

UNITED STATES PATENT OFFICE.

SAMUEL CABOT, JR., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN ARTIFICIAL FUEL.

Specification forming part of Letters Patent No. **187,508**, dated February 20, 1877; application filed October 31, 1876.

To all whom it may concern:

Be it known that I, SAMUEL CABOT, Jr., of Boston, in the county of Suffolk, State of Massachusetts, have invented a new and useful compound, as being chiefly composed of ligneous fiber, which compound, and the method of making it, are described in full in the following specification:

This invention comes under the head of that class of compounds known as "artificial fuels;" and it consists in a composition formed from spent dyewood, tan-bark, sawdust, or other waste vegetable fiber, made to cohere by mixing while wet with very finely-powdered hard coal-tar or asphaltum residuum from which the volatile portion has been distilled, until the mass is hard and brittle on cooling, and then heating and compressing into suitable form for burning.

To prepare this compound, take about ten (10) parts of spent dyewood, tan, sawdust, or other waste vegetable fiber; moisten, if not already moist; then carefully and thoroughly mix in from one to five parts of very finely-

powdered coal-tar or asphaltum residuum; heat slowly till the mass is dry, and then raise the temperature to about the melting-point of the tar or asphaltum residuum, and while hot compress into cakes in any suitable machine—as, for instance, a brick-machine.

The advantage of having the woody fiber moist is that the fine coal-tar adheres to the surfaces of the larger pieces, and in drying and subsequent heating a glaze of melted tar is formed, which insures cohesion as soon as pressure is applied.

I claim—

An artificial fuel, composed of spent dyewoods, tan, sawdust, or other waste vegetable matter, and finely-powdered coal-tar or asphaltum residuum, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1876.

SAMUEL CABOT, JR.

Witnesses:

HENRY W. SEYMOUR,
THOMAS B. HALL.