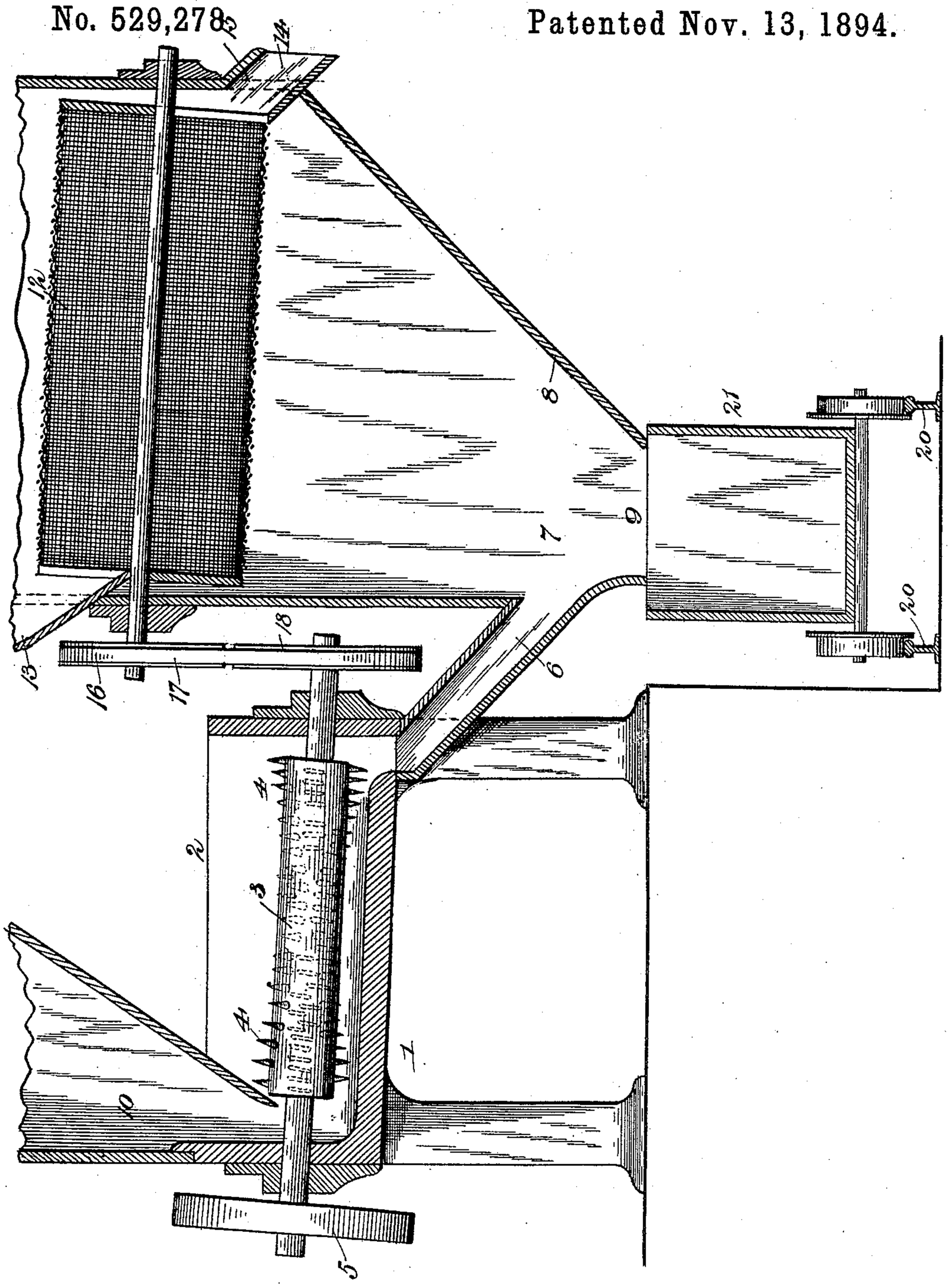
(No Model.)

L. KONOW.

APPARATUS FOR MANUFACTURING ARTIFICIAL FUEL.

No. 529,278. Patented Nov. 13, 1894.



