

J. J. TEASCK.

BIT,

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1,216,628.

Patented Feb. 20, 1917.

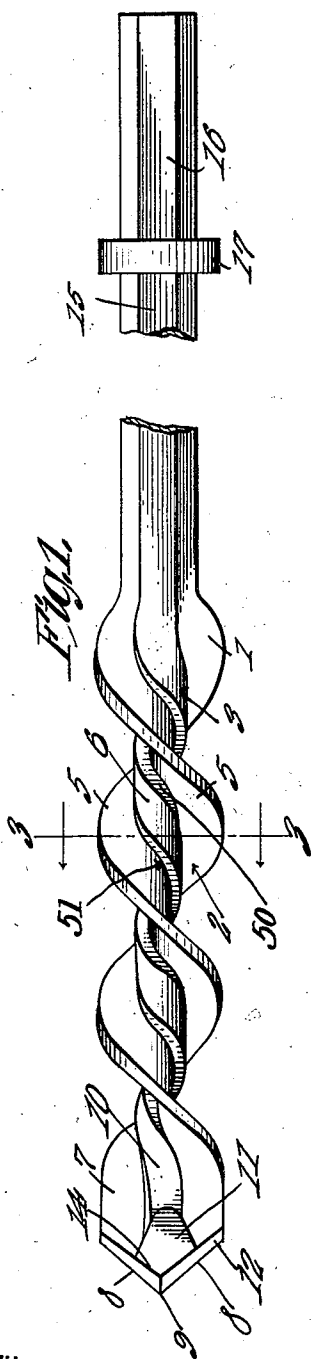


Fig. 1.

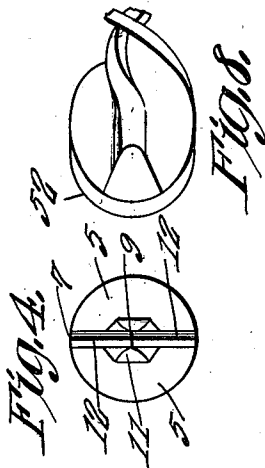


Fig. 4.

Fig. 8.

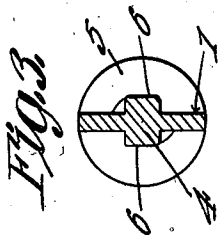


Fig. 3.

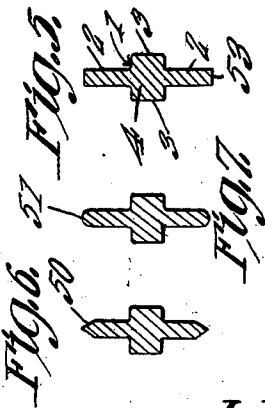


Fig. 5.

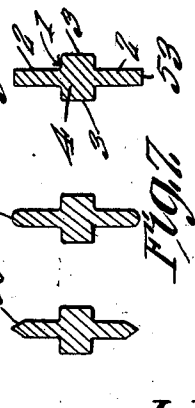


Fig. 6.

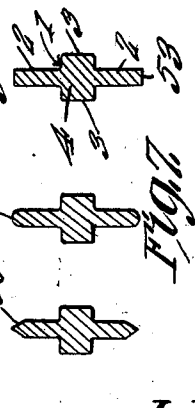


Fig. 7.

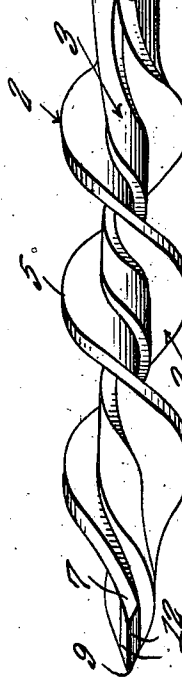
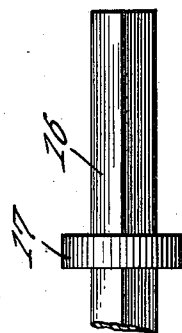


Fig. 2.

