

J. D. McEACHREN.  
Barrel.

No. 200,468.

Patented Feb. 19, 1878.

Fig. 1.

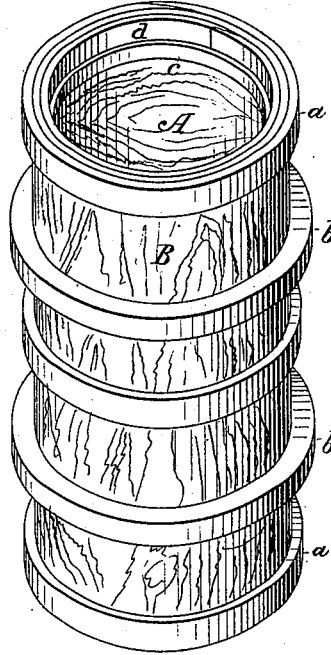


Fig. 3.

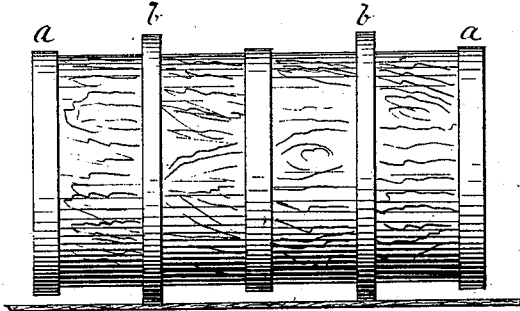
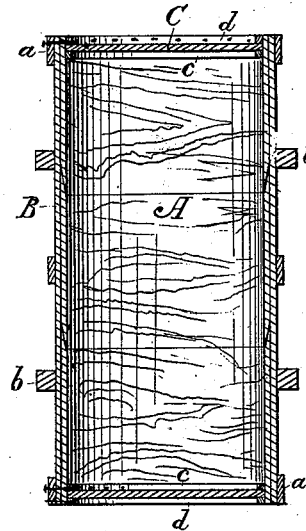


Fig. 2.



Attest:  
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By J. H. Sasaki, atty

# UNITED STATES PATENT OFFICE.

JOHN D. MCEACHREN, OF GALT, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF HIS RIGHT TO DAVID H. BURRELL, OF LITTLE FALLS, NEW YORK.

## IMPROVEMENT IN BARRELS.

Specification forming part of Letters Patent No. **200,468**, dated February 19, 1878; application filed January 2, 1878.

*To all whom it may concern:*

Be it known that I, JOHN D. MCEACHREN, of Galt, county of Waterloo, Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in 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 letters of reference marked thereon, which form a part of this specification.

The object of this invention is to improve that class of barrels, casks and similar packages made in the form of a hollow cylinder from thin sheets of wood, as cut from the log by the saw or knife, and known to the trade as "veneers," by constructing them so that they shall not be liable to have their lining or the inner layer of veneer shrink away from the head as the package dries, thus causing a liability to leakage of its contents; nor shall the barrel, when lying upon its side, rest and roll upon its end hoops, thus rendering it difficult to handle or turn out of a direct course as it rolls along.

My improvement consists in making such barrels or packages of two hollow cylinders of veneers, rolled one upon the other, the inner cylinder being composed of two or more pieces of veneers, scarfed and lapped at their meeting edges, the grain of the wood running around the barrel, and of equal length with the outer cylinder, which is composed of one or more pieces of veneer of equal length with the package, and having the grain of the wood running parallel to its axis; and the invention consists, further, in the means employed to hold the head in position, consisting of an inner and outer hoop, secured to the inner cylinder of the barrel, with a space between them, forming a crozing, into which the periphery of the head enters, being thereby secured in place; and it consists, further, in providing the barrel or package with quarter-hoops of greater thickness than the other hoops, so that it may be easier tilted upon its end, as well as diverted from a straight course when rolling upon its side, together with certain other combinations

and arrangements of parts, which will be hereinafter fully described, and then specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the barrel with one head removed, showing the hoops which form the crozing and retain the head in position, as well as the method of joining the ends of the pieces of veneer forming the inner cylinder. Fig. 2 is a diametrical longitudinal section through the body of the barrel, showing the arrangement of the outer and inner cylinders, the hoops, and means of retaining the head in position. Fig. 3 shows the barrel lying upon its side, illustrating the manner in which the thick hoops keep its ends from touching the surface upon which it may be rolled.

