C. KINZLER.

Purifying Coal.

No. 29,128. Patented July 10, 1860.

Fig. 2.

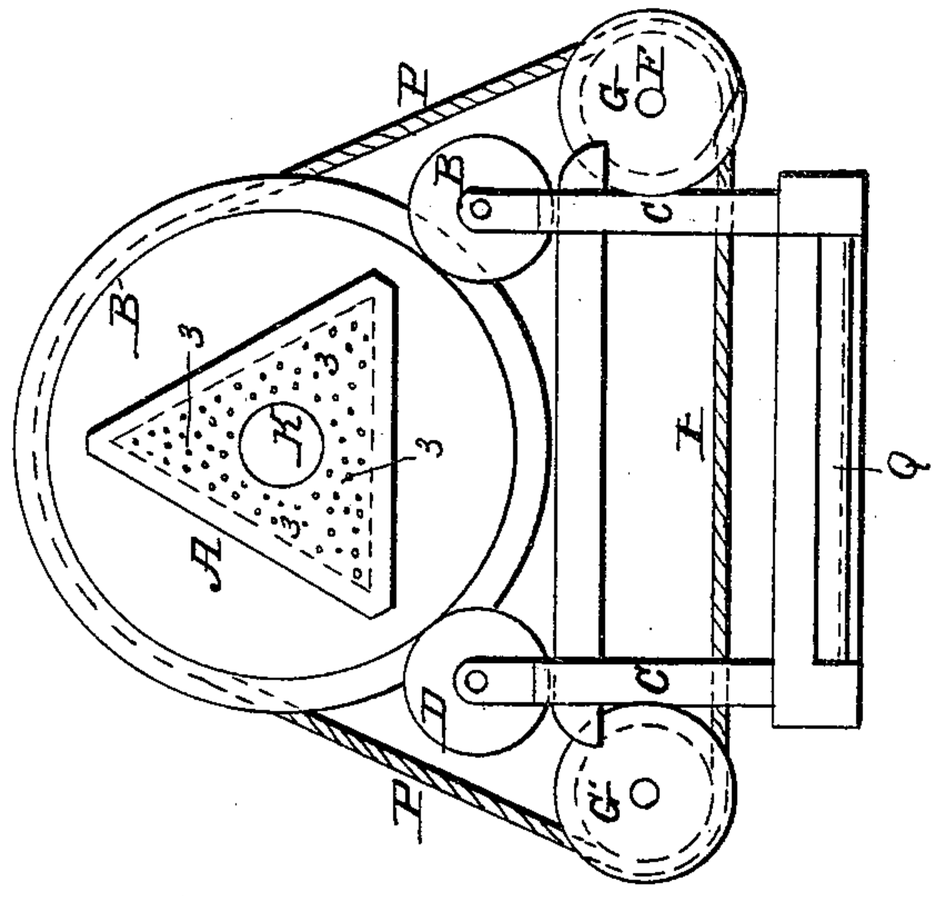
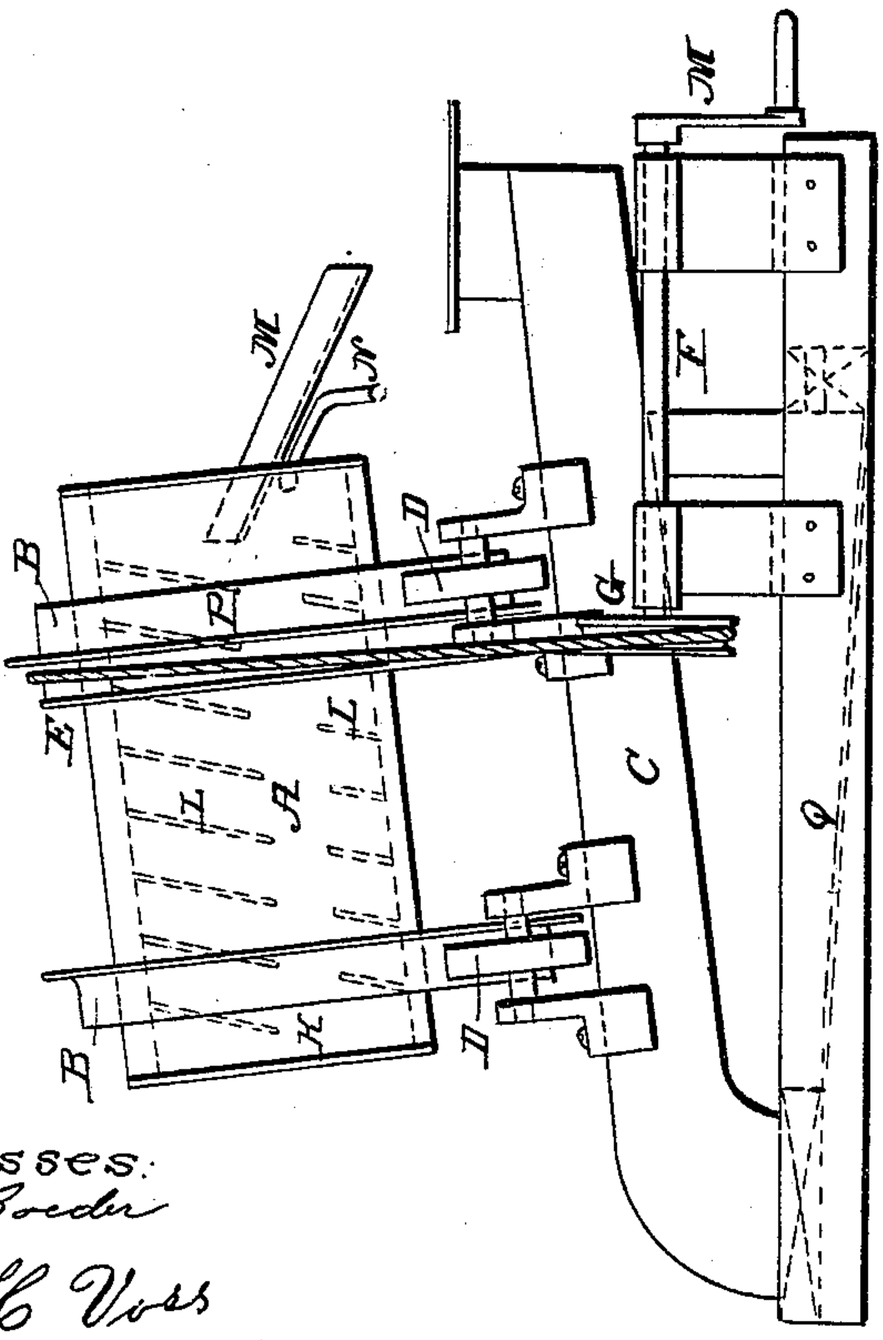


