

UNITED STATES PATENT OFFICE.

PETER C. REILLY, OF INDIANAPOLIS, INDIANA.

PRESERVED WOOD.

No. 899,905.

Specification of Letters Patent.

Patented Sept. 29, 1908.

Application filed January 4, 1906. Serial No. 294,604. (Specimens.)

To all whom it may concern:

Be it known that I, PETER C. REILLY, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Preserved Wood; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention is an article of manufacture consisting of natural wood impregnated with a product of the destructive distillation of petroleum and creosote oil.

This invention is in the nature of an improvement over that set forth in a former application by me, filed August 31, 1905, Serial No. 276,622, for preserved wood, wherein was described the source and manner of producing, from petroleum, a product from which the petroleum product herein mentioned is obtained.

The following is a description of the equipment and process for obtaining and the characteristics of the petroleum product (one of the constituents herein required) and also the manner of mixing the two constituents.

The apparatus consists of a cylindrical retort having an iron shell lined inside with fire clay and loosely filled with pieces of broken fire brick or like refractory material. One end of the retort is provided with an opening and appliance for heating the contents and also a suitably arranged spray pipe connected with a supply tank containing oil. The other end of the retort is provided with a sort of stack valve and also a pipe connecting a condensing chamber and reservoir for collecting such condensable matter and gases as may be produced by the process hereafter described. The starting material must be a crude petroleum or petroleum distillate, having a paraffin base.

In operation the temperature of the contents of the retort is raised to a cherry red heat and then a spray of the petroleum oil is injected into it and caused to pass up through the red hot material. The heat transforms the constituents of the oil into condensable vapors and fixed gases. These products are conducted through the cooling chamber where the vapors condense and the fixed gases pass on to the reservoir where they are stored.

The black oily liquid which is collected in the condensing chamber is the product which

I dissolve in the creosote oil. This hydrocarbon oil has a specific gravity of about 1.0725, begins to distil at about 150° C., is fluid at normal temperatures, is substantially non-volatile and practically free of suspended matter. I place the condensed liquid in a suitable retort and raise it to a temperature of about 300 F., then add the creosote oil in substantially equal parts and cause the ingredients to be thoroughly mixed. In combining these ingredients I have usually used about half and half but this proportion is not necessary and I do not wish to be limited strictly to it. I find that when this petroleum product is mixed with the creosote oil, the resulting mixture is a striking and novel product very valuable as a wood preservative.

The mixture possesses a higher specific gravity than that of the creosote oil alone, yet retains a degree of penetrability equal to that of the creosote oil. On account of the addition of the petroleum product to the creosote oil the mixture obtained possesses a superior value over the creosote oil alone, since it gives to it a body which will offer more resistance to atmospheric elements and surface wear of the wood fiber impregnated with this mixture than wood fiber treated in like manner with creosote oil.

The above described mixture is driven into the pores of the wood fiber in any suitable way, preferably by the usual methods employed for creosoting wood.

What I claim as my invention and desire to secure by Letters Patent is:

As an article of manufacture, wood impregnated with a mixture of creosote oil and the hereinbefore described tar obtained from the manufacture of oil and water gas, said tar having a specific gravity greater than water, beginning to distil at about 150° C., fluid at normal temperatures, substantially non-volatile, and practically free of suspended matter.

In witness whereof, I have hereunto affixed my signature in the presence of the witnesses herein named.

PETER C. REILLY.

Witnesses:

HELEN B. McCORD,
N. ALLEMONG.