WITNESSES:
F. L. Ourand.
W. L. Coombs

INVENTOR:
Ludwig Konow,
by Louis Bagger & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

LUDWIG KONOW, OF BERGEN, NORWAY.

APPARATUS FOR MANUFACTURING ARTIFICIAL FUEL.

SPECIFICATION forming part of Letters Patent No. 529,278, dated November 13, 1894.

Application filed March 13, 1894. Serial No. 503,495. (No model.) Patented in England April 21, 1880, No. 1,627, and in Norway January 13, 1892, No. 2,406.

To all whom it may concern:

Be it known that I, LUDWIG KONOW, a subject of the King of Sweden and Norway, and a resident of Bergen, Norway, have invented certain new and useful Improvements in Apparatus for Manufacturing Artificial Fuel, (patented in Great Britain April 21, 1880, No. 1,627, and in Norway January 13, 1892, No. 2,406;) and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, which forms a part of this specification.

My invention relates to improvements in apparatus for manufacturing artificial fuel, and it consists in certain novel features of construction of apparatus for breaking the coal and mixing it with the saw dust, as will be hereinafter fully described and claimed.

In the accompanying drawing, the figure represents a longitudinal sectional view of an apparatus constructed according to my invention, for mixing the broken coal and saw dust, preparatory to incorporating the binding material therewith.

In the said drawing the reference numeral 1 designates a suitable frame provided with a coal receiver 2, the bottom of which is inclined and in the ends of which is journaled a breaking cylinder 3, provided on its exterior with a series of knives 4, arranged in spiral rows. This cylinder is slightly inclined and its outer journal is provided with a driving pulley 5, by which it is rotated by connections (not shown) with any suitable motor. At its inner end the receiver 2 is connected by means of an inclined chute 6, with a receiver 7, having an inclined side 8, and an outlet 9. The receiver 2, at its highest end is provided with a hopper 10. Journaled in the upper end of receiver 7, is an open ended rotatable cylinder 12 of wire gauze or perforated metal. The cylinder is slightly inclined and at its upper end is provided with a hopper 13, and at its lower or outer end is an inclined chute 14, passing through the receiver 7, and closed by means of a sliding plate 15. The inner journal of cylinder 12 is provided with a pulley 16, connected by means of belt 17, with pulley 18 on the inner journal of cylinder 3, so that as the latter is rotated the cylinder 12 will be correspondingly rotated.

The numeral 20 designates two parallel rails on which travels a car 21, adapted to be moved under the outlet opening of receiver 7, so as to receive the mixed coal and saw dust and convey it to the tank (not shown) where it is mixed with the binding material.

In carrying the invention into effect, the coal cylinders are rotated by means of the pulleys and connections. Coal is introduced into receiver 2, through the hopper which engaging with the knives of the cylinder 3, is broken up and pulverized, escaping through the inclined chute 6. At the same time saw dust is introduced into the cylinder 7, the fine particles of which escape through the meshes thereof onto the inclined side wall, from whence it is deflected to the outlet 9, meeting the pulverized coal from receiver 1 and becoming mixed therewith. The mixed coal and saw dust will now escape through the outlet into the car underneath. When the car is full it is carried away and a new one takes its place. The mixed coal and saw dust is carried by the car to a suitable tank, not shown, where it is thoroughly mixed and incorporated with an inflammable fluid binding material. The mass will now assume a plastic condition and it is then compressed in suitable molds into blocks, and then dried by natural or artificial heat.

The binding material may consist of coal tar, pine pitch, melted rosin or other like compounds or compositions.

Having thus fully described my invention, what I claim is—

In a mixer for manufacturing artificial fuel, the combination with the coal receiver provided with a hopper and an inclined chute, and the rotatable cylinder provided

with a series of knives arranged in spiral rows, of the saw dust receiver having an inclined side and an outlet at the bottom, the open ended wire gauze cylinder connected with said knife cylinder, the inclined chute, sliding board or gate and the hopper; substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

LUDWIG KONOW.

Witnesses:
J. C. ISDAHL, Jr.,
J. LAMPE, Sr.