

UNITED STATES PATENT OFFICE.

ALBERT T. RAND, OF NEW YORK, N. Y.

IMPROVED MODE OF PREPARING VESSELS FOR HOLDING GUNPOWDER.

Specification forming part of Letters Patent No. 53,184, dated March 13, 1866.

To all whom it may concern:

Be it known that I, ALBERT T. RAND, of the city, county, and State of New York, have invented a certain new and useful method of preparing kegs, casks, barrels, boxes, or other packages in which gunpowder, nitrate of potash, nitrate of soda, or other deliquescent salts are transported or stored in such a manner that the article contained may be preserved uninjured from the moisture of the atmosphere or from dampness while in transportation even during rain; also, that I do not know or believe that the same has been known or used previous to the invention thereof by me.

To enable others skilled in the art to make use of my invention, I herewith give a full and exact description of my device.

It is plain that, since all damage to these goods arises from the admission of water or of damp air into the keg or package containing the powder, the method most certain to effectually prevent this will be the insertion of some substance impervious to or insoluble in water between the goods contained in the package and the external air. One plan for doing this is to line the inside of the keg with or to wrap the article in a water-proof texture, as water-proof paper, cloth, or skin. Another, and perhaps better, method is to coat the inside of the package with some water-proof substance, as some one of the solid hydrocarbons, resin, wax, paraffine, asphaltum, bitumen, with other substances possessing the property of insolubility in water. These, of which asphaltum is the best for my purpose, I most commonly apply, both to secure a uni-

form unbroken surface and for the sake of economy of material, by first melting at nearly the boiling-point of the substance used, then pouring into the package to be rendered water-tight, pouring back, of course, any of the water-proofing that may not have attached itself to the sides of the package. The same object—viz., protection against moisture—might be effected by coating the keg or package externally with some one of these substances, or with a mixture of two or more of them. Another way of accomplishing the same thing would be to dissolve some one or more of these substances, and after washing them over the inside of the package to allow the solvent to evaporate and to leave the water-proof coating on the sides of the keg.

I am well aware that glue is commonly used in a similar manner to prevent petroleum, turpentine, &c., from leaking; also, that many preparations have been used for the same purpose; also, that a patent has been granted for the use of the residuum of the distillation of coal to line powder-kegs, which, therefore, I do not claim.

What, then, I claim as my invention, for which I ask Letters Patent for the United States, is—

Coating a keg, barrel, cask, or other package internally with either of the substances before mentioned, or with a mixture of any or all of them, as described, and for the purposes set forth.

ALBERT T. RAND.

Witnesses:

ALGERNON R. JOHNSTON,
E. J. BUTLER.