

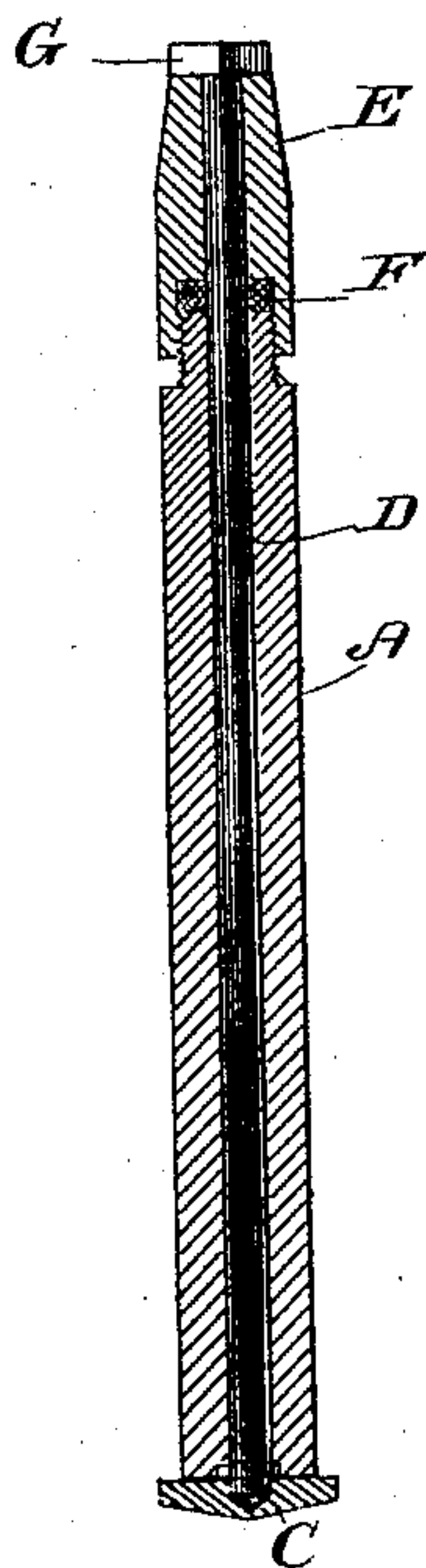
(No Model.)

G. RICHARDSON.

DRILL.

No. 327,315.

Patented Sept. 29, 1885.



Witnesses

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UNITED STATES PATENT OFFICE.

GEORGE RICHARDSON, OF BRIDGEPORT, CONNECTICUT.

DRILL.

SPECIFICATION forming part of Letters Patent No. 327,315, dated September 29, 1885.

Application filed May 11, 1885. (No model.)

To all whom it may concern:

Be it known that I, GEORGE RICHARDSON, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in 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 certain novel and useful improvements in drills for boring purposes, and has for its object to provide a device of this description which shall be especially adapted for tapping pipes in which there is a pressure of any gas or liquid; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction, I will proceed to describe the same in detail, referring by letter to the accompanying drawing, forming a part of this specification, which is a central vertical section of a drill and shank embodying my improvements.

A is the drill-shank, having in its lower extremity a recess, B, which acts as a seat for the drill-cutter C.

As shown, the drill-cutter is held in position within its seat in the shank by means of a threaded rod, D, which passes through the shank and engages with the cutter, a wrench-head, G, being secured to or formed with the upper end of the rod by which the latter is operated.

I preferably thread the upper end of the shank externally and attach thereto an internally-threaded cap, E, adapted to accommo-

date the rod, and within this cap place a packing-ring, F. By this construction it will be readily understood that the rod, which closely fits the opening throughout the shank, may be quickly engaged with the drill-cutter, and when disengaged therefrom may be readily pulled out from the shank, while at the same time the packing will prevent any liquid or gas from escaping through the shank. New drill-cutters are to be used at each operation of the drill, as after drilling the cutter drops into the main.

Of course it will be understood that my improved drill is designed for use only in connection with any suitable tapping mechanism, and hence a detachable drill-cutter affords a great advantage.

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

1. In a drill, the hollow shank having in the interior thereof a rod threaded at the lower end and provided with a wrench-head at the other, in combination with the cutter-point having a threaded opening and adapted to be held in position within a recess in the end of the shank by engagement with the rod, whereby a ready detachment of said point may be effected, substantially as set forth.

2. The hollow drill-shank made in two parts and containing a packing-ring, in combination with the cutter-point adapted to be held within the extremity of the shank by the threaded rod, whose upper end is provided with a wrench-head, as and for the purpose set forth.

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

GEORGE RICHARDSON.

Witnesses:

S. S. WILLIAMSON,
H. T. SHELTON, Jr.