

United States Patent Office

BENJAMIN F. PENNY, OF ROCHESTER, NEW YORK, ASSIGNOR TO THADDEUS B. CURTIS, OF NEW YORK, CITY.

Letters Patent No. 111,565, dated February 7, 1871.

IMPROVEMENT IN 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, BENJAMIN F. PENNY, of Rochester, in the county of Monroe and State of New York, have invented an Improvement in Artificial Fuel; and the following is declared to be a correct description of the same.

Difficulty has been experienced in burning coal-dust, and many efforts have been made to mix clay and bituminous substances to form blocks or lumps to be introduced into stoves or furnaces and burnt; but the costliness of preparation, and the difficulties connected with burning the same, have rendered such efforts unsuccessful or valueless.

The object of my invention is to prepare the coal-dust at the place where it is to be used, and then burn the dust in almost the same manner as lump-coal, the preparation of the dust being inexpensive.

I take anthracite coal-dust, about seventy-five per cent., and bituminous coal-dust, about twenty-five per cent., and mix them together, and add sufficient water to make the particles adhere slightly together.

In this state they are thrown into the furnace, care being taken not to charge the furnace too much at one time so as to deaden the fire.

I have discovered that the fuel mixed in the afore-

said manner cokes under the operation of heat as moisture is driven off, the bituminous dust forms a bond to hold the particles of anthracite; and there will be but little smoke, because the anthracite intensifies the fire and burns up the carbonaceous gases, and the vapors of the water are beneficial rather than detrimental.

I remark that this fuel is not adapted to us first lighting a fire; it is to be burnt after there is a body of incandescent fuel upon which the shovel of such artificial fuel are thrown.

This fuel is most available where the blast from a blower is employed.

The article herein referred to as coal-dust is to be understood as being particles of coal of a smaller size than the merchantable article known as nut coal.

I claim as my invention—

The mode herein specified of mixing and burning anthracite and bituminous coal-dust, as specified.

Signed by me this 9th day of January, 1871.

B. F. PENNY

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.