July 5, 1949. F. H. STAGGS 2,475,263

DRILL JIG

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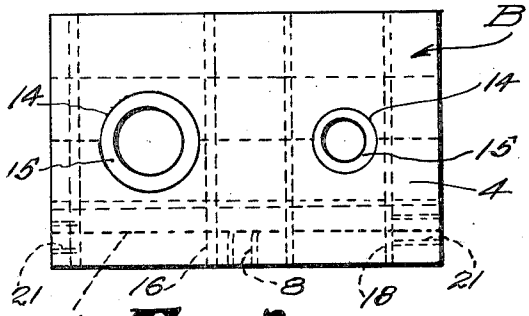


FIG. 2

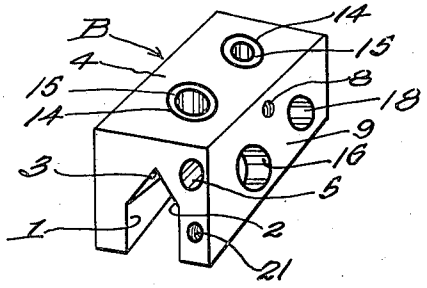


FIG. 1

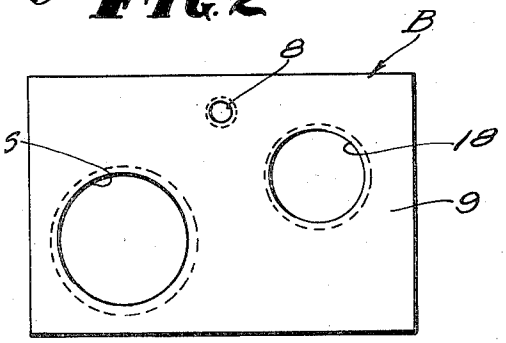


FIG. 4

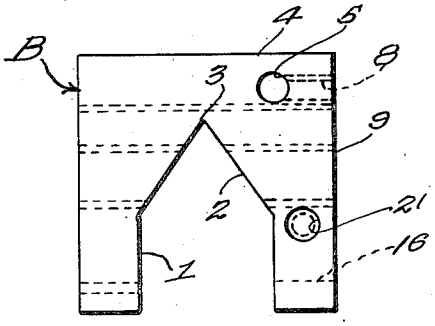


FIG. 3

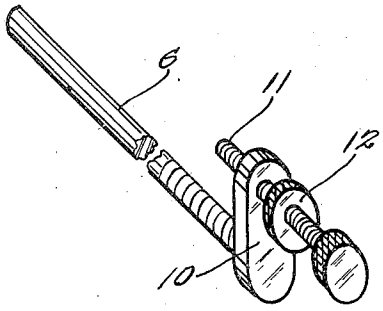


FIG. 7



FIG. 5



FIG. 6

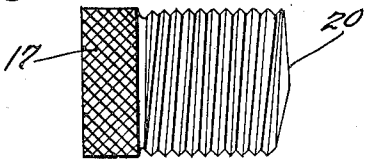


FIG. 10

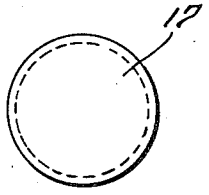


FIG. 11

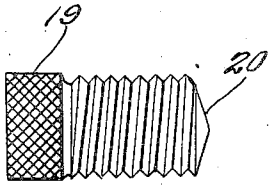


FIG. 8

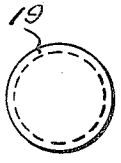


FIG. 9

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DRILL JIG

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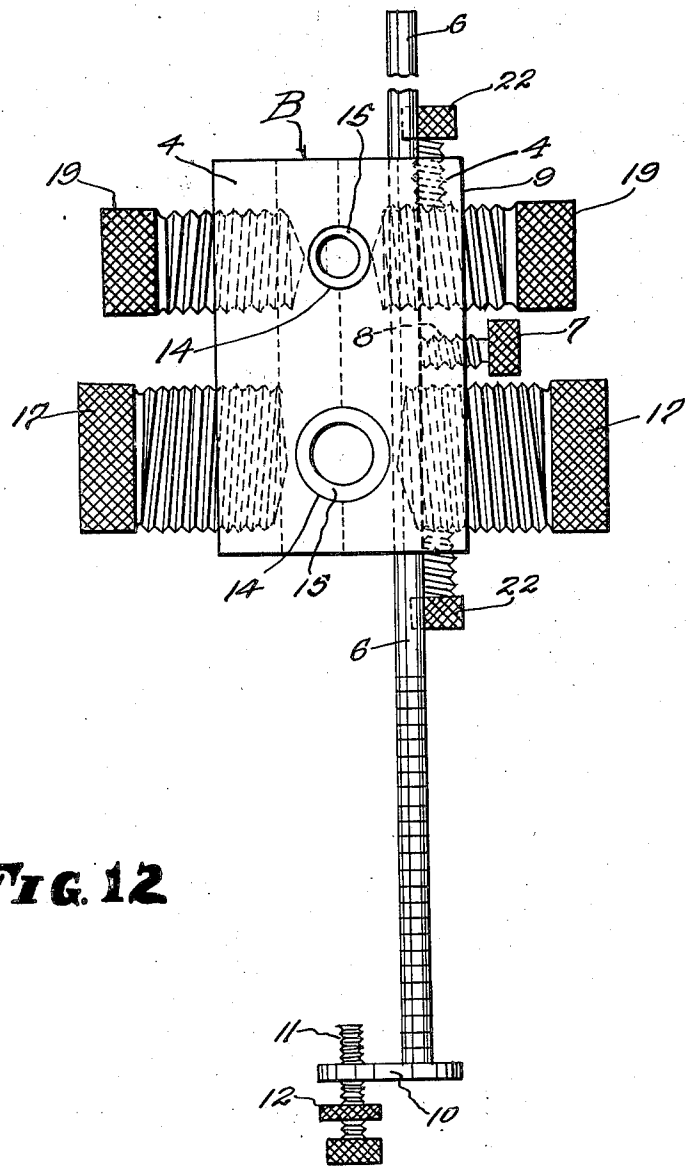


FIG. 12

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DRILL JIG

Francis H. Staggs, Wichita, Kans.

