

No. 685,522.

Patented Oct. 29, 1901.

J. MUIRHEAD.

PACKING FOR DRIFT, GALLERY, OR OTHER OPENINGS IN MINES.

(Application filed July 1, 1901.)

(No Model.)

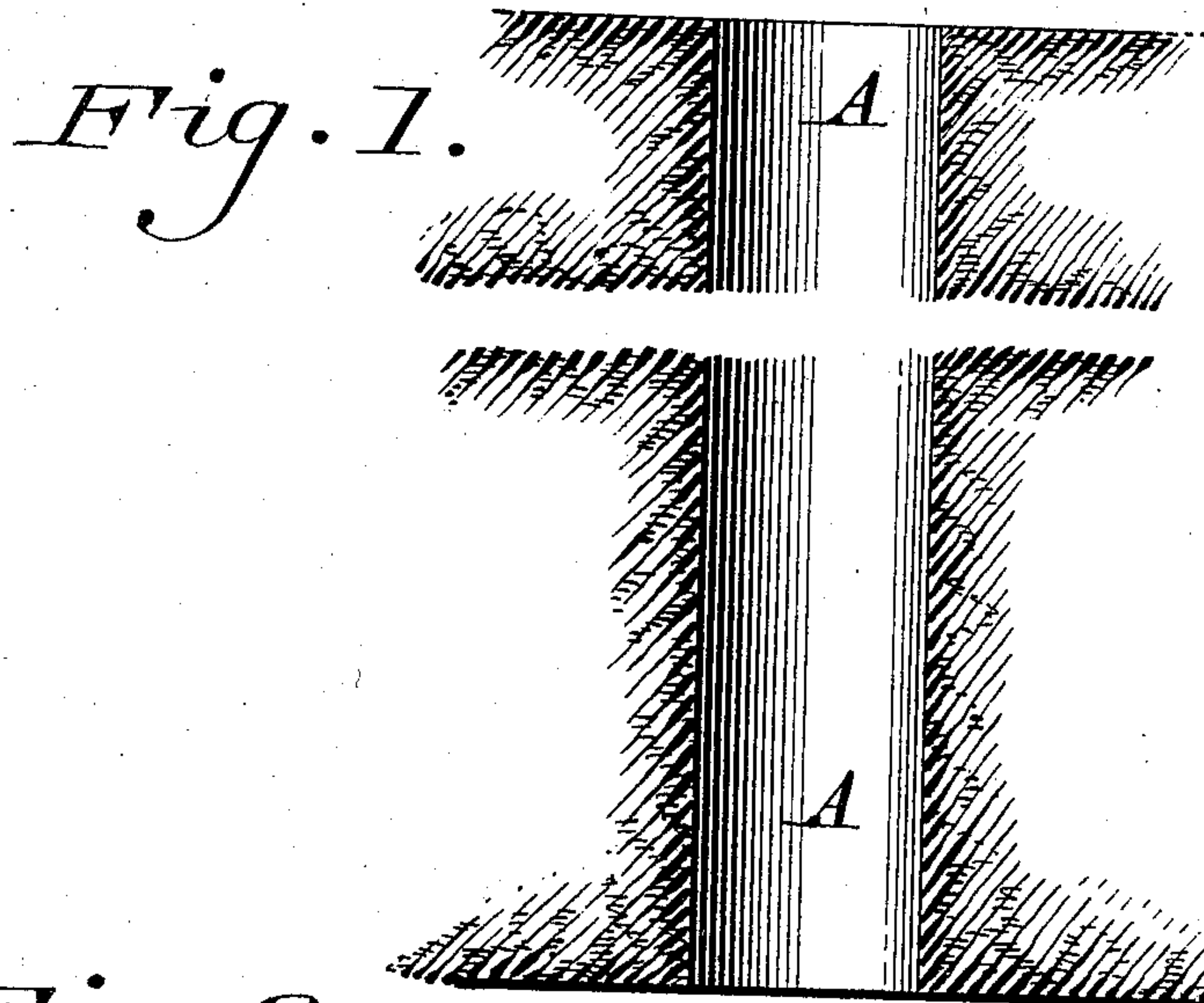


Fig. 2.

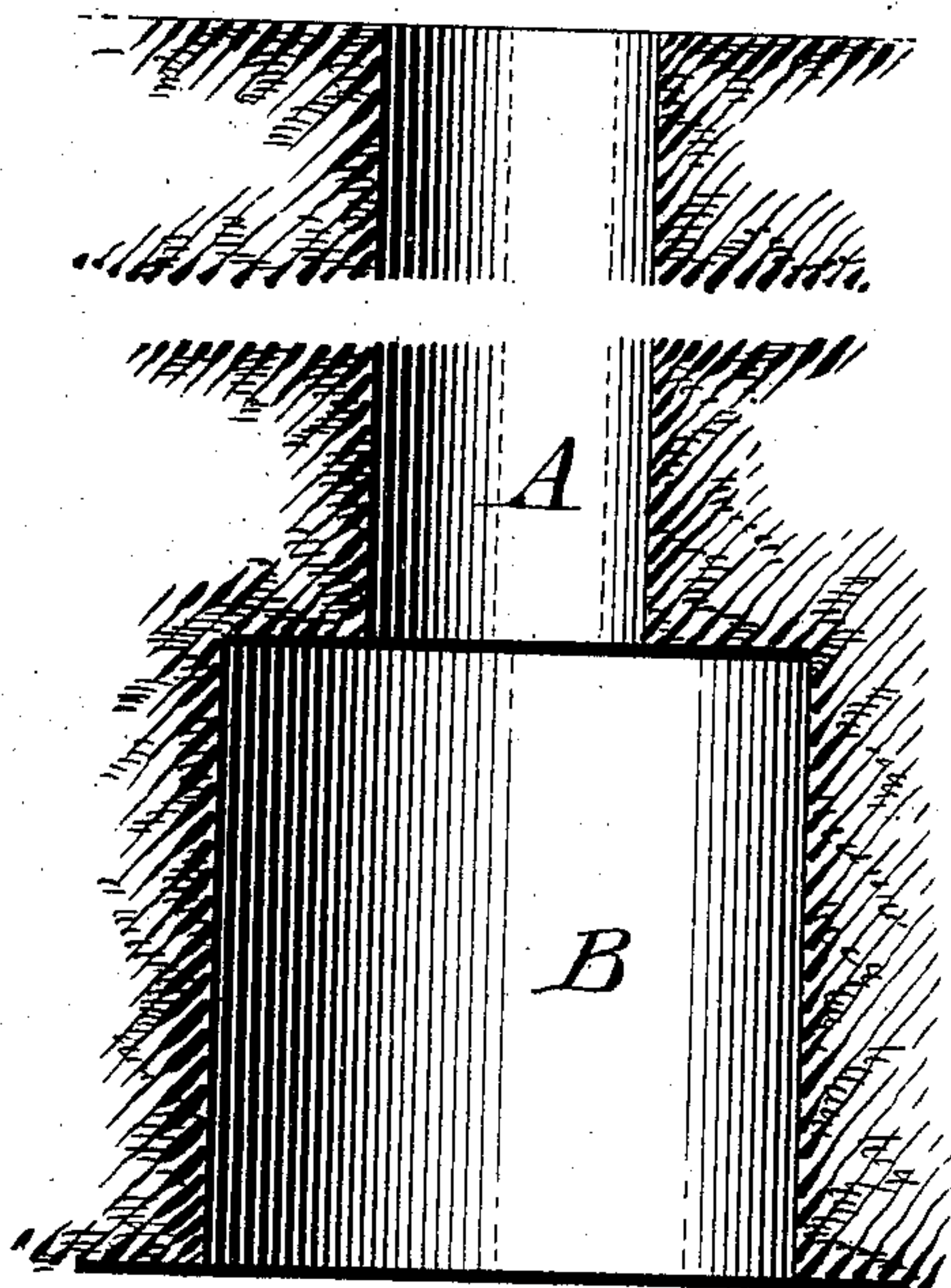
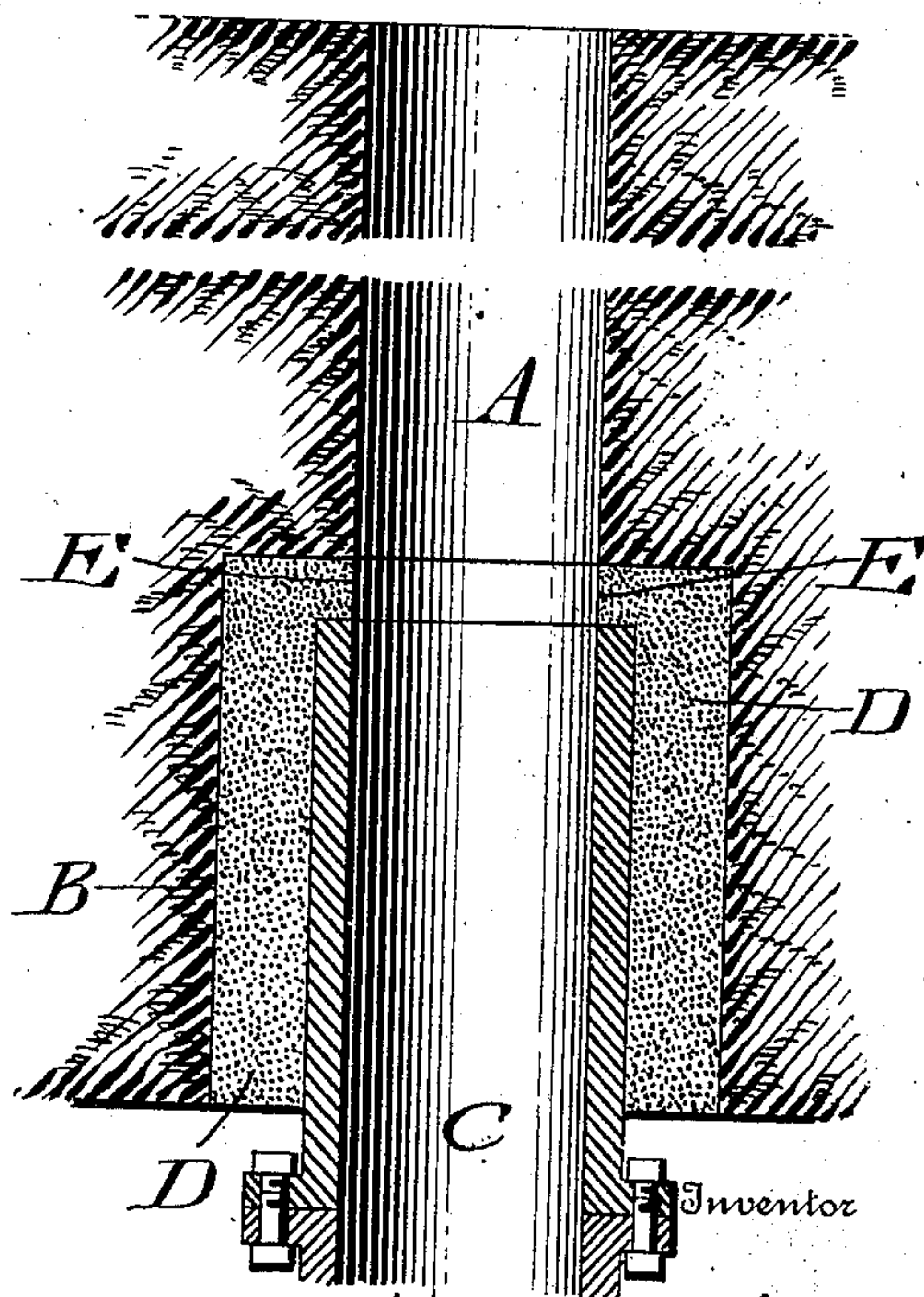


