(No Model.)

E. D. JOHNSTON.

APPARATUS FOR MOVING COAL.

No. 493,272. Patented Mar. 14, 1893.

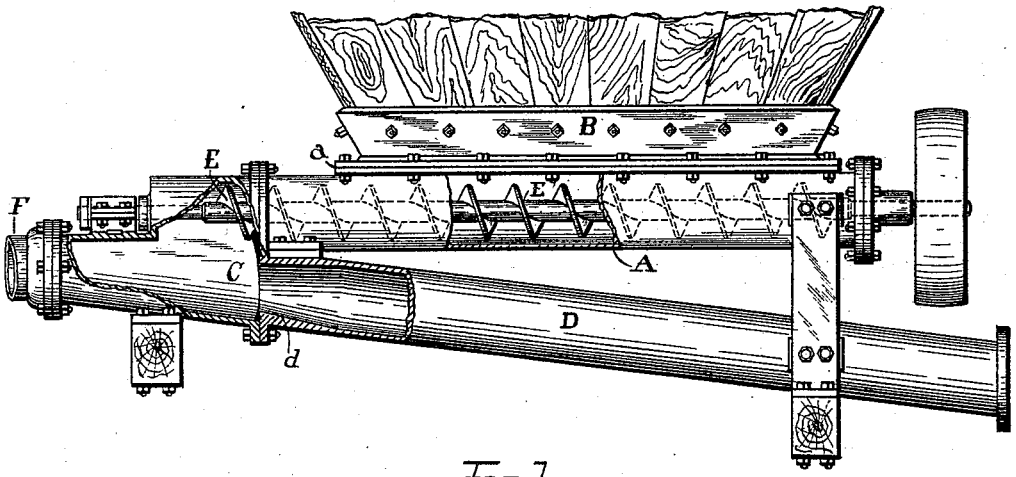

Fig. 1.

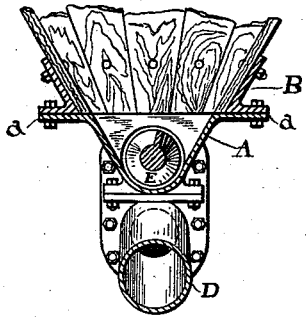

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

EDGAR D. JOHNSTON, OF CONNERSVILLE, INDIANA.

APPARATUS FOR MOVING COAL.

SPECIFICATION forming part of Letters Patent No. 493,272, dated March 14, 1893.

Application filed October 31, 1892. Serial No. 450,430. (No model.)

To all whom it may concern:

Be it known that I, EDGAR D. JOHNSTON, a citizen of the United States, and a resident of Connersville, in the county of Fayette and State of Indiana, have invented certain new and useful Improvements in Devices for Moving Slack Coal, of which the following is a specification.

My invention relates to devices for conveying slack coal from elevators and mines by means of an air-blast and is an improvement upon the apparatus for which Letters Patent No. 449,122 were granted to me March 31, 1891.

The object of the present invention is to deliver the slack uniformly into the blast of air, to deliver the air back of the falling stream of slack with great force, to prevent the blast from forcing any dust back through the hopper and to prevent the delivery pipes leading from the hopper to the blast and from the receiving chamber to the point of delivery from becoming clogged. These objects I attain by the means illustrated in the accompanying drawings in connection with which the invention will be first fully described and then particularly referred to and pointed out in the claims.

Referring to the drawings in which like parts are indicated by similar reference letters wherever they occur throughout the views. Figure 1. is a sectional elevation of a slack remover provided with my improvements. Fig. 2. is a transverse vertical sectional view of the same taken through line *x. x.*

The open top conveyer chamber A. having the surrounding flange *a* upon which the metal box B. which forms the base of the hopper is mounted, the enlarged chamber C. secured to the front of the conveyer chamber and the discharge end of the blast pipe D. are substantially the same as in my aforesaid patent.

The conveyer E. extends into the enlarged chamber C. and the end *d*, of the blast pipe which connects with the said chamber is contracted. These two changes constitute the features of my present invention. By this arrangement the slack is delivered in a uniform stream into the enlarged chamber, the conveyer and the body of slack carried in the forward cylindrical end of the conveyer chamber, acts as a packing to prevent any air passing back into the conveyer chamber, while the contracted opening directs the air with great force toward the delivery pipe F.

I have found by experience, that a device constructed as above described will convey slack to a much greater distance without any liability of clogging the discharge pipe.

The flange *d'*: at the rear end of the pipe D. is connected to a blower, which is not shown, as any of the well known blowers may be employed, and the opening from the blower should be of the same size as the larger opening of the discharge pipe to produce the best results. The application of either the contracted air opening, or, the conveyer extending into the enlarged receiving chamber, to my prior device will produce much better results, but will not produce so good results as when both are applied.

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

1. In a slack remover, the combination of the conveyer chamber, the hopper mounted thereon an enlarged receiving chamber at the discharge end of the conveyer chamber, the spiral conveyer having its end extending into the enlarged receiving chamber, and the blast pipe leading from a blower and connected to the enlarged receiving chamber substantially as hereinbefore set forth.

2. The combination of the conveyer, a hopper mounted thereon, an enlarged receiving chamber connected to the discharge end of the conveyer, and the blast pipe leading from a force blower and connected to the enlarged chamber said pipe having its end opening which connects with said chamber contracted substantially as and for the purpose set forth.

3. The combination substantially as hereinbefore set forth of the conveyer chamber, the hopper mounted thereon, an enlarged receiving chamber connected to the discharge end of the conveyer chamber, the spiral conveyer extending into the receiving chamber, the blast pipe D. having its end opening contracted at *d:* and its opposite end arranged to connect to a force blower.

EDGAR D. JOHNSTON.

Witnesses:
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