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DRILL BIT SUPPORT
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Fig. 1.

Fig. 2.

Fig. 3.

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My invention relates to small drill bits, and has among its objects and advantages the provision of an improved drill bit support to reinforce the bit against bending when pressure is applied thereto.

In the accompanying drawing:

Figure 1 is a view of a conventional bit and my support.

Figure 2 is an enlarged sectional view of the support, and

Figure 3 is an enlarged sectional view on the line 3—3 of Figure 1.

In the embodiment of the invention selected for illustration, I make use of a conventional drill bit 10 and the usual brace chuck 12. Bits of small diameters frequently bend because of pressure applied thereto during the drilling operation. To resist such bending I make use of a support 14 made up of sections 16, which sections have longitudinal grooves 18 therein to receive the drill bit 10. Both grooves 18 extend the full length of their respective sections 16. To afford effective support for bits of different diameters, the support is made up in different sizes, particularly with respect to the grooves 18 so that the sections 16 will have close fitting engagement with the drill bit substantially throughout its entire circumference.

In Figure 2, the sections 16 are provided with tapered and threaded lengths 20 for threaded connection with a sleeve 22 through the medium of which the sections 16 may be clamped to the drill bit. These sections are of such length as to be receivable in the chuck 12, so that the sections 16 are clamped firmly to the drill bit throughout the greater extent of their lengths. With the drill bit 10 clamped accordingly to Figure 2, the bit is reinforced so as to resist bending. The sleeve 22 is tightened upon the section 16 before the sections are inserted in the chuck, and the drill bit may be projected from the sections 16 only sufficiently far to accommodate the thickness of the work being drilled, which affords a stiffening support for the drill bit throughout its greatest possible length.

Without further elaboration, the foregoing will so fully explain my invention, that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

A stiffening device for use with drill bits of small diameter in holding the same in drill chucks, comprising a pair of cooperating elongated grooved sections adapted to receive the drill bit in the grooved portion therebetween, and of a length to extend beyond that portion of the bit engaged by the chuck to fully receive the clamping jaws of the chuck, the outer ends of said sections being tapered and threaded and engaging the bit to a point adjacent the effective drilling portion of the bit, and an internally threaded tapered sleeve engaging the tapered ends of the tapered sections to clamp the sections together on the bit.

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