

S. J. WATKINS.

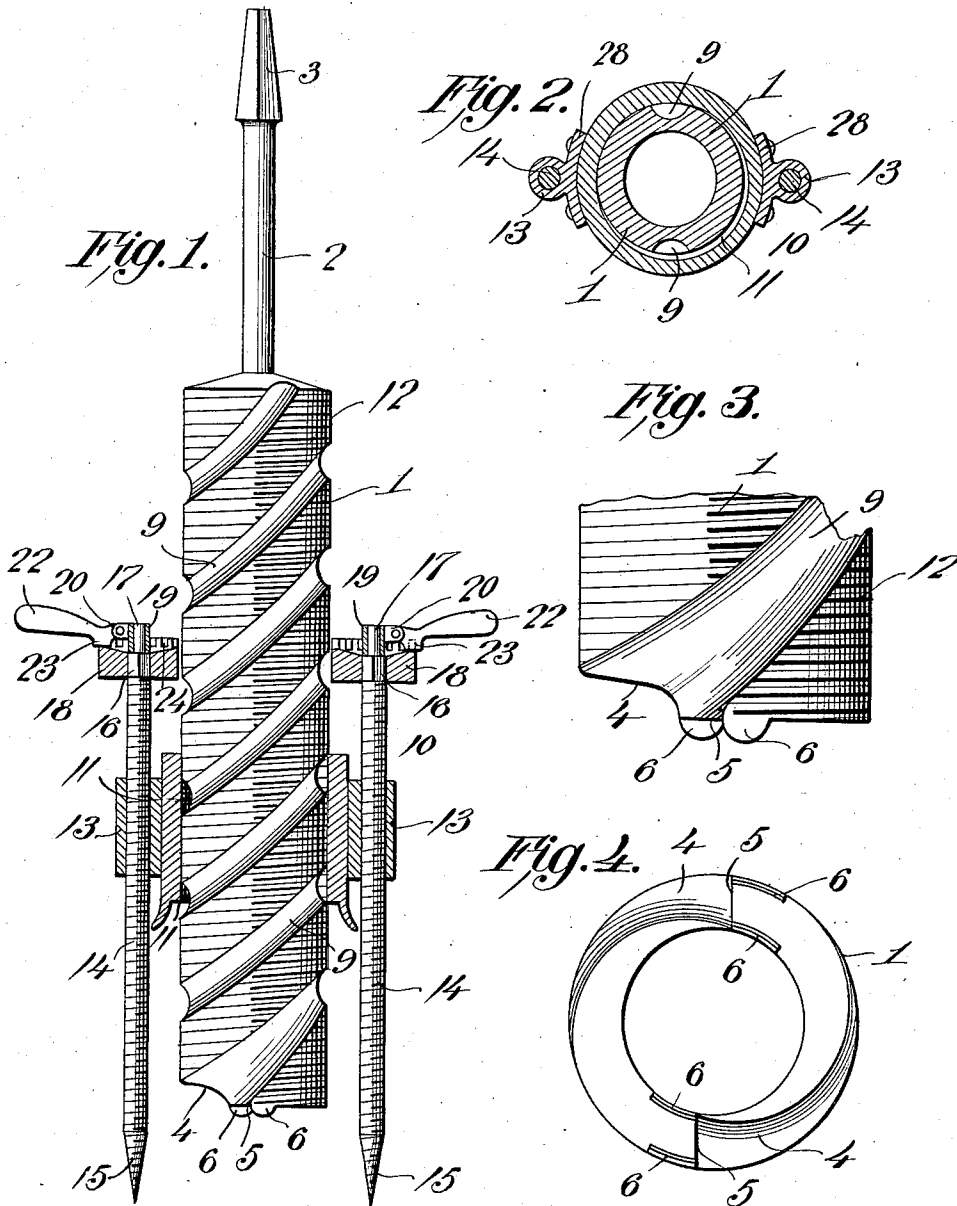
BORING BIT.

APPLICATION FILED MAY 11, 1912.

1,073,005.

Patented Sept. 9, 1913.

