No. 848,632. PATENTED APR. 2, 1907.

G. T. CHAFIN.

BIT.

APPLICATION FILED AUG. 17, 1906.

Fig. 1.

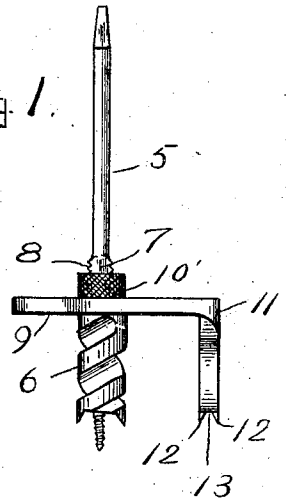
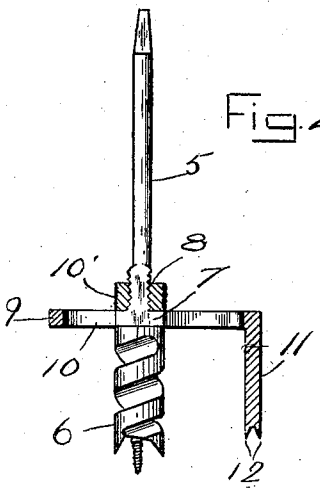


Fig. 2.



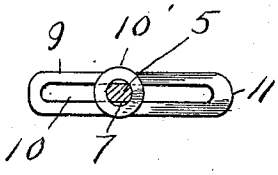


Fig. 3.

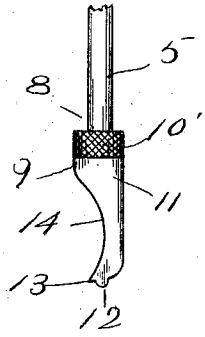


Fig. 4.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE T. CHAFIN, OF STAFFORD, KANSAS.

BIT.

No. 848,632. Specification of Letters Patent. Patented April 2, 1907.

Application filed August 17, 1906. Serial No. 331,074.

To all whom it may concern:

Be it known that I, GEORGE T. CHAFIN, a citizen of the United States, residing at Stafford, in the county of Stafford, State of Kansas, have invented certain new and useful Improvements in Bits; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to bits, and more particularly to that class of bits which are used to cut large holes in boards or the like and which may also be utilized in making disks of any desired size.

The invention resides, broadly speaking, in the provision of a bit having a portion of its shank squared and in adjustably engaging upon the squared portion of the shank a cutter-bar which cuts an annular groove in the board and finally forms a hole therein of the desired size.

In the accompanying drawings, Figure 1 is a side elevation of the bit. Fig. 2 is a detail vertical longitudinal sectional view therethrough. Fig. 3 is a bottom plan view, and Fig. 4 is an end elevation thereof.

Referring more specifically to the drawings, there is shown a bit 5, which is provided adjacent its lower end with a spiral blade 6, which is of the usual construction. The bit is enlarged to form the said blade or cutting portion, and the upper end of the enlargement is reduced to form a rectangular squared portion, which is of the same length as the width of the enlarged portion, but of less width than the said portion. That portion of the bit which lies directly above the squared portion 7 is screw-threaded, as at 8, for a purpose to be hereinafter described.

The cutter-bar for the bit is indicated by the numeral 9 and is slotted longitudinally, as at 10, the slot being for the reception of the squared portion 7 of the bit, there being a milled nut 10′ engaged upon the threaded portion 8 and bearing against the upper face of the cutter-bar to hold it at various adjustments, it being understood that the said squared portion 7 is received lengthwise in the slot and that the cutter-bar is thus prevented from rotation independently of the bit. The cutter-bar for the bit has one of its ends turned downwardly at right angles, as at 11, and is provided with spaced blades 12 and a transverse blade 13, which terminates short of the blades 12. The said blade 13 is formed by curving the forward face of the downturned portion 11 of the cutter-bar forwardly adjacent its lower end, the cutting edge of the blade being determined by the under side of the foot of the said portion and the extreme lower end of its forward face. The blade 13 is hence located slightly in advance of the blades 12, and the under side of the foot of the portion 11 is inclined slightly upwardly from the said blades 12 to permit free movement of the foot and permit proper action of the blade 13. To reduce the friction on the portion 11 as much as possible, its sides converge rearwardly, as indicated by the numeral 14. From the above it is obvious that when the bar 9 is rotated by the bit upon which it is engaged the blades 12 will make small concentric incisions in the wood being cut and the blade 13 will remove the wood between the incisions, thus preventing chipping of the edges of the hole.

In operation the bit is rotated in the usual manner to cause the same to enter the wood being cut, and thereby center the tool, further rotation of the bit serving to bring the blade of the cutter-bar into active engagement with the board.

The construction, operation, and advantages will, it is thought, be understood from the foregoing description, it being noted that various changes may be made in the proportions and details of construction for carrying the invention into practice without departing from the scope of my invention.

What is claimed is—

A tool of the class described comprising a bit having an enlarged blade portion, the upper end of the said portion being reduced and squared, the said squared portion being of greater length than width, a cutter-bar provided with a slot for the lengthwise reception of the squared portion, and a nut arranged to hold the cutter-bar upon the bit.

In testimony whereof I affix my signature in presence of two witnesses.

GEO. T. CHAFIN.

Witnesses:
N. P. REID,
F. KATHS.