

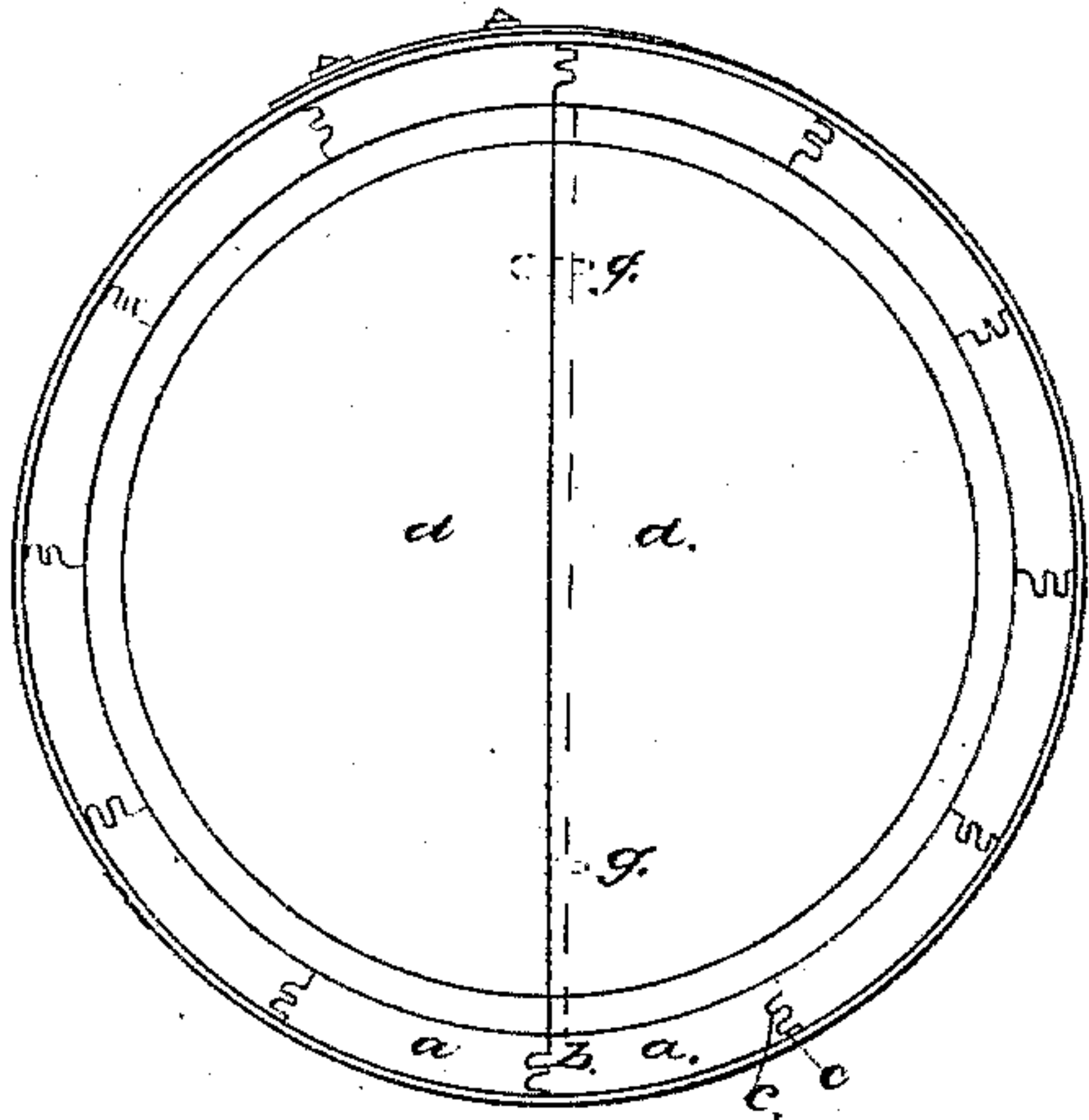
*J. Merrill,*

*Cask.*

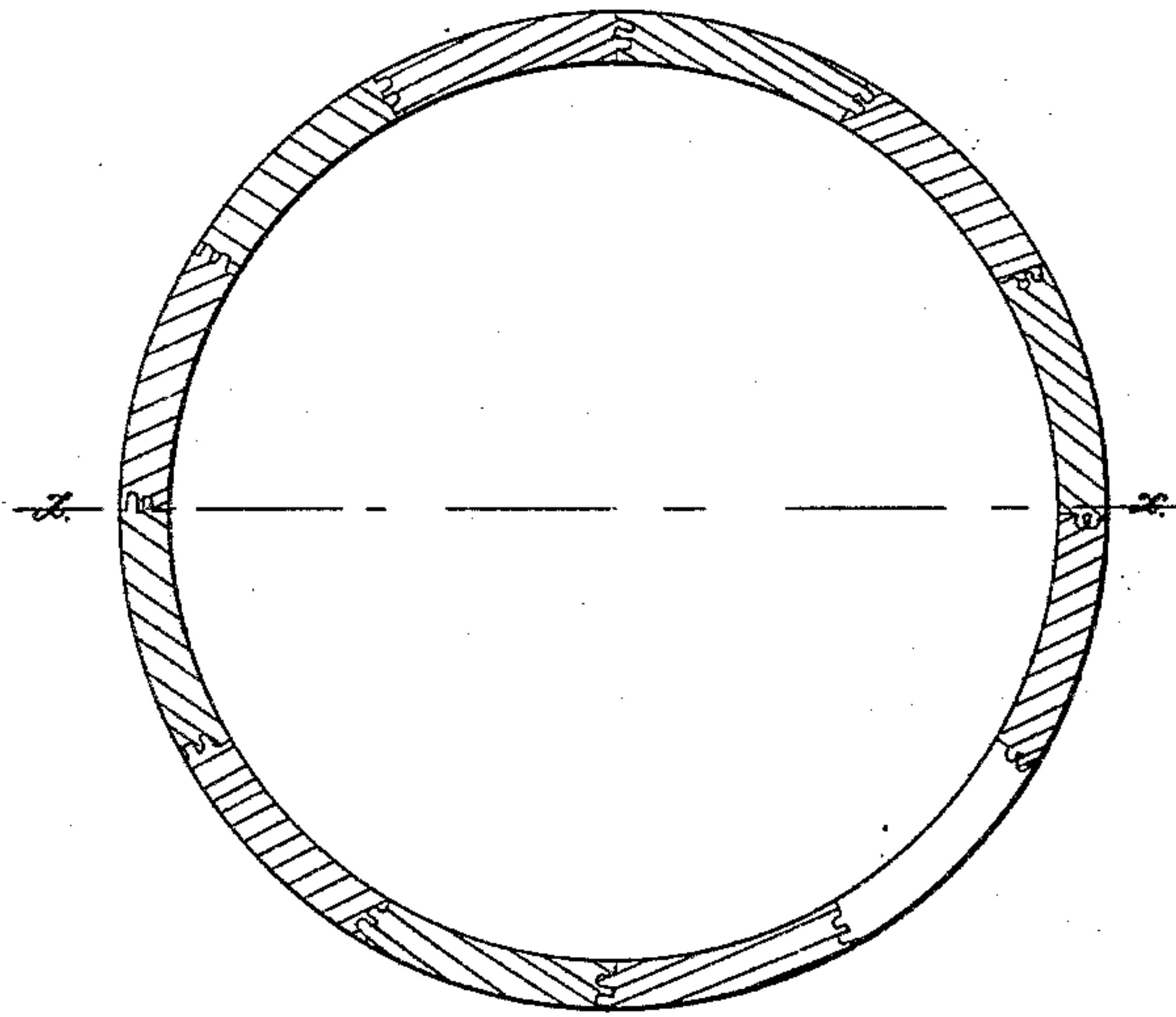
*No 58,451.*

*Patented Oct. 2, 1866.*

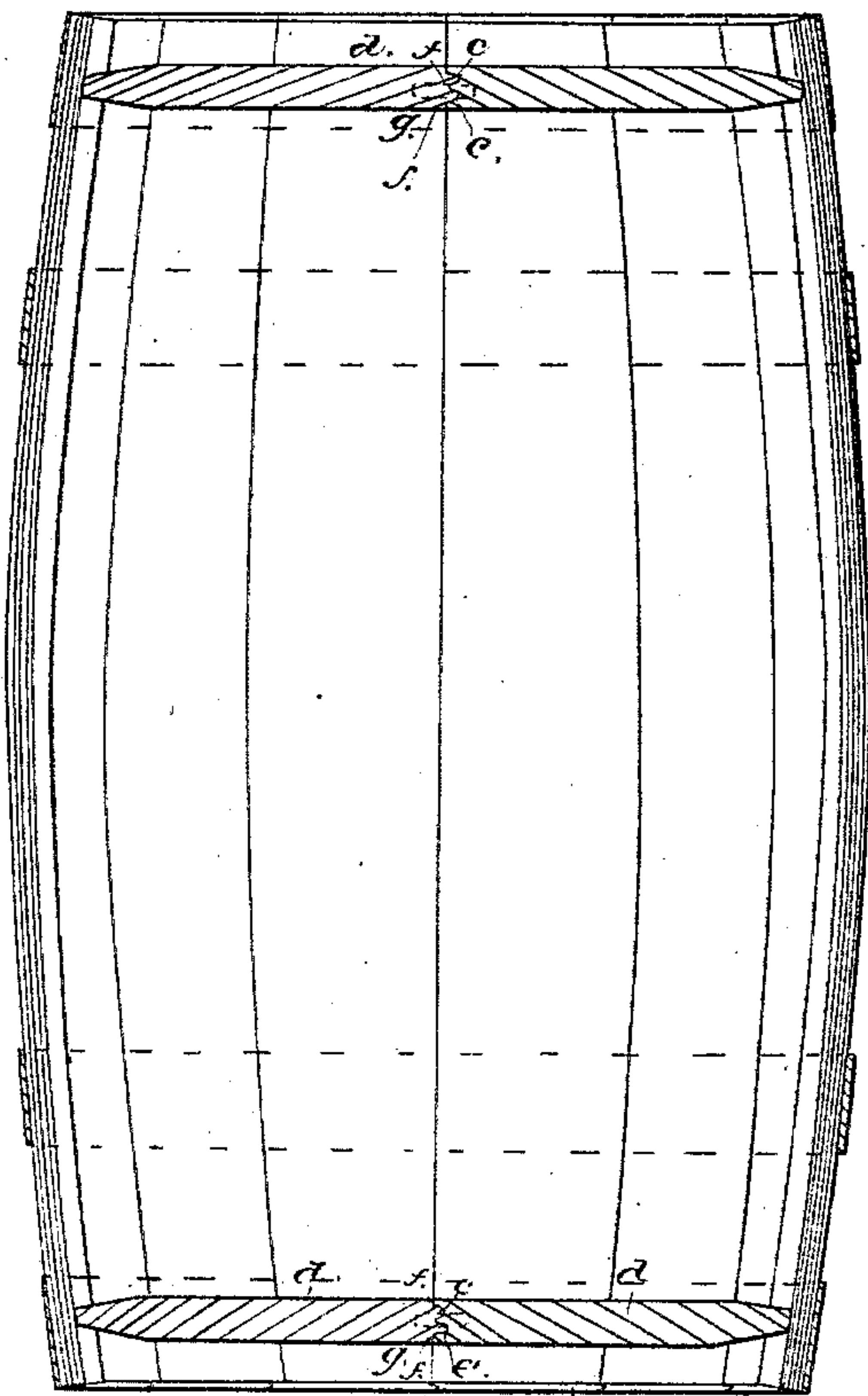
*Fig. 1.*



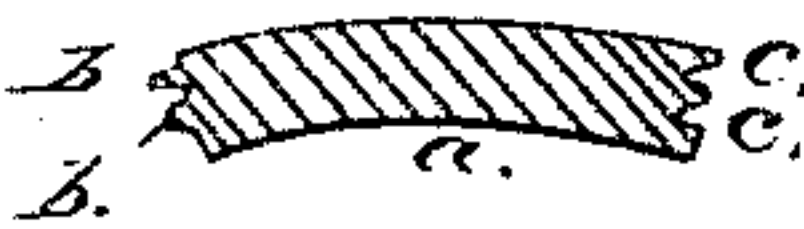
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
*Richard M. Roughton*  
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*Jotham Merrill*



# UNITED STATES PATENT OFFICE.

JOSHUA MERRILL, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN CASKS, BARRELS, AND KEGS.

Specification forming part of Letters Patent No. 58,451, dated October 2, 1866.

*To all whom it may concern:*

Be it known that I, JOSHUA MERRILL, of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Casks, Barrels, and Kegs suitable for Holding and Transporting Liquids; and I do hereby declare that the following is a full and correct description thereof, reference being had to the annexed drawings, and to the letters of reference thereon.

My said invention consists of certain improvements upon an improved cask, barrel, or keg, having its joints tongued and grooved and cemented, for which Letters Patent of the United States were granted to me, bearing date the 29th day of May, A. D. 1866.

