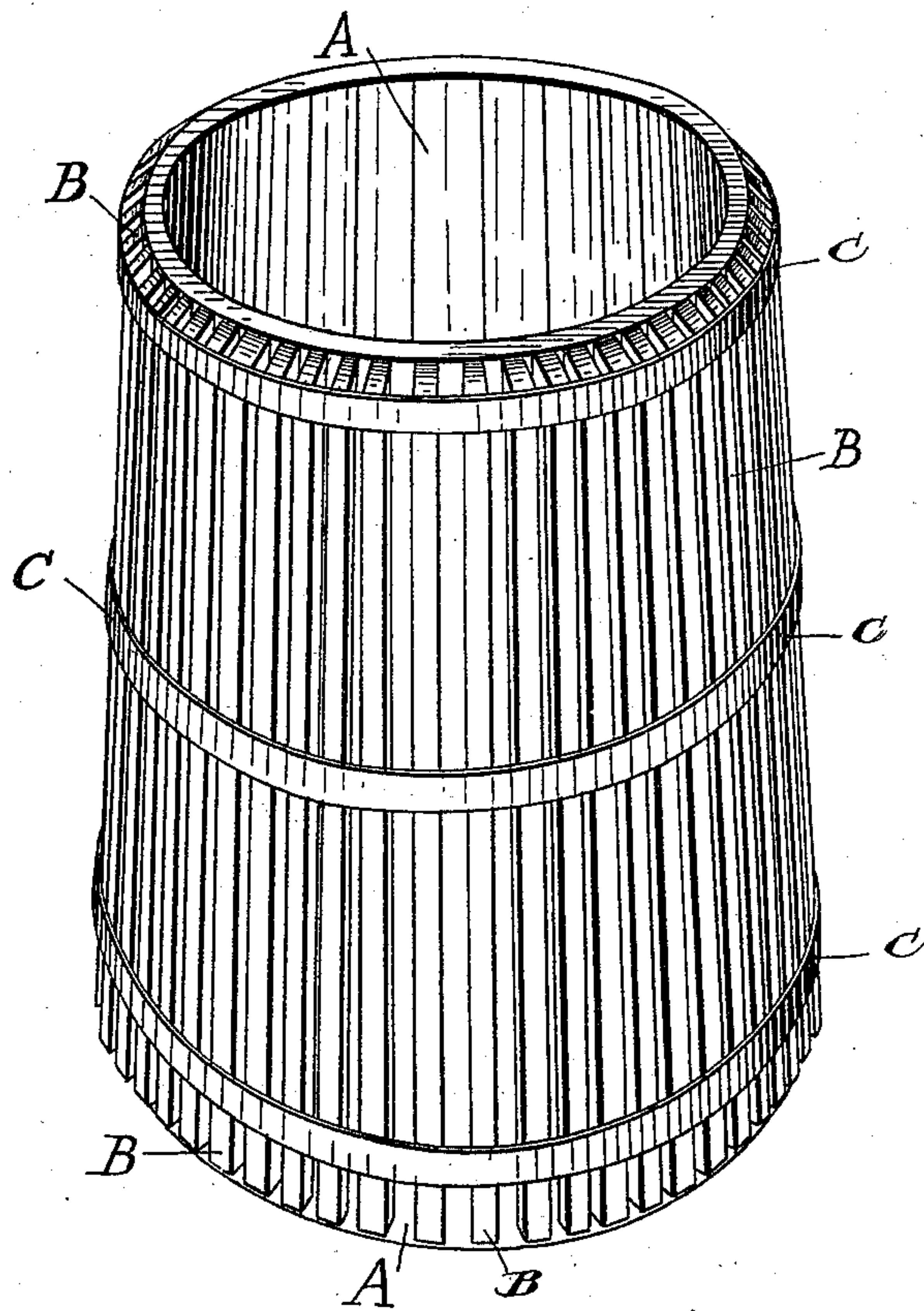


(No Model.)

J. DORAN.
VINEGAR TANK.

No. 418,784.

Patented Jan. 7, 1890.



Witnesses.

L. B. Fehuntonhaugh.
H. G. McMillan

Investor

James Doran
by Donald C. Ridout & Co.
Attys

UNITED STATES PATENT OFFICE.

JAMES DORAN, OF TORONTO, ONTARIO, CANADA.

VINEGAR-TANK.

SPECIFICATION forming part of Letters Patent No. 418,784, dated January 7, 1890.

Application filed May 1, 1889. Serial No. 309,268. (No model.)

To all whom it may concern:

Be it known that I, JAMES DORAN, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented
5 a certain new and useful Improvement in Tubs or Tanks, of which the following is a specification.

The invention relates to an improvement in tubs or tanks used for containing vinegar or
10 other acids; and the object of the invention is to provide means by which the soakage of the acids through the staves shall be prevented from acting upon and destroying the metal hoops employed in binding the said
15 staves together.

It consists, essentially, of a series of strips or projections arranged longitudinally around the outside of the tub or tank to receive the binding-hoops and hold them away from contact with the outer surface of the staves which
20 become soaked with the vinegar or other acid which may be contained within the tank or tub.

The drawing represents a perspective view
25 of my improved tub or tank.

In my experience as a manufacturer of vinegar I have, in common with other vinegar-manufacturers, suffered a good deal of annoyance and loss by the rusting and breaking of the binding-hoops which surround the vinegar tubs or tanks, and which are destroyed by the action of the acids soaking through the staves. To prevent this destruction I arrange
30 around the tub or tank A a series of strips B, and paint the inner surface of each strip with a heavy coating of any suitable liquid-proof paint. Around these strips the hoops C fit. It will be observed that the strips B are longitudinally placed around the tub or tank A, so

that the hoops C may be driven into position in
40 exactly the same manner as though they were immediately in contact with the surface of the staves, and as a matter of fact they are much easier driven into position, as the staves' space
45 between the strips B enables the hoops to be driven into position without the mallet coming in contact with the strips or staves. By supporting the hoops C away from the staves of the tub A and painting the inner surface of each strip B with a heavy coating of liquid-proof paint the acid which soaks through
50 the staves cannot reach the iron hoops, and as a consequence the hoops will remain in perfect condition for years, whereas without the strips the acid soaking through the staves
55 very soon eats into and destroys the metal hoops.

What I claim as my invention is—

1. The combination, with a receptacle A, formed with a plurality of wooden staves, of
60 a plurality of strips B, resting against said staves and extending lengthwise thereof, and the hoops around said strips, substantially as and for the purpose specified.

2. The combination, with a receptacle A, formed of a plurality of wooden staves, of a plurality of strips B, resting against said staves and extending lengthwise thereof, and the hoops around said strips, the inner surface of said strips being covered with a heavy
70 coating of liquid-proof paint, substantially as and for the purpose specified.

Toronto, April 18, 1889.

JAS. DORAN.

In presence of—

CHARLES C. BALDWIN,
W. G. McMILLAN.