

United States Patent Office.

JAMES E. ATWOOD, OF TRENTON, NEW JERSEY.

Letters Patent No. 71,119, dated November 19, 1867.

IMPROVED ARTIFICIAL FUEL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES E. ATWOOD, of Trenton, in the county of Mercer, in the State of New Jersey, have invented a new and useful Improvement in Artificial Fuel, the same being an improvement upon the artificial fuel patented to William Halsted.

My improvement consists in adding to the coal tar, coal dust, and peat, of which his fuel is composed, another material, and for a specific purpose or purposes.

In the use of his valuable composition for certain purposes, and under certain conditions, and also in the use of many other kinds of artificial fuel, the odor given off by some of the ingredients, and particularly by the coal tar or bog peat, is very strong and offensive. When used for steam-boilers, the amount of soot deposited in the flues is so considerable as materially to clog them, or to fill them up. There is also a disposition of the material, when being pressed and moulded into blocks for the market, to stick to the mould, and so retard the operation, as well as make a less symmetrical block.

By the introduction into the composition described in said above-mentioned patent, of lime, as an additional ingredient, I remedy all these difficulties. I find in practice that good results are attained by adding to about, say, a ton of his mixture, some fifty pounds, more or less, of lime. Other proportions will also be found practicable and productive of good results, and will necessarily vary with the quality of the several materials, and the special purpose for which the fuel is to be used.

The beneficial results which I find attend the use of my improved fuel are as follows, and which I attribute to the introduction of lime into the compound: first, the very offensive odor of the coal tar or bog peat is mostly if not entirely neutralized; second, it prevents the accumulation, in the furnace or other apparatus in which it may be burned, and also in the flues of steam-boilers, of the soot arising from the resinous substances in the coal tar, or from other material; third, it burns with a brighter flame and intense heat; fourth, it prevents the compound, when being moulded into blocks or cakes for market, from clinging to the mould, and therefore turns out in more marketable and salable shape.

I do not claim a compound made up only of coal tar, coal dust, and peat, but

I claim an artificial fuel composed of coal tar, coal dust, peat and lime, substantially as described.

Witnesses:

WM. JOHNSTON,
JAMES ROGERS.

JAMES E. ATWOOD.