UNITED STATES PATENT OFFICE.

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ADJUSTABLE EXTENSION DRILL- SOCKET.

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To all whom it may concern:

Be it known that I, SAMUEL W. MEREDH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Adjustable Extension Drill-Sockets, of which the following is a specification.

My invention relates to improvements in adjustable extension drill sockets, the object of the invention being to provide an extension device which may be adjusted longitudinally so as to permit the boring machine and bit to be positioned the desired distance apart, and operate with equal efficiency, and the drill extension so constructed that at any adjustment it is rigid and strong to withstand the necessary strains and stresses to which a device of this kind is subjected.

A further object is to provide an improved adjustable extension drill socket, which is comparatively cheap to manufacture, neat and attractive in appearance, and strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claim.

In the accompanying drawings: Figure 1, is a view in side elevation partly in section illustrating my improvements. Fig. 2, is a fragmentary view in side elevation illustrating a modification. Figs. 3, and 4, are end views of Fig. 1. Fig. 5, is a view in section on the line 5—5 of Fig. 1, and Fig. 6, is a view in section on the line 6—6 of Fig. 2.

1, represents a tube in one end of which the cylindrical end 2, of a shank 3 is secured by a rivet 4, or other suitable means. This shank 3 is preferably angular in cross section but may, of course, be made of other shapes to fit the ordinary sockets in a drilling machine.

5, represents a cylindrical rod having a recessed head 6 at one end to receive the shank of an ordinary bit or other cutting tool.

Tube 1 is provided with a longitudinal slot 7, and along one wall of said slot with a longitudinal series of L-shaped notches or recesses 8, to receive in any of them a screw 9, screwed into a threaded opening in rod 5, and movable through the longitudinal slot 7.

It will be understood that the rod 5, while it fits snugly in tube 1, is capable of longitudinal or telescoping movement in the tube, so that the screw 9 may be positioned opposite the entrance to any of the notches 8, and when the rod is turned to position the screw in the notch and is then moved longitudinally, the screw will enter the longitudinal portion of the notch, and will hold the tube and rod, so that they will turn together in either direction. To strengthen the tube, a plurality of metal bands 10 are shrunk or otherwise secured around the tube, and extend across the slot 7, so as to prevent any possibility of torsional strain spreading the slot or twisting the tube. I preferably employ a screw 9, as a connecting device between the rod 5 and tube 1, which can be readily replaced in the event of wear.

In Fig. 2, I illustrate a modified form of notch 11, which instead of the L-shaped notch shown in Fig. 1, I employ these 80 notches located diagonally, and in many instances this notch will serve, but where the drill is to turn in either direction, a notch such as shown in Fig. 1 is preferable.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claim.

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

An adjustable extension drill socket, comprising a cylindrical tube, and a rod mounted to turn and move longitudinally in the tube, said tube and said rod constructed to turn together in operating as a drill socket, said rod projecting at one end beyond the open end of the tube, a cutting tool receiving socket in the end of the rod, a drilling machine engaging shank on the end of the tube, said tube having a longitudinal slot therein, and a longitudinal series of lateral L-shaped notches of the same width as the groove communicating with one wall of said
slot, a projection fixed to the rod movable in the slot, and into any of the notches, whereby a quick adjustment may be had between the drilling tool and the drilling machine without a disconnection from either, and endless bands shrunk on said tube extending across said slot, and said projection extending beyond the rod a distance approximating the thickness of the tube, whereby it may pass under said bands, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL W. MEREDITH.

Witnesses:

CHAS. E. POTTS,

R. H. KRENKEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."