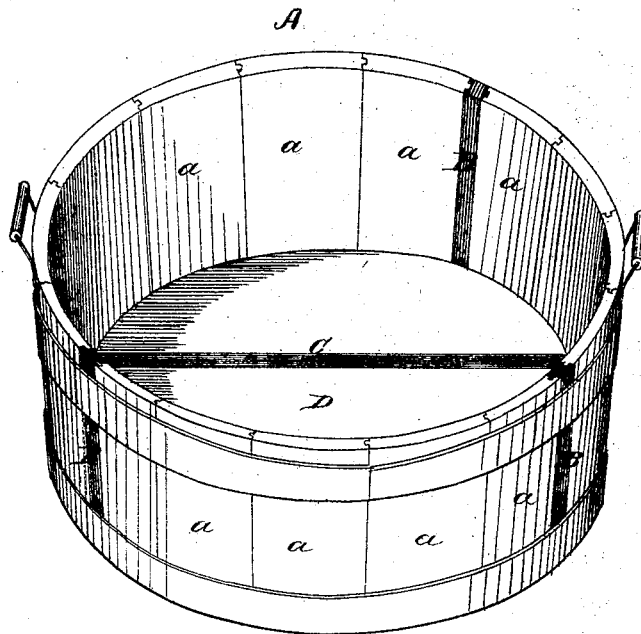


P. H. NILES.

Improvement in Tubs, Pails, &c.

No. 115,088.

Patented May 23, 1871.



Witnesses.

C. F. Brown,
J. O. Hayden

Inventor.

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UNITED STATES PATENT OFFICE.

PETER H. NILES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TUBS, PAILS, &c.

Specification forming part of Letters Patent No. 115,088, dated May 23, 1871; antedated May 9, 1871.

I, PETER H. NILES, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Tubs, Pails, &c., of which the following is a specification:

The figure represents a perspective view of a tub embodying my invention.

The object of this invention is to prevent leakage in wooden vessels which are employed to hold water, &c., when the leakage results from the shrinking of the wood; and it consists in constructing said vessels with elastic staves at intervals, and also in combining an elastic strip with the bottom of a tub or pail, or head of a barrel, &c., as will hereinafter more fully appear.

In the drawing, A represents a tub having the wooden staves *a*, which are rabbeted together in the usual manner. B B B represent narrow staves, of elastic material, which are placed between staves *a* at suitable intervals. The staves B are cast or formed with a groove and rabbet to correspond with staves *a*, or in any desired form, and are strongly compressed between staves *a*, thus storing up, as it were, a lateral pressure, which exerts itself when the wood becomes shrunk by reason of dryness, and prevents the staves *a* from cracking apart by crowding the same closely together. Swelling generally follows shrinking of the wood, through the agency of moisture; so when the staves swell the elastic staves B give to

the pressure; and when the staves *a* become dry and shrink the elastic staves expand accordingly, and preserve the water-tight joints between the staves and at the chimes.

In barrels which are used to contain cider or other liquid subject to fermentation, one or more elastic staves would tend largely to prevent breaking, as the compressed elastic material allows a lateral play for the staves.

An equivalent construction, and one which would give very beneficial results, would be the placing of an elastic band under the hoops, or even an elastic hoop; but this I propose to leave for a further patent.

C represents a similar strip of elastic material across the bottom D, which strip may be employed or not. It is not so essential as the staves B.

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

A pail, tub, barrel, &c., provided with one or more elastic staves, B, or staves B and bottom strip C, substantially as described.

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

PETER H. NILES.

Witnesses:

CARROLL D. WRIGHT,
CHARLES F. BROWN.