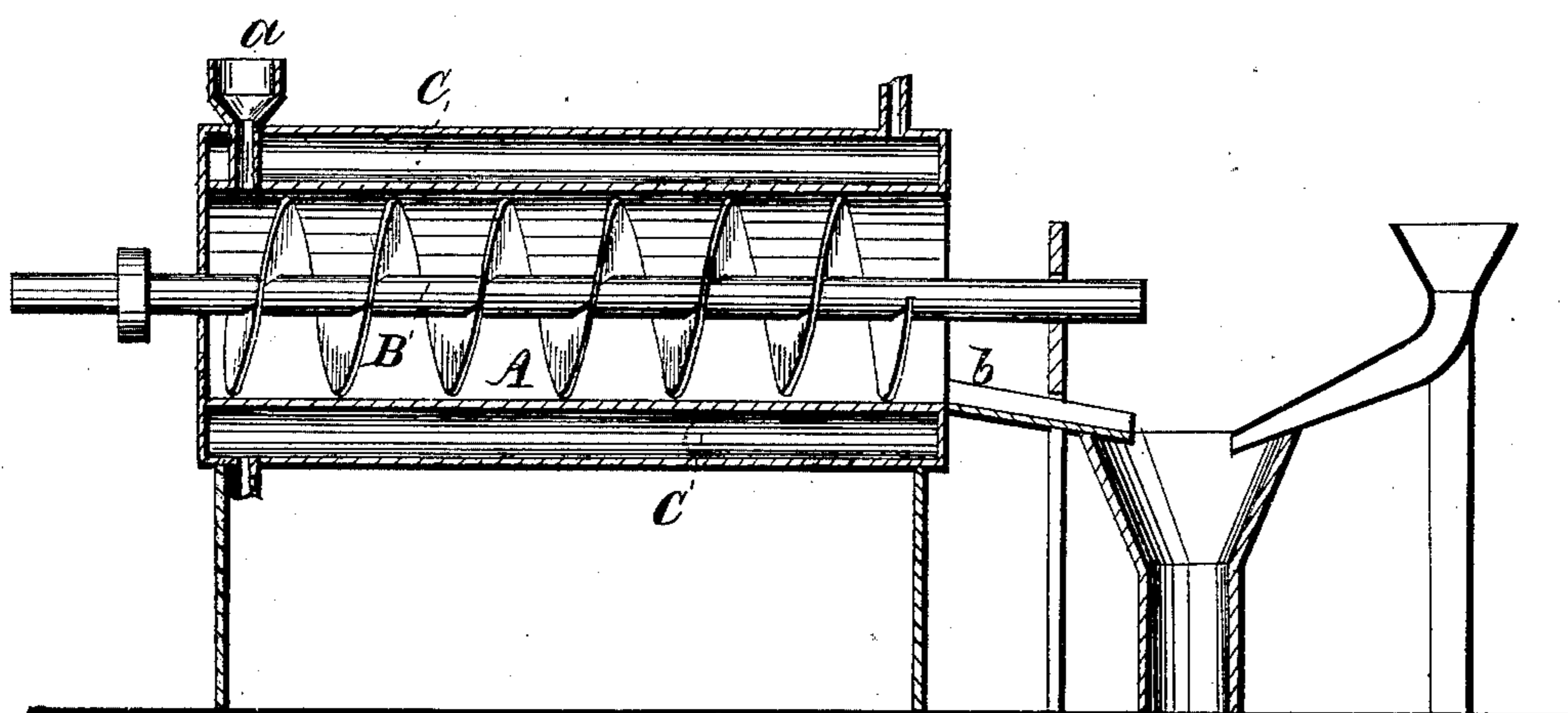


G. H. BRONSON.
Making Artificial Fuel.

No. 82,079.

Patented Sept. 15, 1868.



Witnesses;
Abelure
Jno W. Conley Jr.

Inventor;
Geo. H. Bronson

United States Patent Office.

GEORGE H. BRONSON, OF NEW YORK, N. Y.

Letters Patent No. 82,079, dated September 15, 1868.

IMPROVEMENT IN THE MANUFACTURE OF ARTIFICIAL FUEL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, GEORGE H. BRONSON, of the city, county, and State of New York, have invented a new and useful Improvement in the Process of Preparing and Manufacturing Artificial Fuel; and I do hereby declare that the following is a full, clear, and exact description of the same:

In all the various methods of preparing artificial fuel from refuse coal and pitch, and other similar adhesive substance, one great difficulty has presented itself, namely, that of obtaining a perfect mixture of the substances. This has been owing to the introduction of the adhesive material, the quantity of which should always be as small as possible, in a melted or fluid or semi-fluid state.

The object of this invention is to obtain a more perfect agglomeration of the substances, and to this end my invention consists in subjecting the coal to a degree of heat sufficient to cause the melting of the pitch or other adhesive material, and introducing the pitch or other adhesive material in a powdered state among the coal so heated, by which means a more perfect and uniform distribution of the pitch or other similar material, and consequently a more perfect agglomeration of the particles of the coal, than has heretofore been effected by any other process, are obtained.

In order that others may be enabled to understand the process of compounding and preparing artificial fuel according to my invention, I will proceed to describe it with reference to the accompanying drawings, which represent the principal parts of an apparatus for effecting the same.

I take, say, a ton of coal-dust, and pass it through a horizontal cylinder, A, which is open at one end, and is furnished internally with a screw "conveyer," and is enclosed externally by a steam-jacket, into which steam is admitted of sufficient degree of temperature to heat the coal-dust in the cylinder to 100° Fahrenheit. The coal-dust being admitted through a hopper, *a*, in the upper part of the cylinder A, near one end, is carried, by revolution of the shaft, to the opposite end of the cylinder, which is open, and is discharged, through the opening or trough *b*, into the hopper D of a press or brick-machine, or into any other suitable receptacle. There may be also, at or near the brick-machine, a mill for grinding the coal-tar, pitch, or other similar material, in a dry state, with an elevator carrying the powdered material to a small sieve over the hopper D, which sieve may be agitated in any suitable manner whereby the pitch may be constantly sifted to the hot coal-dust in the hopper D, where it may mix in any suitable manner, and whence it passes through the press. The press or brick-machine may be located in any suitable position contiguous to the heating-cylinder, and the heated coal-dust carried to it by an elevator constructed for the purpose.

This process is applicable to the manufacture of many varieties of artificial fuel, in which peat and other substances may be brought in as additional ingredients thereto.

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

The process of making artificial fuel in which pitch or other similar material is used to produce the agglomeration of the particles of the substance or substances which constitute the basis of the fuel, by first heating the coal or other substance, and, while it is heated, introducing among it the pitch or other similar material in a powdered state, substantially as herein described.

GEO. H. BRONSON.

Witnesses:

A. LE CLERC,
E. P. TRACY.