

UNITED STATES PATENT OFFICE.

LEOPOLD WACKS, OF LONDON, COUNTY OF MIDDLESEX, ENGLAND.

ARTIFICIAL FUEL.

SPECIFICATION forming part of Letters Patent No. 398,810, dated February 26, 1889.

Application filed May 1, 1888. Serial No. 272,618. (No specimens.) Patented in England December 1, 1887, No. 16,501; in Belgium February 23, 1888, No. 80,750, and in Spain February 28, 1888, No. 7,959.

To all whom it may concern:

Be it known that I, LEOPOLD WACKS, a subject of the Queen of Great Britain, residing at London, in the Kingdom of Great Britain, have invented a new and useful Composition of Matter to be Used for Fuel as a Substitute for Coal, (for which I have received the following patents: in Belgium, No. 80,750, dated February 23, 1888; in Spain, No. 7,959, dated February 28, 1888,) of which the following is a specification.

My composition consists of the following ingredients, combined in the proportions stated, viz: coal-dust, ten per cent.; sawdust, ten per cent.; clay, fifty per cent.; sand, nine per cent.; saturated solution of saltpeter, one per cent.; tar, twenty per cent. These ingredients I mix so as to form a soft mass, from which I form blocks of convenient size for handling. In forming these blocks heat and pressure may be used if it be desirable to prepare the fuel rapidly; or if time be no object, after having been formed, the blocks may be allowed to dry at ordinary temperatures. When thus prepared, my compound will be found to be a very convenient and useful fuel, a very cheap substitute for coal, which may be successfully used in stoves, furnaces, &c.

The coal-dust, sawdust, and tar in the composition are the parts introduced to supply combustion. The saltpeter is introduced to increase the heat given off. The sand and clay are introduced as binding material, to hold the mass in compact form, and also to prevent too great rapidity of combustion.

Actual experiment has shown that this compound burns slowly and brightly, and at the same time emits considerable heat—enough for all ordinary purposes.

The amount of any of the said ingredients might be varied if it be thought proper. Thus a smaller amount of sawdust and a larger amount of coal-dust might be used, and again the sand might be replaced by asbestos, and the tar might be replaced by creosote or crude petroleum; but I consider the formula above given to be the best for the purpose.

For use in hot countries, where the inflammable gases escaping from this compound might be easily lost or make the compound dangerously easy to ignite, the blocks, when formed and dried, may be dipped in a solution of glue to cover them with a surface of size through which the gas will not escape.

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

The herein-described composition of matter to be used for fuel as a substitute for coal, consisting of coal-dust, sawdust, clay, sand, solution of saltpeter, and tar, substantially in the proportions specified.

In witness whereof I hereunto set my hand in presence of two witnesses.

LEOPOLD WACKS.

Witnesses:

L. S. BROMHEAD,
97 Newgate Street, London.

WALTER J. SKERTEN,
17 Gracechurch Street, London, E. C.