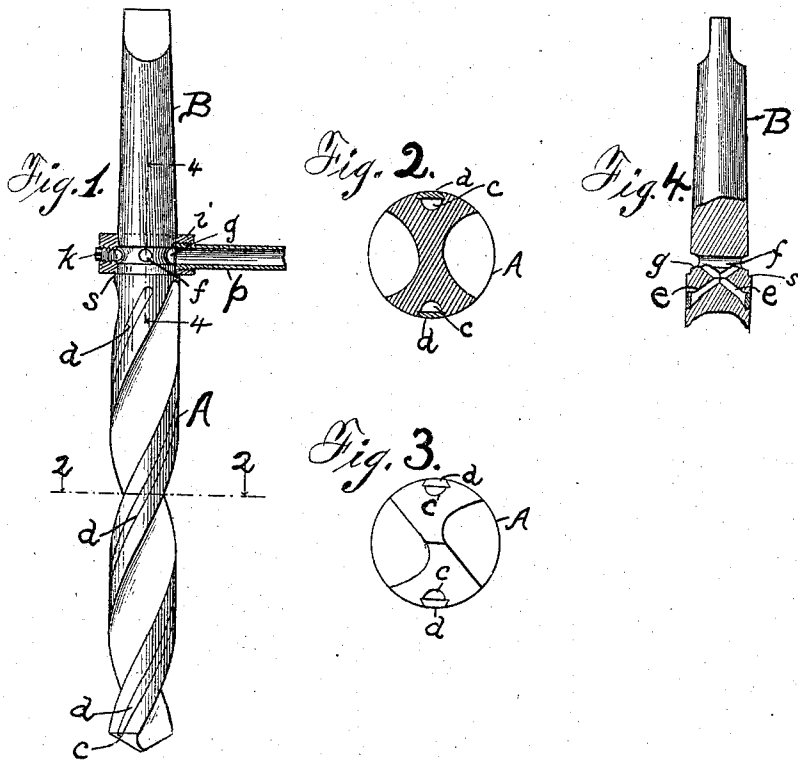


(No Model.)

P. J. HOENSCHIED.
SELF OILING DRILL.

No. 580,398.

Patented Apr. 13, 1897.



Witnesses:
A. E. Rein,
Charles L. Stone

Inventor:
Peter J. Hoenschied
By Albert H. Bates, Atty.

UNITED STATES PATENT OFFICE.

PETER J. HOENSCHIED, OF AKRON, OHIO, ASSIGNOR TO THE WHITMAN & BARNES MANUFACTURING COMPANY, OF SAME PLACE.

SELF-OILING DRILL.

SPECIFICATION forming part of Letters Patent No. 580,398, dated April 13, 1897.

Application filed October 7, 1896. Serial No. 608,140. (No model.)

To all whom it may concern:

Be it known that I, PETER J. HOENSCHIED, a citizen of the United States, residing in the city of Akron, county of Summit, and State of Ohio, have invented a certain new and useful Improvement in Self-Oiling Drills, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

10 My invention relates to self-oiling drills; and its object is to provide a drill having an oil-conduit leading to the working point, with economical and convenient means of supplying oil to that conduit.

15 My invention also contemplates providing such means as will supply oil to a revolving drill held in horizontal position.

The invention consists in the combination, with such a drill, of a collar surrounding the 20 drill-shank and held thereto against longitudinal movement and supplying oil to the drill from a tube held in proper relation to the drill by the collar.

25 Another part of the invention consists of the combination of tubular holes and grooves by which the oil is conveyed to the working point.

The drawings show my invention embodied in the best form at present known to me.

30 Figure 1 is an elevation of a complete drill containing the invention. Fig. 2 is a transverse section on the line 2 2, and Fig. 3 a bottom view thereof, both being on an enlarged scale. Fig. 4 is a view of the drill-shank, being taken at right angles to Fig. 1 35 and its lower portion being a section on the line 4 4 of Fig. 1.

40 A is a twist-drill having a shank B, which may be cylindrical or tapered or formed in other suitable manner. Carried by the body of the drill is the oil-conduit, which I form by making a groove *c* therein and covering the outside of the same in any suitable manner by a strip of metal *d*, preferably brass. The 45 grooves *c* (preferably two in number) terminate in the diagonal tubular holes *e* shown in Fig. 4. These holes continue the conduit from the surface grooves to the transverse hole *f*, extending through the drill and communicating at each end with the annular 50

groove *g*. They are conveniently and economically made and furnish a direct path to the covered surface grooves. Thus oil supplied to this annular groove will flow through the holes *f* and *e* and the grooves *c* and reach 55 the working point of the drill.

Oil is delivered to the annular groove *g* from a stationary supply by means of the tube *p* and the collar *i*, the inner end of the tube being held in proper juxtaposition to 60 the annular groove by the collar, while the collar, having its inner wall in apposition to the annular groove, makes a passage around the shank and thus supplies oil coming through the tube continuously to the conduit. 65 Dislocation of the collar is prevented by a set-screw *k*, whose end terminates in the annular groove. A shoulder *s* is preferably formed upon the drill-shank on which the collar may rest, whereby any leakage resulting from looseness of the collar is prevented 70 or minimized. It will be seen that if the collar is made to fit snugly about the shank oil may be fed to the drill-point when the drill is working in a horizontal position or even if 75 it should be completely inverted.

Having thus described my invention, what I claim is—

1. A drill having an oil-conduit leading from its point to its shank and terminating 80 at the shank in an annular groove, in combination with a collar surrounding the shank and having a set-screw projecting into said groove and a tube supplying oil to said groove and held in proper relation thereto by said 85 collar, for the purpose specified.

2. A drill having an annular groove about its shank, a diametrical hole through it terminating at each end in the annular groove, and a diagonal hole whose entrance is within 90 the said diametrical hole and whose exit is into a covered channel beginning at a point on the shank below the annular groove and extending to or near to the working point of the drill, substantially as described.

PETER J. HOENSCHIED.

Witnesses:

W. H. WRIGHT,
J. A. VINING.