(No Model.)

G. H. BITTENBENDER.

COAL OR ROCK DRILL.

No. 591,204. Patented Oct. 5, 1897.

Fig. 1.

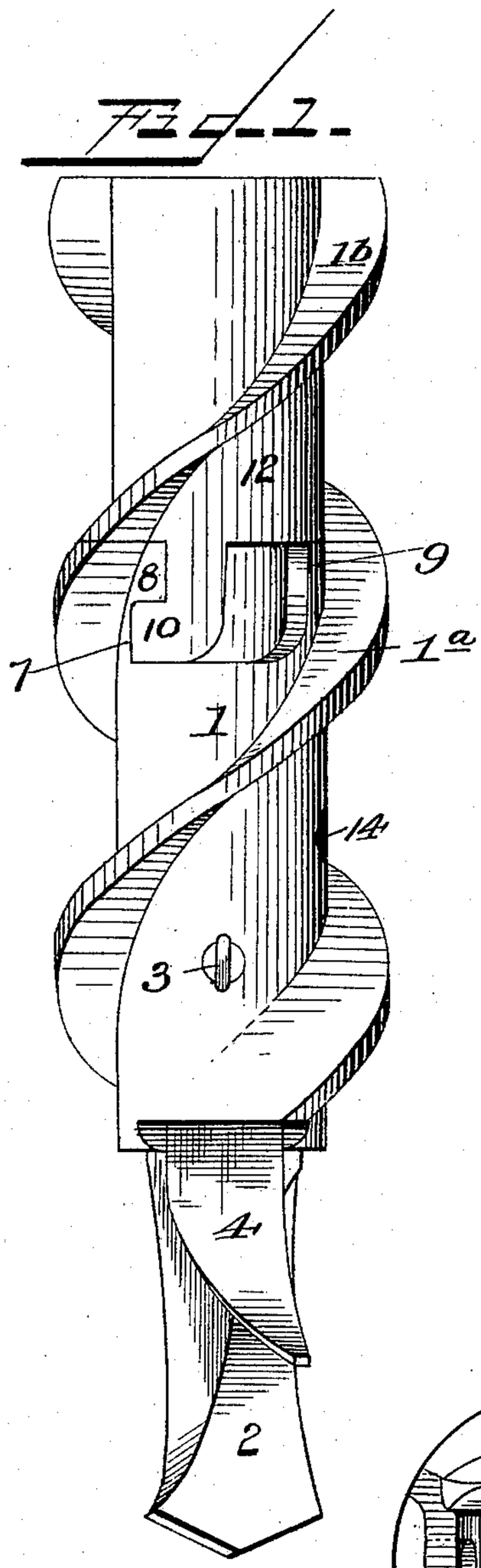


Fig. 2.

