

UNITED STATES PATENT OFFICE.

HAROLD MELVILLE NEWTON, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE KETTLE RIVER COMPANY, A CORPORATION OF MINNESOTA.

PRESERVED WOOD.

1,037,831.

Specification of Letters Patent.

Patented Sept. 3, 1912.

No Drawing.

Application filed October 30, 1909. Serial No. 525,561.

To all whom it may concern:

Be it known that I, HAROLD MELVILLE NEWTON, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented a new and useful Article of Manufacture—namely, Preserved Wood—of which the following is a specification.

My invention relates to improvements in preserved wood, and has special reference to a certain preserving compound and a new article of manufacture which results from the saturation or impregnation of wood therewith.

The object of my invention is to provide an article of wood which shall be adapted for the many uses to which wood is put, and shall effectually resist the destructive and decomposing action and influence of heat changes, air, water, micro-organisms and land and marine insects.

My invention consists in a new article of manufacture, comprising wood saturated with tar, *i. e.*, heavy hydrocarbon oil, that is a by-product of the well known Lowe process of carbureting water gas with petroleum oil having an asphaltic base. Asphaltic base petroleum is produced by many Texas and California oil wells. This particular by-product tar or hydrocarbon oil, is black in reflected light and brown in transmitted light.

Improper action or control of the gas making apparatus sometimes results in the formation of free carbon, which appears in the tar, but the tar is usually substantially free from matter or solids in suspension. This tar is, and remains, liquid at normal temperatures. It is but slightly volatile at atmospheric temperatures; a temperature somewhat exceeding 150° C. being required to initiate distillation. This oil, or tar, as obtained in commerce, may be readily distinguished from other water gas tars by gravity determination, its specific gravity being greater, varying between 1.10 and 1.16 at 15° C. My observation and experience prove that this heavy hydrocarbon oil or tar from such (the Lowe or equivalent) destructive distillation of petroleum oil characterized by an asphaltic base, is a com-

pound of highly complex and stable order, its constituents belonging to the aromatic series. Its lighter constituents are antiseptic and are well fitted to preserve the saturated wood from fermentation or destruction by insects while its large proportion of bitumen insures the desirable, thorough water-proofing of the wood.

To produce the herein described preserved wood, I employ the apparatus generally used in creosoting processes, forcibly injecting the herein described oil into the wood, quite to the point of saturation, chiefly by pressure upon the oil while the wood and a quantity of oil submerging said wood are confined in a closed vessel.

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

1. As a new article of manufacture, wood impregnated with the herein described residuum hydrocarbon oil obtained in the manufacture of oil and water gas, by use of petroleum oil having an asphaltum base, said hydrocarbon oil having a specific gravity of about 1.13 at 15° C., beginning to distil at about 150° C., being fluid at normal temperature and substantially non-volatile, practically free of matter in suspension and antiseptic to the organisms which attack wood.

2. As a new article of manufacture, wood substantially wholly impregnated with the herein described residuum hydrocarbon oil obtained in the manufacture of oil and water gas, by use of petroleum oil having an asphaltum base, said hydrocarbon oil having a specific gravity of about 1.13 at 15° C., beginning to distil at about 150° C., being fluid at normal temperature and substantially non-volatile, practically free of matter in suspension and antiseptic to the organisms which attack wood.

In testimony whereof, I have hereunto set my hand, this 26th day of October, 1909, in the presence of two subscribing witnesses.

HAROLD MELVILLE NEWTON.

Witnesses:

M. SIMON,

R. L. FARRINGTON.