First, in an improved cask, barrel, or keg suitable for holding and transporting liquids, having the joints of the staves and heads (when the head is of more than one piece) made with two or more tongues and grooves to each joint, in contradistinction to the single tongue-and-groove joints in the patent above referred to.

Second, in combining, with the tongued-and-grooved joints of cask, barrel, or keg made with two or more tongues and grooves to each joint, a coating or stuffing of glue or similar gelatinous cement, applied before the cask is set up, whereby the joints are firmly cemented by a cement suitable to resist petroleum, alcohol, and similar fluids that are resisted by glue and similar gelatinous substances.

Third, in combining, with the tongued and grooved joints of a cask, barrel, or keg made with two or more tongues and grooves to each joint, a coating or stuffing of shellac, rosin, or other similar resinous cement, applied before the cask is set up, whereby the joints are cemented when the staves are driven up by a cement suitable to resist leakage of beer, molasses, or other watery fluids.

But more particularly to describe my said invention I will refer to the drawings, of which—

Figure 1 is a top view of the cask. Fig. 2 is a cross-section. Fig. 3 is a vertical section through the heads and staves, and Fig. 4 is a section of a stave.

The staves *a* are each made with two or more

tongues, *b b*, and two or more corresponding grooves, *c*, as shown in the drawings. The heads *d* are also jointed with two or more tongues, *e e*, and two or more corresponding grooves, *f f*, if desired. Dowel-pins *g* may be used in putting the head-pieces together.

The staves may be made in the ordinary way, and tongued and grooved with a suitable tongue-and-grooving plane, or by machinery which I have devised, and which I intend to describe and show in another application for Letters Patent for the same; but the casks may be made sufficiently well by steaming the staves and bending them by rollers and plain-jointing by machinery prior to tonguing and grooving them, as practiced in large cooperages.

I prefer to make the grooves of a *V* form or a rounded *V* form; but I do not intend to confine myself to the *V* form of tongues and grooves. Although casks jointed as above described are tighter than with plain joints or with single tongued-and-grooved joints, I prefer to cement these double tongued-and-grooved joints with a suitable cement applied to the joints before the cask is set up, so that the driving up of the hoops squeezes the cement into the pores of the joints, thus resisting leakage and imparting great strength to the cask.

When the casks are to be used for holding and transporting petroleum, alcohol, or similar fluids that do not dissolve glue or similar gelatinous cements, I apply to the joints a solution of hot glue by dipping or with a brush, and set them up as quickly as possible.

When the staves are properly made and jointed, there is very little difficulty in trussing the casks before the glue sets, especially when the staves have been bent by machinery.

When the casks, barrels, or kegs are to be used to hold and transport beer, molasses, or other watery fluids, I cement the double tongued-and-grooved joints together with shellac or rosin, or other similar resinous cements. In making the shellac solution, I prefer to mix together in about equal proportions alcohol, ninety-five per cent., and coal-tar, naphtha, or benzole of about 32° Baumé's hydrometer; and to one pint of this mixture I put in a pound or a pound and a half of



common gum-shellac. This makes a good thick varnish, and does not dry so rapidly as shellac dissolved in alcohol alone, thus giving more time to set up the cask after the cement is applied to the joints. Shellac will, however, answer, if dissolved in alcohol alone or in caustic ammonia. Rosin cement may be made by dissolving in a pint of common naphtha one and a half pound of the rosin of commerce; or gum-dammar will answer as well.

The casks made as above described may be coated inside by a coating of glue or shellac, according to the liquid the cask is designed for. The coating of the inside is well known, and not necessary to be described, except to say that it may readily be done with glue by pouring into the cask a few gallons of hot glue solution, and then, by putting in the bung tight and rolling the cask about, the air within, being heated by the hot glue, forces it into the pores of the interior surfaces of the heads and staves.

I claim as of my invention and improvement in casks, barrels, and kegs used for holding and transporting liquids—

1. The improved cask, substantially as described, having its joints made with two or more tongues and two or more corresponding grooves at each joint, substantially in the way and for the purposes hereinbefore described.

2. In combination with the joints, a cask having its joints made with two or more tongues and two or more corresponding grooves to each joint, and a coating or stuffing of glue or similar gelatinous cement applied to the said joints, substantially as and for the purposes described.

3. In combination with the joints of a cask having its joints made with two or more tongues and two or more corresponding grooves to each joint, a coating or stuffing of shellac, rosin, or similar resinous cements applied to the said joints, substantially as and for the purposes described.

JOSHUA MERRILL.

Witnesses:

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GEORGE H. FOSTER.