

UNITED STATES PATENT OFFICE.

BERNHARD WAGNER, OF BERLIN, GERMANY.

PROCESS OF PREPARING A MASS FOR MAKING BRIQUETS.

No. 829,042.

Specification of Letters Patent.

Patented Aug. 21, 1906.

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To all whom it may concern:

Be it known that I, BERNHARD WAGNER, merchant, a subject of the King of Prussia, residing at No. 26 Mauerstrasse, Berlin, German Empire, have invented new and useful Improvements in Processes of Preparing a Mass for Making Briquets, of which the following is a specification.

My invention relates to a process of preparing a mass for making so-called "patent fuel" or "briquets" and which meets all the requirements which can be made of this class of material.

In carrying out my process I proceed as follows: I heat the material (such as anthracite) to be converted into briquets up to about 140° centigrade, and I take a cementing or binding agent which is soluble in water—for example, waste lyes from cellulose-factories—and heat it up to about 60° centigrade in a separate vessel. Thereupon I mingle the two substances in a mixing apparatus while maintaining such a temperature that the mass can be fed to the press at about 100° centigrade.

For the purpose of maintaining the mass at the proper degree of temperature in the mixing apparatus and of enabling the anthracite or other material used and the binding medium to be as intimately mingled as possible superheated steam may advantageously be conducted direct into the mixer.

The briquets after leaving the press should be rendered weatherproof by being heated (if possible to the exclusion of air) until the said binding agent has been coked. By the separate heating of the mass and the binding medium a perfect intimate mixture can be obtained for the subsequent forming of the mass, said perfect intimate mixture being a very important feature. It is also essential that the bringing together of the separately-heated mixture and binding medium, which mixture and binding medium have been previously heated to different degrees of temperature for the reason that the mixture of the mass and the binding medium should be

maintained at a temperature of 100° centigrade when placed in the mold, so that the mass fills out and conforms to the walls of the mold so well that quite a solid form is given to the mass.

It is essential that the mixture be fitted properly to the forms and to form a solid composition, so that the briquets so made have the required solidity and strength for the following reason: The briquets after being taken out of the forms have to be brought to a certain apparatus which turns the water-soluble binding medium into coal. During the transportation to this apparatus the briquets are subjected to certain manipulations which they could not stand if the mass did not possess a certain degree of solidity. After the briquets are pressed—that is to say, after they are put out by the lowest stamps of the press—they are subjected to shakings, for they are taken from the forming-plate to the apparatus which turns them unto coal by placing them on an elevator. It is therefore evident that only by my process can briquets be transported mechanically without danger of breaking after leaving the forms.

Having thus described my invention, I claim as new—

The process of preparing a mass for the manufacture of briquets, consisting in heating a mass of material suitable for briquet-making to substantially 140° centigrade, and in heating a suitable binding agent, which is soluble in water, to substantially 60° centigrade in a separate vessel, and in mingling the two substances, while maintaining the mixture at such a temperature that it can be conducted to a press at a temperature of substantially 100° centigrade, all substantially as described.

In witness whereof I have hereunto signed my name, this 10th day of January, 1905, in the presence of two subscribing witnesses.

BERNHARD WAGNER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT