J. P. GRISCOM & J. FRITZ.

BRIDGE FOR SUPPORTING SHAFT DRILLING MACHINES.

No. 111,641 Patented Feb. 7, 1871.

Fig: 1

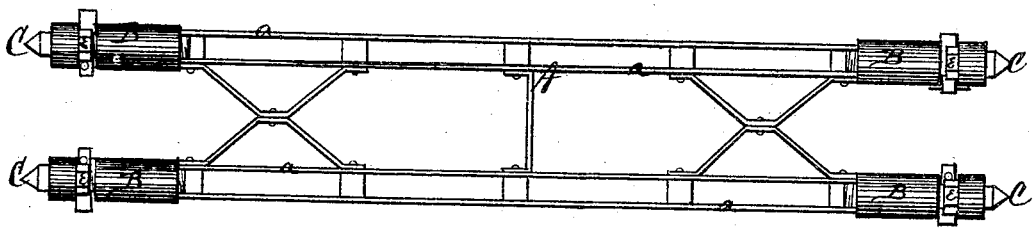


Fig: 2

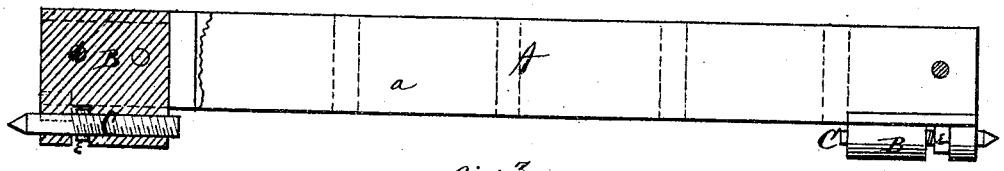
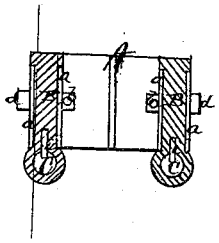


Fig: 3



Witnesses.

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JOHN P. GRISCOM, OF PORT CARBON, AND JOHN FRITZ, OF MAHANOY PLANE, PENNSYLVANIA.

Letters Patent No. 111,641, dated February 7, 1871.

IMPROVEMENT IN BRIDGES FOR SUPPORTING SHAFT-DRILLING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN P. GRISCOM, of Port Carbon, Schuylkill county Pennsylvania, and JOHN FRITZ, of Mahanoy Plane, in the county of Schuylkill, and in the State of Pennsylvania, have invented certain new and useful Improvements in Bridge for Supporting Shaft-Drilling Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of our invention consists in the construction and arrangement of a "bridge for supporting shaft-drilling machines," as will be hereinafter fully set forth.

In order to enable others skilled in the art to which our invention appertains to make and use the same, we will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a bottom view;

Figure 2, a side view, part in section; and

Figure 3, an end view of our bridge.

Our device is especially necessary in extending the use of diamond drilling-machines to the drilling of holes in the bottom of shafts for blasting purposes. All attempts to accomplish this object have hitherto failed, for the reason that in attempting to use this class of machines in shafts they were set right on the surface of the rock, and it was tried to hold them to their work by the dead-weight of the machine. This could not be done, because the pressure of the drill, which was necessary to make the diamonds cut the rock, constantly tended to lift the machine out of position, and when it stood on any inclined surface the mere vibration produced by the rapid revolutions of of the drill was sufficient to shift it out of position or line with the hole, no matter how heavily it was weighted down, and as soon as the machine gets out of line with the hole the drill binds and stops it.

The weight necessary to hold the drill to its work and the unevenness of the bottom of shafts make it impracticable to place the engine on the bottom, and our bridge or track is intended to overcome this difficulty.

This frame or traveling-road is to suspend and support the drill-engine while at work, and allow it to be easily and quickly moved from one position to another, and hold it in place while boring holes.

The road is to be fastened by screws or other means between the walls of the shaft, and the drill-machine fastened on the road, so it can be moved from one end to the other, and so drill a row of holes.

To accomplish this end a track, A, is constructed, having two rails, *a a*, so formed and braced as to resist vibration, having in their ends extension pieces B B to allow of lengthening and shortening the rails in case of inequality in the walls of the shaft.

These extension pieces have flanges at their upper sides, extending over and resting upon the rails *a a*, as shown in fig. 3. They are held in place by means of bolts *d d*, locked by keys *b b*.

In the lower sides of the extension pieces are screws C C, run out by nuts *e e* against the walls to hold the track firm and keep it rigidly in one position until a row of holes is drilled.

The screws C C are grooved longitudinally, and a key or feather, *i*, inserted in the extension pieces B, fitting in said groove, keeps the screws from turning, but allows them to move out and in by the turning of the nuts *e e*.

We are aware that a frame has been used for supporting a rock-drilling machine, which frame has been provided at each end with one extension piece and screw, and we do, therefore, not claim such device as our invention.

Having thus fully described our invention,

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

The combination of the track or frame A, extension pieces B B, and screws C C, all constructed as shown and described, and arranged so that there will be two extension pieces, B, each with their screw C at each end of the track, as herein set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 22d day of October, 1870.

JOHN P. GRISCOM.
JOHN FRITZ.

Witnesses:
LEWIS GRISCOM,
C. GRISCOM.