

UNITED STATES PATENT OFFICE.

CHARLES D. WILLIAMS, OF ST. PAUL, MINNESOTA.

IMPROVEMENT IN ARTIFICIAL FUEL.

Specification forming part of Letters Patent No. 123,962, dated February 20, 1872.

To all whom it may concern:

Be it known that I, CHARLES D. WILLIAMS, of St. Paul, in the county of Ramsey and in the State of Minnesota, have invented certain new and useful Improvements in Artificial Fuel; and do hereby declare that the following is a full, clear, and exact description thereof.

The nature of my invention consists in an artificial fuel, composed of peat or other porous substance saturated with certain materials, as will be hereinafter more fully set forth; and it also consists in the manner or method of saturating the porous substance with such materials.

The materials used for saturating the peat or other porous substance are, coal-tar from gas works, shale-oil, and residuum from the distillation of crude petroleum, in about equal parts.

I do not wish to confine myself to these exact proportions, as they may be varied as circumstances may require, and according to the porosity of the peat and bodies to be used as absorbents may demand.

The peat and porous bodies are first partially saturated with crude carbon-oil or shale-oil, as may be desired, and afterward the saturation is completed with coal-tar from gas-works, or the residuum from distillation of crude petroleum, or with both; or, in case it may be desirable to change this manner of saturating, in consequence of the change or difference in the porous body to be saturated, I may partially saturate these bodies with coal-tar or residuum

first, and then complete the saturation with petroleum-oil and shale-oil.

One great advantage in this mode of saturation is to keep the petroleum-oil and shale-oil from evaporating, as the coal-tar or residuum will readily become hard and close the pores of the porous bodies like a coating. Another great advantage is that the coal-tar and residuum do not ignite near as readily as the oils do, which renders them safer for commercial use. Another advantage is that the coal-tar and residuum do not allow the gases to escape and be followed up from the place of burning to where the fuel is kept for use. Still another advantage is that the coal-tar and residuum, being on the outer surface of the bodies saturated, turn off the water in cases where it is exposed to rains and melting snows.

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

An artificial fuel composed of peat or other porous substance, shale-oil, and residuum from the distillation of crude petroleum-oil, substantially in the manner and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 10th day of November, A. D. 1871.

CHARLES D. WILLIAMS.

Witnesses:

J. P. ALLEN,
JAMES FAIRGRIEVE.