In constructing this barrel, the inner cylinder A is first made by rolling around and upon a suitable former the several sheets of veneer of which it is composed, their meeting edges having first been beveled or chamfered, and allowed to overlap, so that as they shrink in drying or swell from the absorption of moisture there is never an open joint between them, nor do they press out the heads in swelling, as is frequently the case with barrels having the inner cylinder formed of a single sheet. In rolling the sheets upon the former, the ends of a sufficient number to make a width equal to or a little in excess of the length of the intended barrel are held to the former by a suitable clasp, attached longitudinally to one of its sides, and the former is then rotated, the veneers being retained in close contact with it by means of a pressure bar or roller until it has made about a quarter-revolution. One of the sheets forming the outer cylinder B is then placed outside of the inner cylinder A, one of its edges being placed beneath the pressure bar or roll, with the grain of the veneer running lengthwise of the former and at right angles to that of the inner cylinder. The former may then be still further rotated, until the edge of the sheet of veneer has passed the pressure roll or bar. The hoops *a a* are then placed one at or near each end of the intended package, and two others, *b b*, of greater thickness than the hoops *a* are placed midway or thereabout between the end hoops and the

middle of the barrel or package. Other hoops similar to the end hoops may be placed at intermediate points, should the purpose to which the article is to be applied require such reinforcement. One end of each hoop is then passed through grooves formed for their reception in the pressure bar or roll. Nails may then be driven through the hoops and cylinders A B, clinching themselves by coming in contact with the metal surface of the former, which is then rotated until the several parts have completely encircled it. Should the first sheet of veneer applied to form the outer cylinder B lack sufficient width to completely inclose the inner cylinder, the rotation of the former is stopped when the edge of the outer sheet is beneath the pressure-roll, and a second sheet is introduced, having its edge in contact with the edge of the first sheet, both being nailed to the inner sheet through the hoops and along the joint. The rotation of the former then again commences, and continues until the inner cylinder is completely covered by its envelopes, unless it should happen that more than two sheets of veneer were needed, in which case they are added, as above described.

The ends of the hoops lap over each other, and are secured by means of nails or staples, or both, as may be found necessary. The ends of the barrel are then trimmed by means of a pair of circular saws, placed at such a distance from each other as to equal the length of the barrel or package, the latter being rotated upon its axis during the operation of trimming by means of the former, to which it is attached. Other means may be employed for the purpose of bringing the barrel to the proper length; but I prefer that above described, as being simple in operation and expeditious. The article may then be removed from the former, and the operation of inserting the heads proceeded with, to accomplish which a hoop, *c*, is inserted within the inner cylinder, near its end, sufficient room being left for the thickness of the head C, which is inserted in the cylinder and lying upon the hoop *c*, and is kept in place by the hoop *d*, which is placed outside the head, within that part of the barrel answering to the chine of the ordinary stave barrel, and secured in that position by nailing to the cylinders of veneer, which form the body of the barrel.

It will thus be seen that the heads occupy a space between the hoops *c* and *d* corresponding to the crozing of the ordinary stave-barrel; but, unlike that article, it is not necessary to remove the outer hoops from its ends in order to release the head, as the removal of hoop *d* allows it to be taken out without further manipulation, and it may be as easily replaced, thus saving much time in heading and unheading barrels when it is desired to inspect their contents.

I am aware that barrels and other packages have been made of an inner and outer cylinder of veneer, the grain of which crossed at right angles; but in these the inner cylinder was formed of a single piece of veneer of sufficient width to reach from head to head, which method of construction is objectionable, as any shrinkage of the sheet after the head is inserted not only removes all support from the latter upon its inner side, but leaves a crevice open, through which the contents of the barrel may escape.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent, the following:

1. A barrel or package the body of which is composed of two hollow cylinders of veneers, rolled one upon the other, the inner cylinder formed of two or more pieces of veneer, scarfed and lapped at their meeting edges, and the grain of the wood running round the barrel, and an outer cylinder, composed of one or more pieces of veneer, with its grain running parallel to the length of the barrel or package, as and for the purpose specified.

2. In a veneer barrel, the combination of a barrel-cylinder composed of two hollow cylinders, rolled one upon the other, having the grains of the wood of the respective cylinders crossing each other at right angles, the inner cylinder formed of two or more pieces, scarfed and lapped at their meeting edges, with the hoops *b b* and *c d*, as and for the purpose shown and described.

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

JOHN D. MCEACHREN.

Witnesses:

HORACE H. WALPOLE,  
JOHN C. BENNETT, Jr.