

United States Patent Office.

GEORGE GRAY, OF TEMPERANCEVILLE, PENNSYLVANIA.

*Letters Patent No. 61,006, dated January 8, 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, GEORGE GRAY, of Temperanceville, in the county of Allegheny, and State of Pennsylvania, have invented a new and improved compound for Artificial Fuel; and I do hereby declare that the following is a clear, full, and exact description of the same, and of the manner of preparing it.

It is well known that at the mines, and also at large coal yards in and about cities, large masses of fine coal, known as coal-dust, accumulate; and that the same is almost if not entirely useless while in the condition of coal-dust. This dust is composed of fine particles of coal, generally very free from slate, and would make a good article of fuel if it could be compacted into lumps of proper size to lay loosely on the grate, and to be handled and transported like lump coal. To accomplish this object, I take of this dust in the proportion of one ton, and add to it of pitch eight to ten pounds, and of rosin one pound. The pitch and rosin are first melted in a suitable vessel, and the dust is then mixed in, and the whole mass thoroughly stirred and mixed together, until the particles are thoroughly coated over their entire surface, when the mixture is placed in moulds of the proper size, and pressed into cakes or lumps and allowed to cool.

In carrying out my invention on a large scale, I propose to use machinery of suitable construction for mixing the ingredients, and also for pressing it into cakes. This machinery may be so arranged as to deliver to the mixing vessel the ingredients in their proper proportions, and also to deliver the compound from the mixing vessel to the press automatically.

The compound may, if prepared at the mines, be formed into large cakes, say of twenty-five, fifty, or even one hundred pounds' weight, in the form of large bricks, for convenience in handling and transporting, and may then be broken up into pieces of suitable size for burning at the place where it is to be used.

When the dust is very fine, it will be necessary to increase slightly the quantity of pitch and rosin used, in order to render the mass compact.

Having thus described my invention, what I claim, is—

The artificial fuel, composed of the ingredients, prepared in the manner and proportions substantially as set forth.

GEORGE GRAY.

Witnesses:

LEONARD S. JOHNS,

JAS. L. READ.