Fig. 1



Witnesses:
Henry E. Boeder
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UNITED STATES PATENT OFFICE.

CHARLES KINZLER, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND J. H. VOSS, OF SAME PLACE.

APPARATUS FOR WASHING BONE-BLACK.

Specification of Letters Patent No. 29,128, dated July 10, 1860.

To all whom it may concern:

Be it known that I, CHARLES KINZLER, of New York, in the county and State of New York, have invented a new and Improved Animal Coal-Washing Machine; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

Figure I represents a longitudinal side elevation, and Fig. II an end view of the machine.

Similar letters represent similar parts.

The machine consists of a triangular box A, around which circular rings B, B, are fastened, running on guide rollers D, D, attached to the frame, C, of the machine.

The top of the frame, C, is made inclined, or the guide rollers may be made of different heights, so as to give the box A an inclination, toward the front, for the purpose of facilitating the flow of the water out of the box. On the side of one of the circular rings B, a pulley, E, is fastened, for the belt P which passes over said pulley E, and over the pulleys G, G′, attached on each side of the machine to the frame. The pulley, G′, acts only as a guide pulley for the belt P, and the pulley G is fastened on the end of the shaft, F, on the other end of which a crank handle H is fastened, to turn the machine, or another pulley may be placed on said shaft F to turn the same and likewise the machine by power. By this arrangement of the pulleys G and G′, over which the belt passes the machine is likewise held fast down upon the guide rollers, and the belt, P, can easily be tightened by means of the pulley, G′, when required.

The inside of the triangular box A is provided with flanches, L, joined to each other so as to form a spiral thread or screw. In the center of each head of the box a large hole, K, is made, and the forward head is perforated with small holes (3) to allow the water and fine particles of coal to escape through the same. Through the hole in the after head of the box A a plate M is inserted, passing a short distance into the box but without touching the same or the internal screw plates, L, which said plate M is fastened to the frame of the machine. Below the plate M a pipe N is fastened projecting likewise into the box A, for the purpose of injecting water into said box.

In the bottom between the upright frames, C, an inclined bottom, Q, is fastened, or a separate box with an inclined bottom may be placed there, for the purpose of collecting the water which runs out of the machine and to allow the small particles of coal to collect and settle therein. To the ends of the screw plates L near the after head of the box A cups are fastened to throw the coal upon the plate M.

The operation of the machine is as follows: A stream of water is made to run continually into the box A, through the pipe N, at the after head of the box, and the machine set in motion, revolving on its own axis. As the box A is placed in an inclination toward the forward head, the water will easily pass between the spiral flanches or screw way, L, and then run out through the small holes (3) in the forward head of the box, into the box in the bottom of the machine, between the upright frames, C. The animal coal, to be washed, is put into the triangular box A, through the hole K, in the forward head, and is moved toward the after head by means of the screw flanches, L. On account of the triangular shape of the box A, the coal is, during the turning of said box, carried on the straight sides, out of the water, until, by its own weight, the same falls down again, by which means the coal is thoroughly washed and cleaned of the fine dust and particles, which latter is carried off with the water. When the coal arrives at the end of the screw plates L near the after head of the box A, the cups on said plates or flanches, L, prevent the coal falling, until over the plate M, upon which they empty themselves, when the coal falls down said plate upon a table, W, or into any other receptacle.

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

1. The arrangement and construction of a

triangular box, turning on its axis for the purpose of washing animal coal when said box is provided with internal flanches forming a spiral screw, in the manner substantially as specified.

2. The general construction, combination and arrangement of the washing machine as shown and described, so as to operate substantially in the manner and for the purpose set forth.

CHARLES KINZLER.

Witnesses:
HENRY E. ROEDER,
JOHN H. VOSS,
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