2 SHEETS-SHEET 1.



Witnesses

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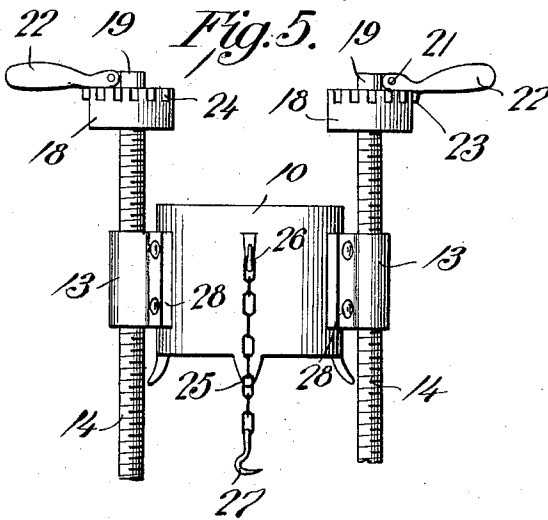
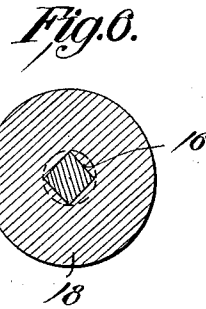
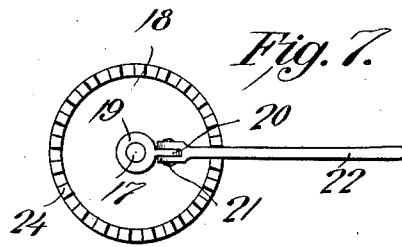
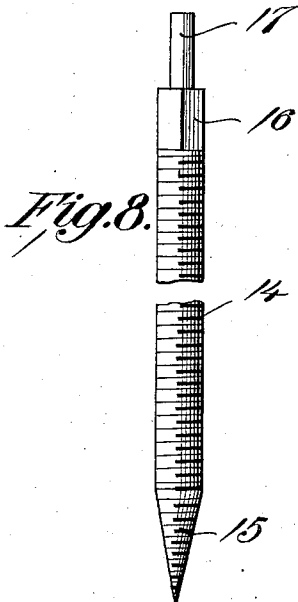
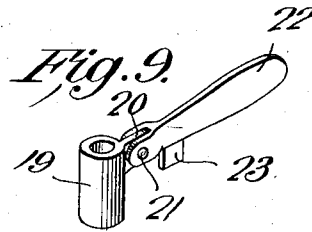
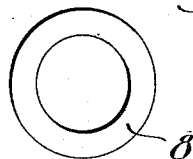
By *Victor J. Evans*
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2 SHEETS—SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL J. WATKINS, OF AVONDALE, COLORADO.

BORING-BIT.

1,073,005.

Specification of Letters Patent.

Patented Sept. 9, 1913.

Application filed May 11, 1912. Serial No. 696,703.

To all whom it may concern:

Be it known that I, SAMUEL J. WATKINS, a citizen of the United States, residing at Avondale, in the county of Pueblo and State of Colorado, have invented new and useful Improvements in Boring-Bits, of which the following is a specification.

This invention relates to boring bits, the object of the invention being to provide what may be termed a hollow boring bit, combined with holding and feeding means, whereby the bit is properly positioned and braced during the boring action, and capable of being fed to its work simultaneously with the boring operation.

The main object of the invention is to provide means for holding the bit in position, during the manipulation of the bit, so as to relieve the operator of the greater portion of his labor, it being unnecessary to bring any special pressure to bear on the boring bit, as the bit holder is provided with means for feeding the bit forward, as the bit is revolved.

With the above and other objects in view, the invention consists in the construction, combination and arrangement of parts, as will be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a vertical sectional view of the complete device, showing the bit in elevation. Fig. 2 is a cross section through the same. Fig. 3 is a side elevation on an enlarged scale of the lower portion of the bit. Fig. 4 is a bottom plan view of the bit. Fig. 5 is a side view of the holder. Fig. 6 is a cross section of the anchoring screw and ratchet head. Fig. 7 is a detail plan view of the ratchet head. Fig. 8 is a detail elevation of the anchor screw. Fig. 9 is a detail view of the ratchet lever and sleeve. Fig. 10 is a plan view, illustrating the work accomplished by the bit.

The bit, shown at 1, is of hollow cylindrical form, and provided at one end with a reduced shank 2, having a squared shoulder or extremity at 3 to receive the usual brace. At its opposite or cutting end, the annular wall of the bit is cut away at one or more points 4 to provide a cutting or chiseling edge 5 and scoring lips 6 at opposite sides of the cutting edge 5, and projecting

sufficiently to effectively score the work, before the cutting edge 5 comes into operation.

