed for barrels, vats, tanks, and other vessels, such as tubes and pipes.

In the drawings—

a, *b*, and *c* are the three thicknesses of the veneers forming the cylindrical portion of said barrel or vessel; these are to be disposed so that the grains of the wood run in different directions, two or more with the grains running around the barrel, and the other layer with the grains running lengthwise of the barrel, or one or both layers running diagonally, the grains crossing each other, and the number of the layers may be increased to any desired extent.

In fig. 1 I have shown the heads *d* and *e* as set in with rebates, and one of the heads, *e*, is formed of several layers of veneers with the grains of the wood crossing each other to prevent warping or splitting.

A lining, *f*, may also be put into the barrel, the separate staves of which are grooved at the edges, if desired, so as to receive the strips, as seen in fig. 2, and the ends of the stave are beveled, as seen at 2, and a groove provided upon the inner surface of the head, receiving said ends of the staves, renders the union of the lining and head much tighter. This lining may be made of either one or two thicknesses of wood.

A lining with beveled ends is also shown in fig. 4, at *f*, and the heads are similarly grooved at 2; the lining, however, is represented as of one lamina wound up and introduced within the barrel, a tapering section, *g*, driven in between the ends being employed to force the lining tightly to the inside surface of the barrel.

The head *h* is secured by the band *i*, introduced inside the barrel around the chine, and end hoops *k* and *l* are employed also to strengthen the ends of the barrel, and these are connected together by the irons *m*, that run along the barrel; the parts are riveted together so as to form a very strong and durable vessel.

The head *h'* is provided with handles *o*, by means of which it may be strengthened, and a cross-bar, *p*, slipped at its ends into mortises through the barrel and end hoops, is employed to tighten said head and secure it in place, and a screw, *q*, may also be employed to press the head upon the end of the lining.

What I claim, and desire to secure by Letters Patent, is—

A barrel, made of lamina of wood rolled up to shape, with the grains of the respective lamina crossing each other, and connected by glue or adhesive material, and the heads introduced within the cylindrical ends, substantially as set forth,

Dated April 2, A. D. 1868.

J. W. WESTON.

Witnesses:

CHAS. H. SMITH,

GEO. D. WALKER.