H. HAUS.

JOINT FOR DRILL BITS AND OTHER PURPOSES.

APPLICATION FILED AUG. 30, 1918.

1,296,954.

Patented Mar. 11, 1919.

Fig. 1.

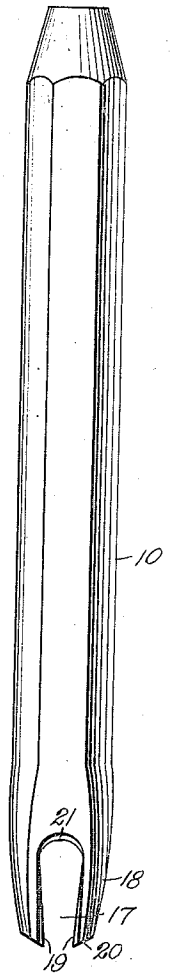


Fig. 2.

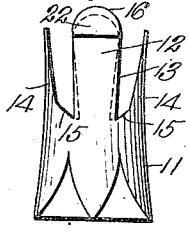


Fig. 3.

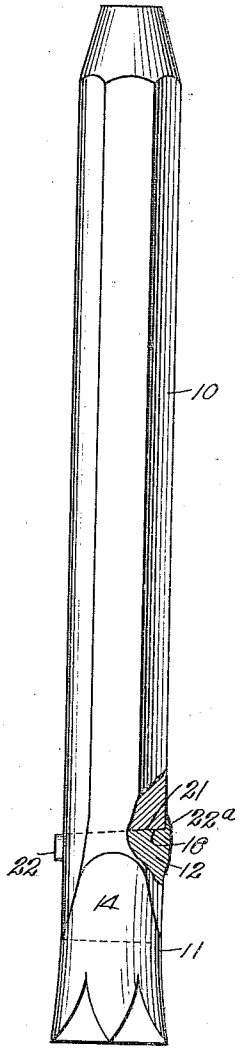


Fig. 5.

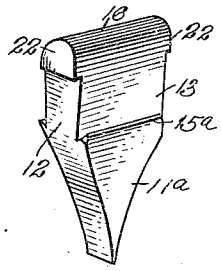


Fig. 6.

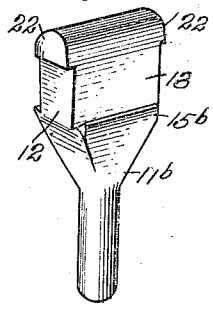
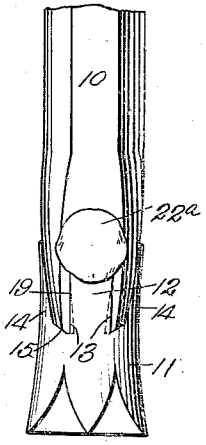


Fig. 4.



WITNESSES

Arthur Drisch

J. L. McCullough

INVENTOR

Henry Haus

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

HENRY HAUS, OF POPE VALLEY, CALIFORNIA.

JOINT FOR DRILL-BITS AND OTHER PURPOSES.

1,296,954. Specification of Letters Patent. Patented Mar. 11, 1919.

Application filed August 30, 1918. Serial No. 252,093.

To all whom it may concern:

Be it known that I, HENRY HAUS, a citizen of the United States, and a resident of Pope Valley, in the county of Napa and State of California, have invented a new and Improved Joint for Drill-Bits and other Purposes, of which the following is a full, clear, and exact description.

My invention relates to joints particularly advantageous for embodiment in tools such as drill bits, chisels, and the like, although capable of a wider use in forming joints between the sections of a shaft or rod. The particular nature of my improved joint and its advantages will appear from the specific description following.

Reference is to be had to the accompanying drawings, forming part of this specification, in which like characters indicate corresponding parts in all the views.

Figure 1 is a side elevation of the shank or holder of a tool formed in accordance with my invention;

Fig. 2 is a similar view of a drill bit adapted to be secured to said holder;

Fig. 3 is a partly sectional side elevation taken at right angles to Figs. 1 and 2 and showing the holder and bit assembled and secured by my improved joint;

Fig. 4 is a view of the lower portion of the holder and the bit in assembled form, the view being at right angles to Fig. 1, a portion of the joint member of the drill bit being upset or riveted;

Fig. 5 is a perspective view of a chisel bit adapted to be substituted for the drill bit of Figs. 2 and 4; and

Fig. 6 shows a perspective view of a punch to be received in the holder and united thereto by my improved joint.

Referring more particularly to Figs. 1 to 4, the numeral 10 indicates a shank or holder, and 11, a separate tool, here shown as a drill bit. The said bit is formed with a central head 12, the sides 13 of which taper in two directions, that is to say, vertically and horizontally, with respect to the position of the bit in Fig. 2. At each side of the head 12 the bit is formed with a lip 14, the inner sides of said lips flaring rearwardly, the flare of the lips being more abrupt at the forward end, as indicated at 15. In addition to the vertical and horizontal flare of the sides 13 of the head, the top surface 16 thereof tapers also, thereby giving a taper to the head at three sides.

The shank 10 is formed to correspond with the described bit, thereby presenting a slot 17 extending to the front end thereof to accommodate the head 12 and presenting forked or forwardly extending sides 18, the outer surface of which corresponds with the flare of the lips 14, to be accommodated between said lips and the sides of the head 12. The inner surfaces 19 of the members 18 taper in two directions to agree with the taper of the sides 13. Also, the top surface or wall 21 of the slot 17 tapers to correspond with the taper of the top surface 16 of the head 12. The front ends of the members 18 are beveled, as at 20, to agree generally with the angle 15 of the lips 14.

With the described construction the smaller end of the head 12 is entered sidewise in the larger end of the slot 17. Thus, the parts may be readily engaged and the head passed freely into the slot. Finally, the taper of the parts causes the head to firmly bind against the walls of the head 17 so that the head is given a tight fit when forced home to its final position, there being a close contact between the head and the shank or holder 10 at the sides of the slot 17 and at the inner or top wall 21 thereof, the wedging connection thus obtained serving to firmly hold the bit in position.

In addition to the features mentioned, the head 12 at the upper or inner end thereof has such a length as to present laterally projecting ends or protuberances 22 at opposite sides of the shank or holder 10; and these protuberances, or the one at the smaller end of the head 12, may be upset or riveted as 22^a in Fig. 3, thereby uniting the parts by a substantially permanent joint.

In Fig. 5 a chisel bit 11^a is shown formed in accordance with my invention. The head 12 of the chisel is made in all respects the same as the head 12 in Figs. 1 to 4. The lips 15^a, however, correspond with the forward portions or angle 15 of the lips 14. The lips in both instances accommodate the beveled front edges 20 of the holder 10, as best seen in Fig. 1.

In Fig. 6 a punch 11^b is shown having a head 12 corresponding in all respects to the head 12 in Figs 1 to 4, the lips 15^b, however, on said punch corresponding with the lips 15^a in Fig. 5.

Broadly, the shank 10 and the tool 11^a or 11^b consists respectively of members to be

united by my improved joint, and it will be obvious that the members to be united may consist of shaft sections or rod sections or other sections or members of tools other than those illustrated.

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

A joint for uniting two members, including a head central on one member, and tapering lips at opposite sides of said head, the side surfaces of said head tapering in two directions and the top surface of said head tapering lengthwise of the head, the other of said members having a central slot presenting walls tapering to correspond with the said head, said head, furthermore, at the rear or inner end thereof, presenting lateral protuberances projecing beyond the shank and adapted to be upset.

HENRY HAUS.