Witnesses

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BIT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH J. TEASCK, a citizen of the United States, residing at Virginia, in the county of St. Louis and State of Minnesota, have invented a new and useful Bit, of which the following is a specification.

The device forming the subject matter of this application is a bit adapted to be employed in connection with drills which have a combined reciprocating and rotary movement.

The invention aims to provide a bit of this type which is adequately reinforced, between its spiral flanges, by spiral ribs.

Another object of the invention is so to construct the spiral flanges and the ribs, as to the working end of the bit, that the bit will be reinforced at its extremity.

Another object of the invention is to improve the construction of the bit so that the same will be practically self-sharpening, and remain in operative condition, without wearing off or breaking, even when the bit is employed on a hard and resisting material.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above 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 can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:—

Figures 1 and 2 are side elevations where-in the bit forming the subject matter of this application is viewed at right angles, in the respective views, parts being broken away;

Fig. 3 is a cross section on the line 3—3 of Fig. 1;

Fig. 4 is an end elevation of the bit;

Fig. 5 is a cross section showing the strip or bar of material out of which the bit forming the subject matter of this application is fashioned.

Figs. 6 and 7 are cross sections showing slight modifications in the invention;

Fig. 8 is a fragmental side elevation showing a further modification.

The bit forming the subject matter of this application is fashioned from a bar 1 having opposed longitudinal fins 2, and opposed longitudinal ridges 3 disposed approximately at right angles to the fins 2. The ridges 3 are of rectangular cross section and are of small lateral extent compared with the fins 2.

A bar of the sort above described is twisted, so that the bar proper 1 becomes a central body 4, the fins 2 being transformed into spiral flanges 5, and the ridges 3 being transformed into spiral ribbon-like reinforcing ribs 6 located between the flanges 5 and having the same twist as the flanges. The edges 50 of the ribs 6 cooperate with the flanges 5 to form spiral grooves 51 which aid in retracting the loosened material adjacent the body 4.

The flanges 5 are prolonged to form a flattened head 7, the terminal edges of which may be inclined as shown at 8 to define a point 9, the edges 8 being beveled off in opposite directions as shown at 12. The reinforcing ribs 6 are prolonged to form extensions 10 lying on the opposite faces of the head 7 and serving to reinforce the same, the extremities of the extensions 10 being laterally enlarged as shown at 11 and the end edges of the enlargements 11 being inclined as shown at 14 to correspond to the inclination of the edges 8 of the head 7. The portion of the bit above described is made from a good grade of steel, properly tempered for the work in hand. The shank 15 of the bit is assembled with the body portion thereof after the latter has been twisted, the shank 15 including a tang 16 and a collar 17 adapted to cooperate with the tool-receiving element of a rotary and reciprocating drill.

The structure herein disclosed is so constructed that its working end may be reinforced, and so that it will be reinforced throughout the length of its spiral portion. The material loosened as the bit reciprocates will be carried rearwardly, as the bit rotates.

In Fig. 5 of the drawings, the flanges have been shown at 53 as of rectangular form at their longitudinal edges. The longitudinal edges of the flanges, however, as shown at 50 in Fig. 6, may be beveled, or, as shown at 51 in Fig. 7, they may be rounded.

Fig. 8 of the drawings will serve to illus-

trate the fact that the working end of the tool, as shown at 52, may be of rounded contour, or of any other form.

A skilled mechanic will understand that the spiral flanges 5 may extend toward the collar 17 any desired distance.

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

A bit fashioned from a bar having opposed fins and opposed ridges disposed at right angles to the fins, the ridges being of rectangular cross section and being of small lateral extent compared with the fins, the bar being twisted to form a central body, to

transform the fins into spiral flanges, and to transform the ridges into ribbon-like ribs reinforcing the body, the flanges projecting outwardly beyond the ribs, the edges of the ribs coöperating with the flanges to form spiral grooves which aid in retracting the loosened material adjacent the body.

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

JOSEPH J. TEASCK.

Witnesses:

PAUL C. OMANN,
E. J. ANDREW.