

UNITED STATES PATENT OFFICE.

JAMES OSCAR GREEN AND HARRY TALBOT MARTIN, OF WHITEWATER,
WISCONSIN.

ART AND PROCESS OF CONVERTING PEAT INTO FUEL.

SPECIFICATION forming part of Letters Patent No. 700,190, dated May 20, 1902.

Application filed September 13, 1901. Serial No. 75,248. (No specimens.)

To all whom it may concern:

Be it known that we, JAMES OSCAR GREEN and HARRY TALBOT MARTIN, citizens of the United States, residing in the city of Whitewater, in the county of Walworth and State of Wisconsin, have invented a new and useful Art and Process of Converting Peat into a Compact Non-Fibrous Substance for Use as Fuel, of which the following is a specification.

In compressing peat we have discovered that it is necessary in the production of a superior fuel substance of slow combustion to disintegrate the fiber which is always contained in peat and forms air-cells when left entire in the finished product. We have also ascertained that dry peat when heated sufficiently to release the pitchy substances to bind it together while it is being compressed and ground produces a better article of peat fuel than can be obtained otherwise. The best way to destroy the fiber is by grinding the peat while it is being compressed. For this reason when the grinding and compressing are done at once in the same tube a shorter tube can be used, permitting a high rate of speed in the press, because additional heat is produced by the friction in grinding.

The objects of our invention, therefore, are to produce a compact non-fibrous substance from peat for use as fuel, which we accomplish by the following process:

First, the peat is removed from the bed and thoroughly dried by exposure to the heat of the sun or by artificial means; second, the dry peat is broken up into small pieces, so that it will feed into a machine for carrying

out the process; third, the peat thus prepared is heated enough to release the pitchy substances at the same time it is being compressed and ground.

The heating, grinding, and compressing may be accomplished by driving the prepared peat through a tube with a rotating rod or plunger driven by hand or any suitable mechanical device, in which case the friction of the peat, tube, and rod will produce sufficient heat to release the pitchy substances and bind the powder together into a compact mass.

In Letters Patent granted to us September 3, 1901, No. 682,059, for a machine for converting peat into a compact non-fibrous substance for use as fuel a suitable machine for grinding, heating, and compressing by this process is shown. In this application, however, we do not confine ourselves to the use of that machine or any other particular device, but use any suitable means for carrying out our process as above described.

What we claim as new, and desire to secure by Letters Patent, is—

The art or process of converting peat into a compact non-fibrous substance for use as fuel by drying, and then simultaneously grinding heating and compressing substantially as herein described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JAMES OSCAR GREEN.
HARRY TALBOT MARTIN.

Witnesses:

E. A. COTTER,
J. H. WARD.