

UNITED STATES PATENT OFFICE.

THOMAS PARKER, OF WEDNESFIELD, ENGLAND.

MANUFACTURE OF FUEL.

947,400.

Specification of Letters Patent. Patented Jan. 25, 1910.

No Drawing.

Application filed July 6, 1908. Serial No. 442,254.

To all whom it may concern:

Be it known that I, THOMAS PARKER, M. I. C. E., a subject of the King of Great Britain and Ireland, residing at Wednesfield, in the county of Stafford, England, have invented certain new and useful Improvements in and Relating to the Manufacture of Fuel, of which the following is a specification.

10 This invention relates to the treatment of ordinary gas coke in order to render it easy of ignition and capable of free burning so that thus it may be used as a domestic fuel in substitution of coal.

15 According to the invention I discharge the hot coke as it leaves the retort into a tank containing heavy tar oil or other suitable liquid hydrocarbons or other material on the surface of which is floated a layer of water whose thickness is determined for example by allowing 1 inch of water per cwt., of coke to be quenched, the amount of oil or hydrocarbons used being sufficient practically to cover the coke shot in. The impact of the red hot coke with the water gives rise to violent ebullition, quenches the exterior of the coke but leaves the interior still hot. On reaching the oil the latter penetrates to the hot core and is partly vaporized and partly decomposed and is driven into the pores of the coke. The water is then run off from the top of the oil through a floating outlet or otherwise and the oil is drawn from the bottom of the tank leaving the coke still at a temperature of about a little over the boiling point of water so that thus it quickly dries. Coke so treated ignites easily and burns with a smokeless combustion.

40 Several hydrocarbons having a flash point of over 250° F., might be used for the purpose of the invention but I prefer heavy tar oil as its high specific gravity insures the water remaining as a layer on the surface and the heavy tar oil itself is of such low

commercial value as to be the cheapest material to use.

I am aware that it has before been proposed to spray coke with such oils, but if the coke be hot this gives rise to ignition while if the coke be cold the lower portions of the mass are oily and unfitted for use. The plunging of coke into tar oil has also been suggested but here again if the coke be at a sufficiently high temperature to obtain any useful effect the whole mass is liable to ignite.

What I claim as my invention and desire to secure by Letters Patent is—

1. A process for the manufacture of fuel consisting in the immersion of hot coke in a liquid fuel over which floats a layer of liquid substance by which the coke on its exterior surface is cooled before passing into the liquid fuel.

2. A process for the manufacture of fuel consisting in the immersion of hot coke into liquid fuel of higher specific gravity than water over which a layer of water floats substantially as described.

3. A process of manufacture of fuel consisting in the immersion of hot coke in heavy tar oil over which floats a layer of liquid substance by which the coke is cooled on its external surface before entering into the heavy tar oil substantially as described.

4. A process of manufacture of fuel consisting in the immersion of hot coke in heavy tar oil over which floats a layer of water by which the coke is cooled on its external surface before entering into the heavy tar oil substantially as described.

In testimony whereof I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

THOMAS PARKER.

Witnesses:

KORAN B. LEWES,
JOS. MAURICE ADAMS.