Application September 13, 1945, Serial No. 615,996

3 Claims. (Cl. 77—62)

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This invention relates to a drill jig and it is primarily an object of the invention to provide a jig which can be employed in a manner to assure accuracy at .005 of an inch and which is easily operated.

It is also an object of the invention to provide a device of this kind which affords a quick, accurate and positive holding and wherein full vision of the work is permitted at all times as the work is placed in the jig.

A still further object of the invention is to provide a drill jig wherein a screw lock is positioned directly below the drilling position which allows for the drilling of very short work and wherein the working ends of the screw locks are of such angles to allow clearance for the largest practical size drill.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved drill jig whereby certain important advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein:

Figure 1 is a view in perspective of the body block of the jig as herein embodied;

Figure 2 is a view in side elevation of the block or body as illustrated in Figure 1;

Figure 3 is an enlarged view in end elevation of the block or body;

Figure 4 is a view in side elevation of the block or body;

Figure 5 is an elevational view of a holding screw as herein embodied;

Figure 6 is a view in end elevation of the screw illustrated in Figure 5;

Figure 7 is a view in perspective of the holding bar for the body or block;

Figure 8 is an elevational view of one of the screw locks as herein employed;

Figure 9 is a view in elevation of the outer end of the screw lock as illustrated in Figure 8;

Figure 10 is an elevational view of a second screw lock;

Figure 11 is a view in end elevation of the screw lock illustrated in Figure 10; and

Figure 12 is an elevational view showing the jig in assembly.

As disclosed in the accompanying drawings, B denotes a body or block of required dimensions and which is provided along one face with a relatively wide and deep groove or channel 1 open at both ends of the body or block B and which has its inner or base portion 2 of V-formation with the apex 3 thereof at substantially the longitudinal center of the block or body B. This channel 1 is adapted to receive the work in a manner which is believed to be readily apparent.

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The block B adjacent the face 4 thereof remote from the face provided with the channel 1, and to one side of the apex 3 of the channel 1, has disposed therethrough a bore 5 through which is adapted to be snugly disposed an elongated holding bar 6. The body or block B is held to this bar 6 at a required selected position by a binding screw 7 threading into a properly positioned opening 8 in a side face 9 of the block or body B for binding contact with the bar 6. The outer end of the bar 6 carries a laterally disposed elongated head 10, the major portion of which extends beyond one side of the bar 6 and through which part is threaded a holding screw 11 which carries a locking or binding nut 12.

The top face 4 of the block or body B at the transverse center thereof is provided with the longitudinally spaced drill guide openings 14 of varying sizes to comply with the requirements of practice and snugly fitting within each of these openings 14 is a bushing 15. By the use of bushings 15 of various internal radii, the size of each of these openings 14 may be readily regulated in accordance with the size of the drill.

In communication with the outer or wider portion of the channel 1 are the relatively large openings 16 formed in the opposite side faces of the block or body B and through each of which is threaded, from the outer end, a screw lock 17. These openings 16 are provided at one end portion of the block or body B while at the opposite end portion said block or body B has formed therethrough, from the opposite sides thereof, the smaller openings 18, which open through the inner or base portion 2 of the channel 1. Threaded into these openings 18, from the outer ends, are the screw locks 19.

As is clearly illustrated in the accompanying drawings, the inner or working extremity of each of the screw locks 17 and 19 is tapered, as at 20, and on such angle that the largest practical size drill for varying stock will have sufficient clearance. It is also believed to be obvious that the placing of the screw locks is such as to permit drilling of very short work.

It is of advantage in many instances that one of the screw locks 17 or 19 be locked against turning and for this purpose the end of the block or body B adjacent to the screw lock, is provided

with a tapped bore 21 which extends into the adjacent screw lock opening, in which is threaded a holding or binding screw 22.

From the foregoing description it is thought to be obvious that a drill jig constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. A drill jig comprising a body provided with a relatively wide and deep groove open at opposite ends of the body, the groove having an outer portion defined by spaced parallel walls and an inner or base portion of V-shaped cross section with the apex substantially at the longitudinal center of the body, aligned threaded openings in opposite sides of the body adjacent to one end communicating with the outer or wide portion of the channel through said parallel walls, screw locks threaded through said openings, said block adjacent to the opposite end having openings in opposite sides in communication with the inner or base portion of the channel, screw locks threading through and drill guide openings formed through the top of the block on said transverse center and communicating with the base or inner portion of the channel through said apex.

2. A drill jig as set forth in claim 1, wherein the body to one side of the channel is provided therethrough with a bore paralleling the channel, a bar slidably disposed in said bore, and means for locking the bar in an adjusted position in the body.

3. A drill jig as set forth in claim 1, wherein the body to one side of the channel is provided therethrough with a bore paralleling the channel, a bar slidably disposed in said bore, means for locking the bar in an adjusted position in the body, a head carried by the end of the bar remote from the body and extending laterally across the line of the groove, and a screw threading through the outer portion of said head and adapted for contact with an end of a piece of work positioned in the groove.

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