

# UNITED STATES PATENT OFFICE.

HENRY C. REICHARDT, OF POTTSVILLE, PENNSYLVANIA, ASSIGNOR TO THE  
AMERICAN DIAMOND ROCK BORING COMPANY, OF NEW YORK, N. Y.

## SWIVEL FOR DRILLS.

SPECIFICATION forming part of Letters Patent No. 304,857, dated September 9, 1884.

Application filed May 21, 1884 (No model.)

*To all whom it may concern:*

Be it known that I, HENRY C. REICHARDT, of Pottsville, in the county of Schuylkill, State of Pennsylvania, have invented a new and useful Improvement in Swivels, of which the following is such full, clear, and exact description as will enable others skilled in the art to make and use the same when taken in connection with the accompanying drawings, in which—

Figure 1 is a view of the head and the water-pipe, part of the latter being in dotted lines. Fig. 2 is a view of the swivel-link. Fig. 3 is a vertical section of the two as combined, showing a view of the water-pipe. Fig. 4 is a view of the water-pipe. Fig. 5 is an end view of the thimble. Fig. 6 is a vertical section of the same.

This my invention is intended to be applied to drill-rods of the form used with diamond-pointed drills, wherein a stream of water is passed through the drill-rod and drill, but is equally well adapted to other forms of drills, drill-rods, and other like devices whereby a stream of water may be supplied to the drill-rod, and the drill-rod may be hoisted by suitable tackle attached thereto.

Heretofore, and before this my invention, it has been difficult to draw from the hole bored the drill and drill-rod by which it was drilled, and when a water-connection was maintained with the drill-rod it became necessary to remove the pipe-connections and substitute for them an eye or hook by which to attach the tackle to raise the rod.

This my invention consists of a head and swivel-link thereto attached, to which the upper part of the drill-rod is connected, so that the rod will be free to turn in the swivel without turning it, in providing a water-passage to connect with the drill-rod, and the various combinations hereinafter specified and set forth.

The swivel-link A of the drawings is made in the form in which swivels ordinarily are made, consisting of a loop and sleeve or socket, *a*.

The head B is made with a spindle, C, and shoulder D. The spindle C being made with a small thread thereon to enter the end of the

drill-rod, which should abut against the shoulder D. At the other end of the head B is a spindle, E, and shoulder G. On the spindle E is a thread cut to receive a nut. (Shown in Fig. 3, at H.) This nut H is preferably fastened to its place by a screw, I, passing through it. The swivel-link A is put on the spindle E and secured thereon by the nut H. A soft-metal or brass washer, K and L, is put on the spindle E, on either side of the link, to keep the shoulder G, nut H, and link A from wearing away.

The apparatus thus made may be used on drill-rods which do not have water supplied to them; but when water or other fluid or air is supplied through the drill-rod, the parts hereinafter described are used.

The interior of the lower spindle, C, is cut away up to the shoulder M, and the lower portion thereof is provided with a female screw.

The pipe N is made of sufficient length to pass through the length of the head B and of such size as to fit closely within the head B.

At or near the end of the pipe N is provided the projection or ring O, and at or near the other end is a screw-thread. The pipe N is put in the head B, so that the ring O comes against the shoulder M of the head and the other end of the pipe N projects above the upper end of the spindle E.

The hollow thimble P is made with a thread on the outside thereof, of such a size as to fit within the spindle C, and after the pipe has been inserted in the head B, so that the ring O is against the shoulder M, this thimble is inserted in the end of the spindle C, and screwed up so as to hold the ring O in place. Packing is put around the pipe N next the ring O, so that it will be between the ring O and the shoulder M. The thimble is preferably made of brass or soft metal, to avoid wearing the ring O, against which it comes.

To the upper end of the pipe N is attached a connection with a water-supply, preferably by means of an elbow-joint.

The spindle C is screwed into the drill-rod securely, and water supplied through the rod N, the head B and drill-rod being free to turn

(No Model.)

H. C. REICHARDT.  
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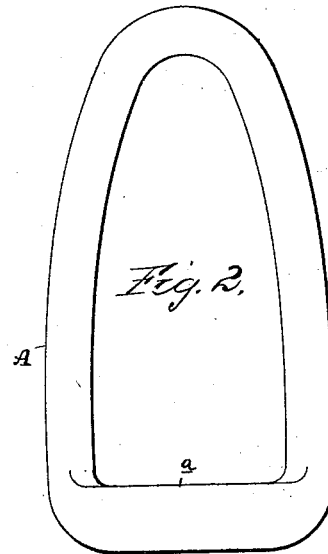
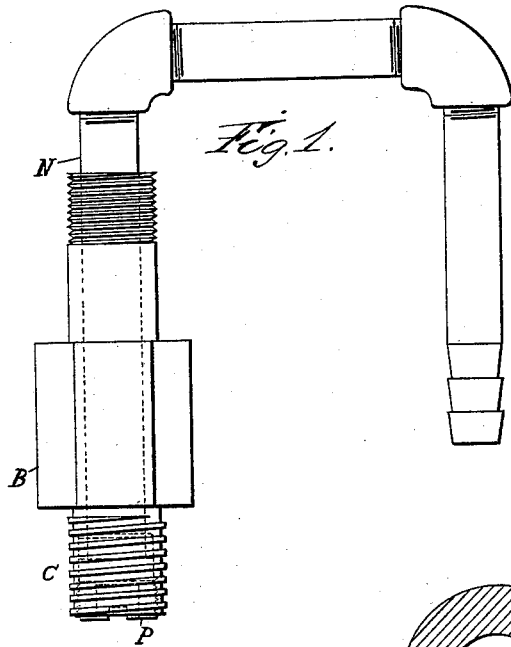


Fig. 4.

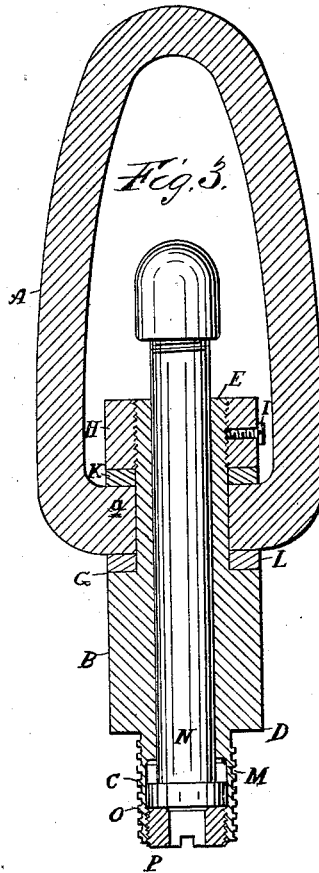
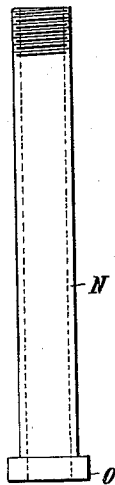


Fig. 5.

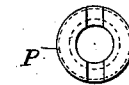


Fig. 6.



WITNESSES:

*N. H. Kuntzmann*  
*A. L. Schmitt*

Henry C. Reichardt  
INVENTOR

BY *E. G. Thompson*  
ATTORNEY

