Feb. 12, 1924. 1,483,296

F. A. GILL

DRILL

Filed July 26, 1922

Fig. 1.

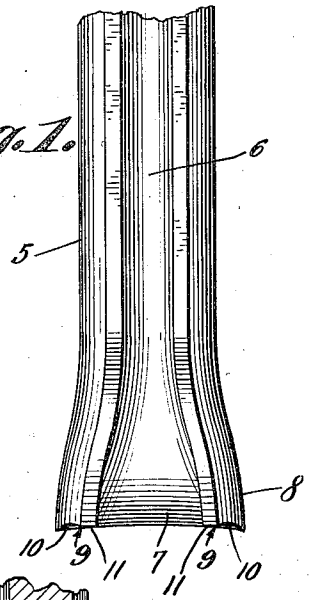


Fig. 2.

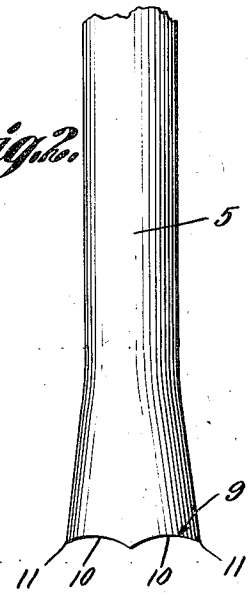


Fig. 3.

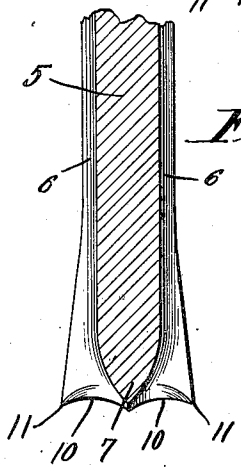


Fig. 5.

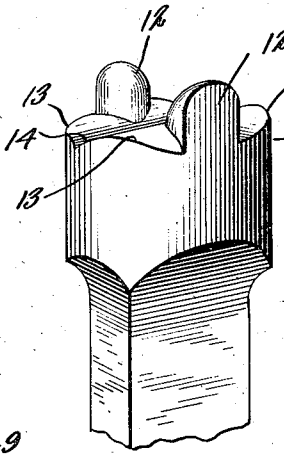


Fig. 4.

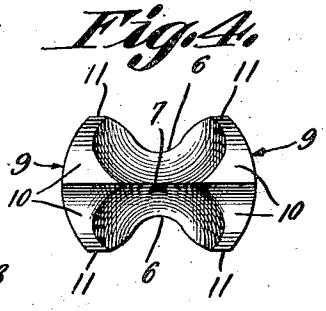
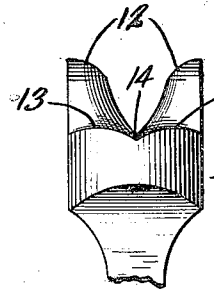


Fig. 6.



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Patented Feb. 12, 1924. 1,483,296

UNITED STATES PATENT OFFICE.

FRED A. GILL, OF LEBANON, PENNSYLVANIA.

DRILL.

Application filed July 26, 1922. Serial No. 577,584.

To all whom it may concern:

Be it known that I, FRED A. GILL, a citizen of the United States, residing at Lebanon, in the county of Lebanon and State of Pennsylvania, have invented a new and useful Drill, of which the following is a specification.

This invention relates to drills and dollies, the primary object of the invention being to provide a dolly of a novel construction, so that when the same is brought into engagement with a length of metal to be formed into a drill, the cutting edge of the drill will be so formed as to prevent lateral drift of the tool, while in operation.

Another object of the invention is to provide a device of this character which will form a cutting edge to allow the drill to be operated at an angle with respect to the vertical.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

Referring to the drawing:

Figure 1 is a view in side elevational of a drill constructed in accordance with the present invention.

Figure 2 is an elevational view disclosing one edge of the drill.

Figure 3 is a longitudinal sectional view of the drill taken through the center thereof.

Figure 4 is an end view of the drill disclosing the formation of the cutting end thereof.

Figure 5 is a perspective view of one end of the dolly.

Figure 6 is an elevational view of one edge of the dolly.

Referring to the drawing in detail, the reference character 5 designates the shank of the drill which may be of any desired length and contour, the same being formed however with longitudinal grooves 6, formed in opposite sides thereof, the bases of the grooves, at the cutting end of the tool being inclined towards each other defining a transverse web 7.

The cutting end of the drill is enlarged, as clearly shown by Figure 1 of the drawing, the outer surfaces thereof being convex curvilinear as indicated at 8 to provide relatively smooth surfaces to contact with the walls of the opening being bored and prevent the drill from becoming wedged in its opening.

The walls of the grooves 6 taper towards the edges 9 of the cutting end of the tool to permit water and fluid to pass through the grooves and allow the same to be discharged adjacent to the upper end thereof. As shown, the edges 9 are curved as at 10, the curvatures extending from the ends thereof towards the central rib 7, defining cutting elements 11, which are designed to grip the material through which the drill is being operated and hold the drill in direct alignment eliminating any possibility of lateral drift of the drill.

The dolly forming an important feature of the invention is disclosed by Figures 5 and 6 of the drawings and as shown the forming end of the dolly is provided with opposed fingers 12 adapted to find their way into the parallel grooves 6 of the drill to guide the dolly to the drill in a manner to bring the forming surfaces thereof into direct alignment with the cutting end of the drill.

Forming edges 13 are convexed in formation and extend from the fingers 12 to a central groove 14, which surfaces and groove, form the curved edges 10 of the drill, when the former or dolly is brought into engagement therewith.

Having thus described the invention, what is claimed as new is:—

1. A dolly including a shank having a forming end, opposed guiding fingers formed at the forming end of the dolly, said forming end having a transverse groove and having convex surfaces extending from the side edges of the fingers and terminating at points adjacent to the groove.

2. A dolly including a shank having a forming end, opposed guiding fingers extending from one end of the shank, and having a groove disposed between the fingers and extending transversely of the forming end, and the surfaces at the forming end of the shank being curved downwardly towards the groove and towards the edges of the fingers.

3. A dolly including a shank having a forming end, opposed fingers extending from the forming end, said fingers having curved inner surfaces, said forming end having a transverse groove and the surfaces of the forming end between the groove and edges of the forming fingers being convexed.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

FRED A. GILL.

Witnesses:

CLARENCE B. WORRELL,

G. R. CLARK.