G. F. GASS.

ROCK-DRILL HOLE-CLEANERS.

No. 193,328. Patented July 24, 1877.

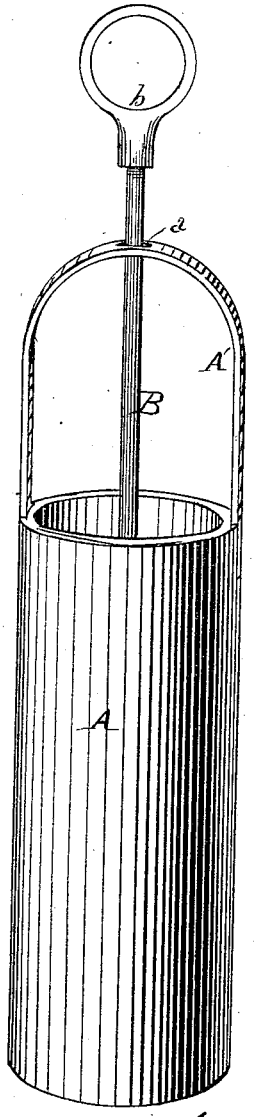

Fig. 1.

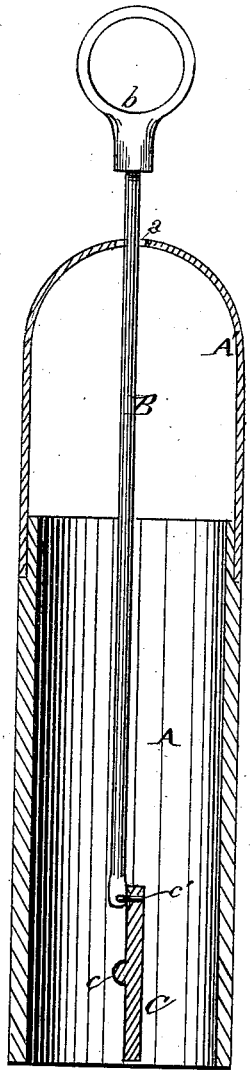

Fig. 2.

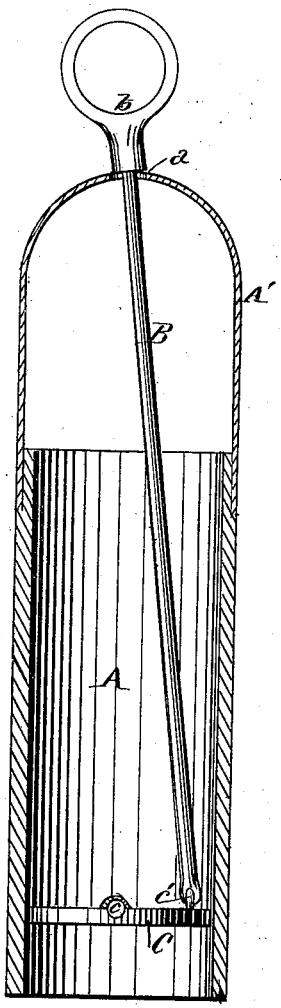

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE F. GASS, OF ALLEGHENY, PENNSYLVANIA.

IMPROVEMENT IN ROCK-DRILL HOLE CLEANERS.

Specification forming part of Letters Patent No. **193,328**, dated July 24, 1877; application filed May 16, 1877.

To all whom it may concern:

Be it known that I, GEORGE F. GASS, of Allegheny city, Pennsylvania, have invented a new and useful Improvement in Rock-Drill Hole Cleaners, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

Similar letters of reference indicate corresponding parts.

My invention relates to an improvement in the method of cleaning pulverized rock from the holes of rocks in the drilling process.

In the accompanying drawing, Figure 1 is a plan side view of my invention; Fig. 2, a longitudinal cross-section, showing the valve open; and Fig. 3 is the same view, showing the valve closed.

A is the body of the can. A′ is the handle to the same. B is the rod to operate the valve. *b* is a handle to the rod B. C is the valve. *c* is the journal of the valve, the seat of which is in the can, one on either side. *c′* is a staple in the valve, to connect the latter to the rod B.

The can A is made of any of the metals, such as sheet iron, zinc, brass, &c. It should be so constructed as to allow it to enter freely the drilled hole in the rock. The handle A′ is properly secured to the can on the inside or outside, and should be, in length, made to be above the hole, so as to be worked and operated within the same. The depth of the can A is not material, so that it be adequate to carry up the powdered rock, &c., within the hole.

Near the bottom of the can, and in the sides of the same, the valve C is pivoted. This valve should also be metallic, and in size it should fill the bore of the can when the valve is closed. When the valve is open it should reach as far down as the bottom of the can.

To one side of the valve is fastened the rod B by a staple, *c′*. The rod B in length should extend from the valve upward high enough to be above the hole when the latter is at its depth. This rod passes up through the handle A′, as seen in Fig. 1 at *a*. The rod should be also made of some of the metals. The handle to the rod is merely to operate it and the valve C.

The use of my invention will be readily seen and understood.

In drilling holes in a rock it becomes necessary to clean it out frequently, and the processes heretofore used are very slow. With my invention this will be done with a greater economy of time. After the drill is removed from the hole the can will be put in and forced down to the bottom of the bore, when, by a few turns of the handle A′, it will gather up the powdered rock. While this is being done the valve C will be open, as seen in Fig. 2. When the powdered rock is all in the can the valve is to be closed by pushing on the rod B. After this is closed the can may be drawn out by the handle. To facilitate this process the powdered rock may be made into a thin mush by use of water.

My cleaner may be used in a like manner in drilling coal.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a rock-drill hole cleaner the combination of the can A, pivoted valve C, staple *c′*, and rod B, constructed and arranged substantially as shown and described.

GEO. F. GASS.

Witnesses:

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