

UNITED STATES PATENT OFFICE.

HENRY R. BRISSETT, EDWARD COUSINS, AND BENJAMIN BENOIT, OF
LOWELL, MASSACHUSETTS.

ARTIFICIAL FUEL.

SPECIFICATION forming part of Letters Patent No. 584,105, dated June 8, 1897.

Application filed February 6, 1897. Serial No. 622,356. (No specimens.)

To all whom it may concern:

Be it known that we, HENRY R. BRISSETT, EDWARD COUSINS, and BENJAMIN BENOIT, of Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Artificial Fuels and the Process of Making the Same, of which the following is a specification.

Our invention relates to artificial fuels and the process of manufacturing the same; and it consists in certain novel combinations of ingredients and steps in the manipulation thereof, which will be readily understood by reference to the following description and to the claims hereto appended and in which our invention is clearly pointed out.

In carrying out our invention we take dry peat or other similar fibrous absorbent and grind or otherwise pulverize or disintegrate it and then saturate it with crude petroleum. We then melt a quantity of bituminous pitch, either natural or artificial, cool it to about 130° Fahrenheit, mix it with the saturated absorbent material in the proportion of about seven per cent., by bulk, of the pitch to one hundred of the saturated absorbent, said pitch serving to lock up the petroleum in the absorbent material and prevent it from evaporating. We then melt together a quantity of coal-tar pitch or bituminous pitch and rosin in about equal quantities, then add to said melted pitch and rosin a quantity of liquid coal-tar equal in bulk to the combined pitch and rosin, and when cooled to about 130° Fahrenheit a quantity of this mixture of pitch, rosin, and liquid coal-tar equal to five per cent. of the bulk or weight of the mass of the combined absorbent material, petroleum, and bituminous pitch is thoroughly mixed with said saturated absorbent and bituminous pitch, with sufficient additional absorbent material to give the whole mixture the necessary dryness to enable the mixture to be pressed into bricks or blocks of suitable shape and size. The additional absorbent is preferably a hard dense variety of peat. The mixture of pitch, rosin, and coal-tar is to form a cementing medium for the whole, the rosin serving to give the coal-tar more tenacity and to overcome the smell. Either coal-tar pitch or hard bituminous pitch may be

used with the rosin and fluid coal-tar to form the cementing medium with equally good results, and therefore we do not wish to be limited to the use of either one.

It is not practicable to give an exact and unvarying formula for the manufacture of this fuel, owing to the variable nature and grade of materials entering into its composition, especially the crude petroleum, and therefore all the proportions given are approximate and are subject to variation necessary to meet the variation in the qualities of the materials used at different times.

What we claim as new, and desire to secure by Letters Patent of the United States, is—

1. An artificial fuel composed of an absorbent material, crude petroleum, bituminous pitch and a binder or cementing medium formed of pitch, rosin and fluid coal-tar, all combined and united substantially as herein set forth.

2. The process of manufacturing artificial-fuel bricks which consists in grinding or otherwise pulverizing a dry absorbent, saturating said absorbent with crude petroleum, melting a quantity of bituminous pitch equal in bulk to seven per cent. by bulk of the saturated absorbent and when cooled to about 130° Fahrenheit mixing said pitch with said absorbent; melting together bituminous or coal-tar pitch and rosin, and adding thereto fluid coal-tar, in the proportion of one part of pitch, one part of rosin, and two parts of coal-tar, as a cementing medium, and when cooled to about 130° Fahrenheit mixing said cementing medium with the combined saturated absorbent and bituminous pitch in the proportion of about five per cent. by bulk of the cementing medium to one hundred of the saturated absorbent and pitch, and then pressing said composition in blocks or bricks.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses, on this 5th day of February, A. D. 1897.

HENRY R. BRISSETT.
EDWARD COUSINS.
BENJAMIN BENOIT.

Witnesses:

N. C. LOMBARD,
GEO. A. SEWALL.