7 designates a piece of work, while 8 designates the annular groove formed thereby by the cutting bit. It will be observed that by reason of the small amount of material removed with the aid of the cutting bit, the latter may be operated with much greater ease than a solid cutting bit. The bit is also provided with a spiral clearance groove 9 extending around its outer side to permit the shavings to pass outward.

In connection with the boring bit, above described, I employ a bit holder and feeder 10 which is in the form of a hollow cylinder, interiorly threaded, as at 11, to be engaged by the exterior threads 12 on the cutting bit 1. Therefore, as the bit 1 is turned, it is gradually fed forward or toward the work by reason of its threaded engagement with the holder. At diametrically opposite points, the holder is provided on the outside thereof with nuts 13, through which pass vertical anchoring screws 14 having pointed or gimlet shaped extremities 15 adapted to easily embed themselves in the wood to be bored. Each of the anchoring screws 14 is provided adjacent to its upper end with a squared shoulder 16, and an end journal 17, as shown. 18 designates a ratchet head provided with a square hole adapted to fit the shoulder 16 of the anchoring screw 14, so as to turn therewith. Mounted on the journal 17 is a rotatable sleeve 19 adapted to fit upon the journal 17 and provided with a laterally projecting ear 20, to which is pivotally connected, at 21, a ratchet lever 22 having on its lower side a tooth 23 adapted to engage the teeth 24 projecting upward above the top surface of the ratchet head 18. It will be observed that two of such anchoring screws 14 are employed, the same being located at diametrically opposite points, exteriorly of the bit holder, and of course, a corresponding number of ratchet heads and levers are employed. When the tooth 23 is in engagement with the teeth 24 of the ratchet head, by turning the lever, the head 18 is turned and also the anchoring screw. In this way, the anchoring screws may be turned into and out of position for fastening and releasing the holder.

In addition to the fastening means, above described, the use of anchoring chains 25 is

contemplated, any suitable number of anchoring chains being connected to hooks 26 on the holder 10, and provided with terminal hooks 27 on their opposite ends adapted to be driven into the work.

The nuts 13 are shown as provided with base flanges 28, to receive suitable fasteners, whereby they are secured to the outer face of the holder.

10 What is claimed is:

1. A boring bit comprising a hollow cylindrical body externally screw threaded and formed with scoring and chiseling lips, in combination with a hollow cylindrical holder for the bit having internal screw threads which engage the threads of the bit and feed the same to its work, and means on the holder for anchoring the same to the work.

20 2. A boring bit comprising a hollow cylindrical body externally screw threaded and formed with scoring and chiseling lips, in combination with a hollow cylindrical holder for the bit having internal screw threads which engage the threads on the bit and feed the same to its work, anchoring screws at opposite sides of the holder, and detachable ratchet heads on said screws.

30 3. A boring bit comprising a hollow cylindrical body externally screw threaded and formed with scoring and chiseling lips, in combination with a hollow cylindrical holder for the bit having internal screw threads which engage the threads on the bit and feed the same to its work, anchoring screws at opposite sides of the holder, and detachable ratchet heads on said screws.

35 4. A boring bit comprising a hollow cylindrical body externally screw threaded

and formed with scoring and chiseling lips, in combination with a hollow cylindrical holder for the bit having internal screw threads which engage the threads on the bit and feed the same to its work, consisting of screws at opposite sides of the holder having squared shoulders, ratchet heads detachably mounted thereon, and ratchet levers removably journaled on said screws and rotatable independently of the heads.

5. A boring bit comprising a hollow cylindrical body externally screw threaded and formed with scoring and chiseling lips, in combination with a hollow cylindrical holder for the bit having internal screw threads which engage the threads of the bit and feed the same to its work, and means on the holder for anchoring the same to the work, consisting of screws at opposite sides of the holder having squared shoulders and end journals, ratchet heads fitted on the squared shoulders of the screws, sleeves mounted on the journals of the screws, and ratchet levers pivotally connected to said sleeves.

6. A hollow cylindrical boring bit provided at one end with scoring and chiseling lips and also provided with a clearance groove running spirally around the outer surface thereof, bit feeding screw threads intersecting said spiral groove, and an internally screw threaded holder for said bit.

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

SAMUEL J. WATKINS.

Witnesses:

W. G. LYONS,
R. C. OLIVER.