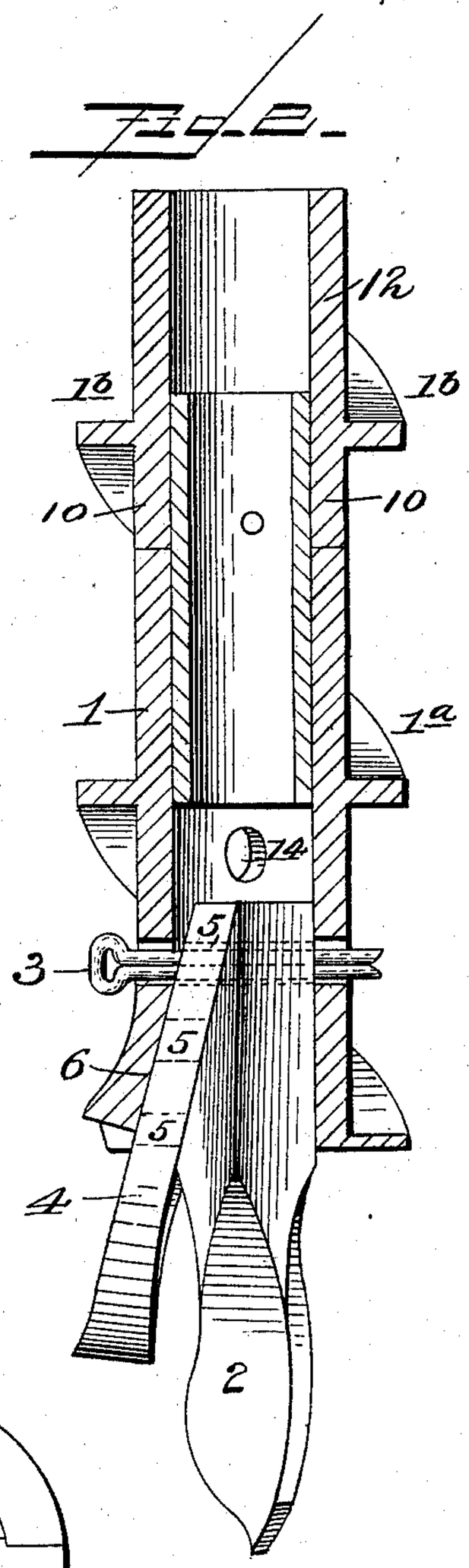
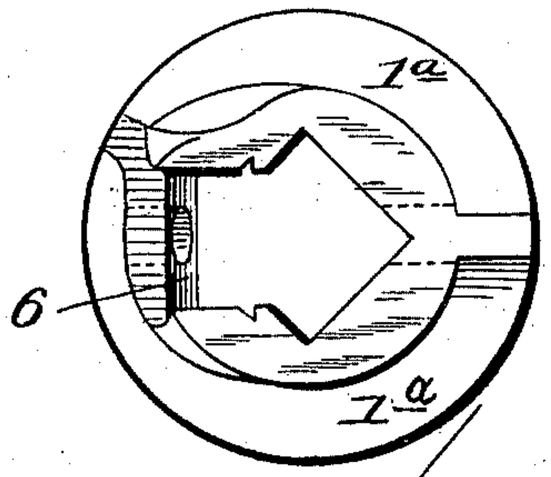


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE H. BITTENBENDER, OF PLYMOUTH, PENNSYLVANIA.

COAL OR ROCK DRILL.

SPECIFICATION forming part of Letters Patent No. 591,204, dated October 5, 1897.

Application filed May 18, 1897. Serial No. 637,093. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. BITTENBENDER, a citizen of the United States, residing at Plymouth, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Coal or Rock Drills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to coal or rock drills, and its object is to provide an improved construction of the same which shall possess superior advantages with respect to efficiency in use.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a drill constructed in accordance with my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a bottom plan view of the tube or socket, the bits being removed.

In the said drawings the reference-numeral 1 designates a hollow tube or socket provided with a spiral thread 1^a on its exterior, which conveys the dirt or dust caused by the cutters up or away from the same.

The numeral 2 designates a stationary bit or cutter the end of which fits in the lower end of the socket and is held in place by a transverse pin 3, passing through the same and through the socket.

The numeral 4 designates a movable bit or cutter the shank of which is formed with a number of holes 5, with which said pin is adapted to engage. This bit fits in inclined ways 6 in the lower end of the socket, so that by moving it outward its point or cutting edge will project farther from the axial line of the drill and thus cut a larger hole. By moving it inward the diameter of the hole cut will be decreased, as will be obvious.

The upper end of the tube or socket is formed with opposite recesses or slots 7, forming lugs 8. Engaging with these lugs are corresponding lugs 10 of a tube or solid rod 12, also provided with a spiral thread 1^b, forming a continuation of thread 1^a. This upper section is connected with the tube or socket by inserting its end into the upper end of the latter and then turning the same until the said lugs engage with each other.

The tube or socket is formed with one or more holes 14 to allow a portion of the dust or dirt to escape into the tube, so as to reduce the friction on the spiral threads and allow the dirt to be more easily carried away.

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

In a coal or rock drill, the combination with the tube or socket, formed with a spiral thread on its exterior, the stationary bit, the adjustable bit provided with a series of holes, the pin passing through said socket and bits, and the lugs at the upper end of said socket, of the tube formed with lugs engaging with the lugs of the socket, and the spiral thread forming a continuation of the thread on the socket, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE H. BITTENBENDER.

Witnesses:
THEO. PENSHOW,
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