

# UNITED STATES PATENT OFFICE.

D. C. RAND AND M. WADHAMS, OF PERINTON, NEW YORK.

## IMPROVED WATER-TIGHT CASK.

Specification forming part of Letters Patent No. 36,168, dated August 12, 1862.

*To all whom it may concern:*

Be it known that we, D. C. RAND and M. WADHAMS, of Perinton, in the county of Monroe and State of New York, have invented a new and Improved Cask, rendered impervious to moisture by the application of concentrated coal-tar; and we do hereby declare that the following is a full and exact description thereof.

The object of our invention is to produce a cask containing materials that readily absorb moisture, rendered entirely impervious to water, either when immersed or by the gradual absorption of the atmosphere.

The process employed consists in coating the interior surface of the cask with a resinous cement, so applied as to fill not only the pores of the wood, but the joints or crevices of common cooperage not intended as tight work. For this purpose we employ coal or gas tar, which we evaporate by boiling in any convenient manner until it acquires the necessary consistency to harden perfectly on cooling. This may be determined by placing a small quantity on any surface where it may become cold, and if it is no longer adhesive to the touch it has acquired the necessary degree of concentration. It is poured into the bung of the closed cask, which must be immediately rolled and turned in every direction, so that no part of the surface will remain uncovered, when the excess may be drained off by placing the bung downward. An interior coating will be found sufficient for nearly all purposes; but if there is danger of constant external exposure to water, the exterior surface may also be covered either by immersion or by applying rapidly with a brush. The cement thus applied penetrates deeply into the pores of the wood, thereby preserving it from decay, and also forms a thick coating,

which closes the joints of the staves, worm-holes, and other imperfections of the timber, and entirely prevents the absorption of moisture or leakage of the contents of the vessel. It will also be found, when well hardened by cooling, to be nearly or quite inodorous.

The application of this improvement to useful purposes is various; but the preservation of gunpowder in casks or kegs fully instances its great value. It not only prevents the powder from becoming damp, and consequently worthless, but it entirely obviates the danger of accidental explosions from the leakage of minute grains through the joints of the casks or kegs, while it enables manufacturers of that article to use a cheaper kind of cooperage, and thereby save nearly half the ordinary expense. The cost of applying this process is insignificant both as regards the material and labor. It is equally beneficial for casks containing leaky and penetrating fluids—as various kinds of oils—which otherwise require the very best of barrels both in timber and workmanship to contain them.

What we claim as our invention, and desire to secure by Letters Patent as a new article of manufacture, is—

A close cask rendered impervious to moisture by a coating of concentrated coal-tar, substantially as and for the purposes herein set forth.

In witness whereof we have hereunto signed our names in the presence of two subscribing witnesses.

D. C. RAND.  
M. WADHAMS.

Witnesses:

J. FRASER,  
M. CANFIELD.