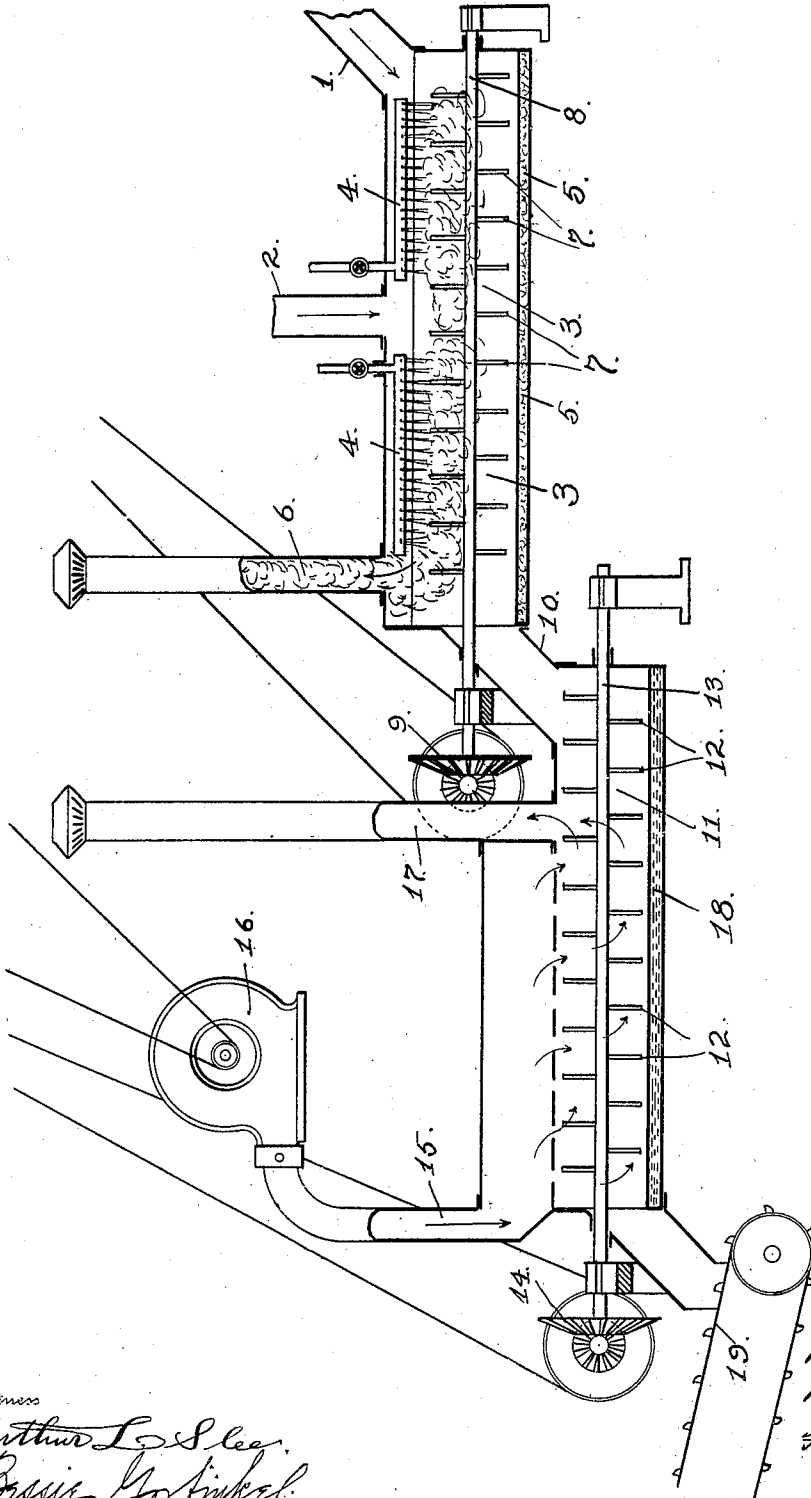


No. 836,897.

PATENTED NOV. 27, 1906.

R. SCHORR.
PROCESS OF BRIQUETING.
APPLICATION FILED DEC. 5, 1905.



Witness

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UNITED STATES PATENT OFFICE.

ROBERT SCHORR, OF SAN FRANCISCO, CALIFORNIA.

PROCESS OF BRIQUETING.

No. 836,897.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed December 5, 1905. Serial No. 290,343.

To all whom it may concern:

Be it known that I, ROBERT SCHORR, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Processes of Briqueting, of which the following is a specification.

This invention relates to an improved process of briqueting of fuels and other substances, the object of the invention being to provide a process which will effect an economy in the materials used and in the apparatus employed, will be more rapid in operation than those heretofore employed, and which will be under complete control.

In the accompanying drawing the figure is a diagrammatic view of one form of an apparatus for use with my improved process.

In carrying out this process the raw solid fuel is introduced by the supply-conduit 1 into the front portion of a chamber 3. It is there heated as high as possible without causing self-ignition by steam introduced through the perforated pipe 4, the bottom of the chamber itself being heated by the steam-jacket 5. It is also agitated by stirring-arms 7 on a shaft 8, driven by bevel-gearing 9 from any suitable source of power. The binding material, which may be hard pitch, soft-coal-tar pitch, coal-tar, asphaltum, or other oil residue, is introduced by the conduit 2 into the rear portion of the mixing-chamber 3. This binding agent is added in a liquid state and at a temperature of about 400° Fahrenheit, and the mixed fuel and binder are again stirred by the stirring-arms 7, and heated by steam introduced through a perforated pipe 4.

The fuel and binder after having been mixed at a high temperature are discharged by a chute 10 into a cooling-chamber 11, through which they are simultaneously conveyed and stirred by stirring-arms 12 upon a shaft 13, driven by bevel-gear 14 from any suitable source of power. In this chamber the mixture is cooled by an air-blast leading

into said chamber by a conduit 15 from a blower 16, the vapors passing up by a vent-pipe 17. The mixture is also cooled, if found necessary, by the surface over which the mixture travels being water-jacketed, as shown at 18. The mixture thus cooled is discharged onto a conveyer 19, by which it is conveyed to the briqueting-machine.

The following are the advantages of this process: The preliminary heating of the solid fuel liquefies the bituminous matter therein, which then acts as a binder and effects a saving in the proportion of external binder required. It also avoids the chilling of the external binder, which acts more efficiently when hot and thoroughly fluid, since it can thus penetrate thoroughly the interstices of the mixture.

The step of stirring the mixture while cooling is important, since it imparts thereto the granular or floury condition necessary to make the material fill the press-molds in making the briquets. Moreover, without stirring the cooling effect, even with an air-blast, is very slow, requiring a very long travel of the hot material, necessitating an extensive supply of conveyers, occupying a large area.

I claim—

The process of making coal briquets consisting in first, heating the pulverized coal; second, melting the organic binder separately therefrom; third, mixing both substances while hot; fourth, reducing the mixture to a granular, floury condition by continued mixing under an air-blast; and, fifth, supplying the same while floury and cool to the press to make briquets, substantially as described.

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

ROBERT SCHORR.

Witnesses:

BESSIE GORFINKEL,
ANNIE PETERSON.