C. W. THOMPSON.
Truss-Hoop.

No. 199,385. Patented Jan. 22, 1878.

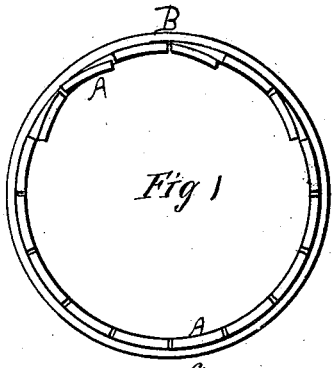


Fig 1

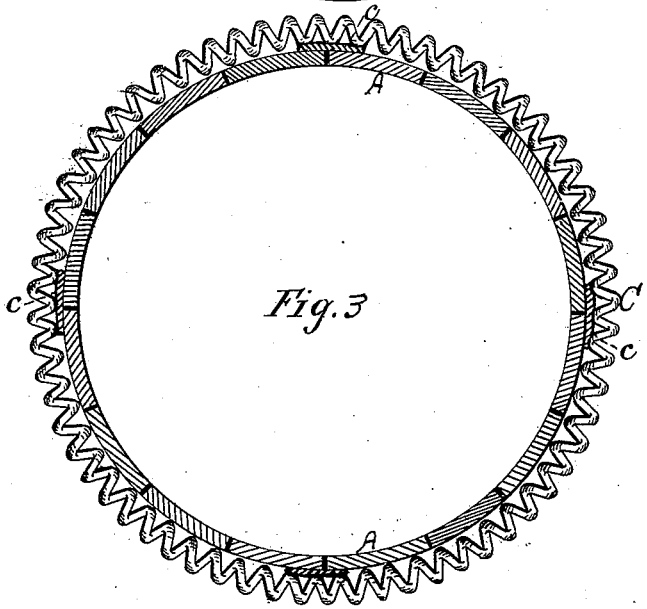
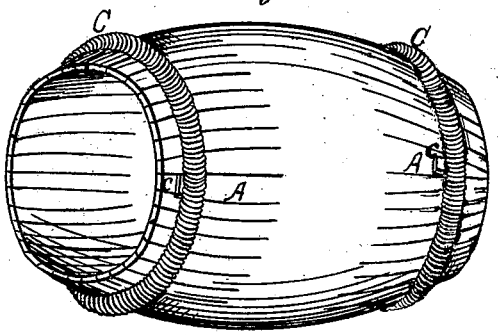


Fig. 3

Fig. 2



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UNITED STATES PATENT OFFICE.

CLARK W. THOMPSON, OF WELLS, MINNESOTA.

IMPROVEMENT IN TRUSS-HOOPS.

Specification forming part of Letters Patent No. **199,385**, dated January 22, 1878; application filed May 1, 1877.

To all whom it may concern:

Be it known that I, CLARK W. THOMPSON, of Wells, in the county of Faribault and State of Minnesota, have invented certain new and useful Improvements in Manufacture of Barrels; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

One method of manufacturing barrels or similar articles is to take staves, or a sheet of veneer, or two or more sheets of veneer, and bend or compress the same into the proper shape—that is, with the ends of the barrel tapering in form—and then, by means of artificial heat, dry or season the same, the material being usually steamed or otherwise rendered pliable during the operation of bending or compressing.

A difficulty has been met with in the carrying out of this system of manufacture, as follows: The wood shrinks during the seasoning, and the edges of the veneer are liable to warp and spring from contact with each other, and frequently become so set before removal from the kiln or other place of heating and drying that it is difficult to replace the parts in proper position for receiving the heads and finishing hoops.

It is apparent that the use of the ordinary truss-hoop, which is used to confine the staves or veneer during the seasoning process, will not prevent the above-described warping or displacement of parts, from the fact that such truss-hoops are practically rigid, and do not contract or reduce their diameters to compensate for or follow up the shrinkage in the material.

Part of my invention is designed to obviate the above-described difficulty; and consists in a novel construction of elastic truss-hoop, adapted to produce a substantially uniform compression upon each of the staves of which the barrel is composed, as will be fully explained.

Having thus set forth the nature and scope of my invention, I will now describe a means for carrying it out.

In the drawings, Figure 1 represents an end view of a barrel which has been seasoned or dried, with an ordinary truss-hoop upon it. Fig. 2 represents a barrel which has been manufactured by my improved method. Fig. 3 is a detached view of a hoop used by me in carrying out my invention.

A A are the stave ends, formed by cutting gores from a sheet of veneer; or, when preferred, a single sheet of veneer without gores may be used, in which case there will be but a single joint extending the entire length of the barrel; or the barrel may be composed of single staves, or of veneers containing two or more staves in one piece.

B is an ordinary inflexible truss-hoop. (See Fig. 1, where it will be noticed that the edges of some of the stave ends have warped or sprung, and do not meet the edges of the adjoining staves.) C is a hoop made of coiled wire, preferably a steel wire of high tension. But I do not wish to be limited to the use of any particular material or form for this hoop, although I prefer that shown, because, among other reasons, a wire which is round in cross-section facilitates the perfect drying of the barrel, this uniformity in seasoning being increased by the substitution of my spiral-wire hoop for the continuous truss-hoop ordinarily employed.

I expand this hoop C to such an extent as will produce the desired tension, and place one or more upon each end of the barrel; and, in order to facilitate using these elastic hoops, I usually employ wire hoops to retain the staves in position during the removal of the barrel from the dies which shape the ends of said barrel. If, however, an ordinary rope and windlass be employed for compressing the ends of the staves or veneer, the elastic hoop may be applied at once.

If desired, small lugs *c c* may be used to prevent the hoop from turning.

It will be readily seen that where this hoop is used the edges of the wood will be kept in close contact, notwithstanding the shrinkage, and hence the proper shape and relation of parts will be maintained.

I do not claim, broadly, the employment of a contracting truss-hoop, as hoops have heretofore been made of a single piece of non-elastic material having its ends drawn together by a spring; but I believe that my construction is preferable to any heretofore used, particularly in the manufacture of barrels which are made of thin staves, because my hoop produces a substantially uniform pressure around the entire circumference of the barrel, and it is not therefore compelled to slip upon part of the staves in order to draw together the edges of some of the other staves. This drawing together of two adjacent staves, independently of the action of the hoop upon the others, might be effected by making the hoop in short sections, connected with each other by contracting springs, without departing from the spirit of my invention, which consists, essentially, in constructing a truss-hoop in such manner that its parts shall be contracted or drawn toward each other at more than one point around the barrel. And a rigid hoop having internal vertical ribs to facilitate the uniform seasoning of the material might be substituted for the coiled-wire hoop, and carry out the second part of my invention, which consists, essentially, in the employment of a truss-hoop having its inner surface made in broken or detached portions, to permit free access of heat to the work.

What I claim is—

1. An elastic truss-hoop, parts of which are drawn toward each other upon two or more sections of the barrel, substantially as set forth.

2. A truss-hoop provided with lugs *c*, to assist in maintaining the hoop in position upon the barrel, substantially as set forth.

3. A truss-hoop formed of coiled metal, substantially as set forth.

4. A truss-hoop provided upon its inner surface with transverse ribs which engage with the barrel, substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CLARK W. THOMPSON.

Witnesses:

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M. P. CALLAN.