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PACKING FOR DRIFT, GALLERY, OR OTHER OPENINGS IN MINES.

SPECIFICATION forming part of Letters Patent No. 685,522, dated October 29, 1901.

Application filed July 1, 1901. Serial No. 66,638. (No model.)

To all whom it may concern:

Be it known that I, JOHN MUIRHEAD, a citizen of the United States, residing at Pittston, in the county of Luzerne, State of Pennsylvania, have invented a new and useful Improvement in Packing for Drift, Gallery, or other Openings in Mines, of which the following is a specification.

In mines the openings that lead from drifts, galleries, &c., to an upper passage or the surface of the ground are at times enlarged in diameter for various purposes, among others the insertion of tubes or pipes—as air, steam, or water columns—reaching to the bottom of the wells or openings and said tubes or pipes required to be packed, which is the object of my invention.

Figure 1 represents a view of a mine-opening in normal condition. Fig. 2 represents a view of the same, showing a portion enlarged in diameter. Fig. 3 represents a vertical section of packing embodying my invention.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates an opening leading from a drift or gallery of a mine to an upper passage or to the surface of the ground, and B designates a bore or portion of said opening which is enlarged in diameter, said enlargement being capable of being produced by a drill, for which Letters Patent of the United States No. 456,770 were granted to me on the 28th day of July, 1891; but any other suitable drill may be employed for my purpose.

C designates a pipe or tube which occupies the enlarged opening or bore B, said pipe being of less diameter than said opening and has its exterior incased in the packing D of cement or other suitable material, the same filling the portion of said bore B unoccupied

by said pipe, it being noticed that said material also covers the top edge of the pipe and extends horizontally inward, forming a shoulder E. By this provision the pipe will be reliably packed, it being noticed that the same is accomplished in a simple and inexpensive manner, for as the pipe is located in the bore the material D may be placed around the same.

In the present case the pipe C is employed as a column for pumping mine-water and is connected with the pump at its lower end.

While it is not necessary to extend said pipe to the surface, its upper end requires to be guarded and packed, whereby the water will not escape to the exterior of the pipe and loosen the cement around the pipe, which under ordinary circumstances tightly embraces the pipe and serves to hold the same from dropping.

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

1. A mine-opening having an enlarged chamber below the same, a column in said chamber, and packing material in the unoccupied portion of said chamber around said pipe, said column extending downwardly from said chamber to a pumping device with which it is connected.

2. A packing for a mine-opening consisting of a pipe occupying said opening, and cement or other packing material filling the unoccupied portion of said bore around said pipe, said material having a shoulder at its upper end, the same inclosing the adjacent edge of said pipe.

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Witnesses:

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