

UNITED STATES PATENT OFFICE.

MILES W. QUICK, OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN COATINGS FOR OIL-BARRELS.

Specification forming part of Letters Patent No. **158,978**, dated January 19, 1875; application filed October 28, 1874.

To all whom it may concern:

Be it known that I, MILES W. QUICK, of Titusville, in the county of Crawford and State of Pennsylvania, have invented a new and useful Improvement in Coating or Lining for Oil-Barrels; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to the means employed for lining oil-barrels and similar articles intended for storage and transportation of oily matters; and it consists in the application of fluid extract of tan-bark to the interior of barrels, so as to produce an elastic, tough, and durable lining, one which will not unite with and discolor the contents of the barrel, or be affected by any of the light products.

The requisites of a lining for oil-barrels, as understood in the trade, are: First, that it should be of a nature to resist the action of hydrocarbons; second, that it should be flexible and tough to resist possible injury in rough handling of the barrel; third, that it should be of a nature to permeate and close the pores of the wood; fourth, that it should be easily and readily applied; and, fifth, that it should be inexpensive.

Heretofore, in lining oil-barrels glue and gelatines, shellac, and resinous matters have been used singly and in combination with the following results: The glue compounds require much care in applying, for if, from any cause, the barrel is not perfectly free from oily matters the glue will not permeate or adhere to the wood; or if evaporation is not sufficiently perfect to carry off all moisture from the lining then the remaining moisture will cause the lining to be so acted upon by the hydrocarbons as to render the oil milky or roily, and injure its sale. Glue linings are also liable to flake and peel off. Shellac and resinous linings are too brittle to resist the rough handling incident to transportation when used alone, and when glue is added this defect is but partially remedied, while the effects of moisture upon glue are superadded. In attempts to overcome these objections molasses and glycerine have been added to the compounds, in a measure remedying the defects, but rendering the compound too expensive for the purposes intended.

After much experimenting I have discovered

that what is known in the trade as fluid extract of tan-bark, when properly applied, fulfills the requirements above set forth, and are liable to none of the objections above set forth.

In order to enable others skilled in the art to use my invention, I will now proceed to describe the same as preferably practiced.

In carrying out my invention I take fluid extract of tan-bark, which will vary in weight from eight and one-half pounds to ten and one-half pounds to the gallon. Where the heavier extracts are used they are reduced by the addition of water, so as to weigh about nine pounds to the gallon. This liquid is then, preferably, heated in a suitable vessel up to a temperature varying from 180° Fahrenheit to 212°, and the requisite quantity poured into the barrel, after which the bung is inserted and the barrel rocked and agitated in the usual manner, to cause an even application of the liquid to the interior of the barrel. The steam given off by the liquid exerts an internal pressure, which will disclose any imperfections in the barrel, which may be at once repaired. After a few moments of agitation the barrel is removed and placed upon an inclined trough, the bung taken out, and the surplus liquid allowed to drain back into the heater. The amount usually introduced into each barrel is about one gallon. The quantity actually used in coating is about one pint, more or less, which cannot exceed in the market three and one-half cents in cost, while the average cost of coating a barrel by the glue and shellac compounds will vary from six to nine cents.

The advantages of my lining are as follows: It may be applied in relining barrels not entirely freed from oil, as it will not unite with the oil, but will float or clean off the oil and apply itself to the barrel. It forms an elastic coating or lining which will not crack from handling. It permeates the wood, and will not flake or peel off. It will not discolor or injure the contents of the barrel, and it can be applied at less than half the cost of any lining known to me.

I am aware that solutions of tannin have been used with glue, gelatine, &c., producing a tannate of gelatine or similar lining for oil-barrels; also that coatings of shellac and rosin have been employed, and that the juice of

prickly pear and other gelatinous plants, together with lime, plaster-of-paris, &c., have been applied to the interior of oil-barrels, to all of which no claim is herein made; but

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

The process herein described for rendering oil-barrels impervious to hydrocarbons by coat-

ing the interior of the barrel with fluid extract of tan-bark, substantially as specified.

In testimony whereof I, the said MILES W. QUICK, have hereunto set my hand.

MILES W. QUICK.

Witnesses:

F. W. RITTER, Jr.,

T. B. KERR.