# W. H. Rand,

## Drill Stock.

No. 113,344. Patented Apr. 4. 1871.

Fig. 1.

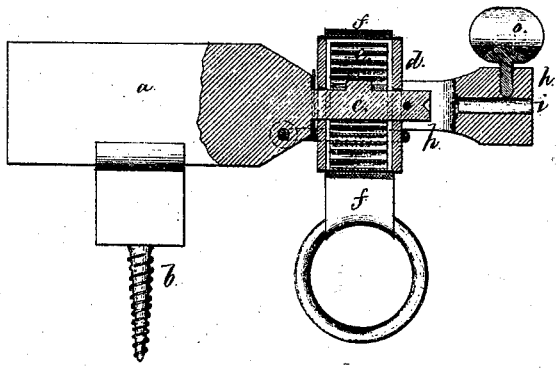



Fig. 2.

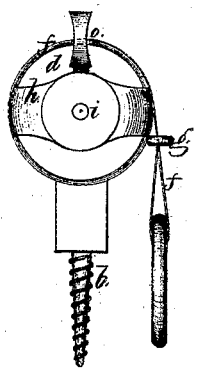
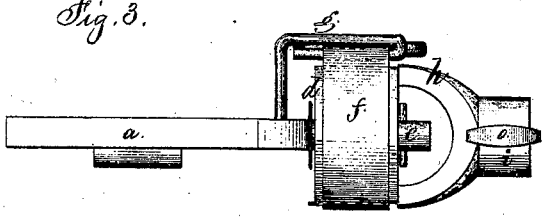



Fig. 3.




Witnesses

Chas. A. Smith

Geo. B. Walker

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# United States Patent Office.

WILLIAM H. RAND, OF BROOKLYN, NEW YORK.

Letters Patent No. 113,344, dated April 4, 1871.

## IMPROVEMENT IN DRILL-STOCKS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, WILLIAM H. RAND, of Brooklyn, in the county of Kings and State of New York, have invented and made an Improvement in Drill-Stocks, and the following is declared to be a correct description thereof.

Watchmakers and jewelers usually employ drills that are revolved first in one direction and then in the other by a bow that is reciprocated by the workman, and in other instances an arbor has been mounted in a frame similar to the mandrel of a turning-lathe; but the rotation has been given in one direction by drawing a cord off a spool and winding up a helical wire spring, which latter, by uncoiling, gives to the drill-arbor a rotation in the other direction, which device may be seen in Letters Patent granted to A. Wirsching, August 25, 1868.

This device is inconvenient in consequence of the distance between the cord and the drill, and the liability of the wire helical spring to become bent or inoperative.

My invention is made for bringing the drill and the actuating band or cord nearer to each other, and insuring durability under the circumstances where such drill-stocks are intended to be employed.

I make use of a fixed gudgeon, around which is revolved a spring-barrel, by the action of a cord or tape and the volute plate watch-spring contained in such barrel, and at one side of this barrel is a yoke carrying a drill-socket. The gudgeon projects from a stock that may be inserted in a vise or attached to the workman's bench; or the stock may be held by the workman in one hand, when most convenient.

In the drawing—

Figure 1 is a section longitudinally of the drill-stock, and

Figure 2 is an end view of the same.

The stock A is adapted to being clamped in a vise, or connected to the bench by the screw *b* or otherwise.

The gudgeon or projecting pin *c* receives the spring barrel *d*, within which is the volute spring *e*, similar to those used for watches or clocks, and the inner end of the same is hooked to the gudgeon and the outer end to the spring-barrel.

This spring-barrel is adapted to receive the tape or cord *f* around its periphery, and for this purpose the barrel may either be a plain cylinder, as shown, or else have flanged ends, and the cord or strap *f* passes through a stationary loop or guide, *g*, extending from the stock *a*, as shown more clearly in the plan view, fig. 3.

At one side of the spring-barrrel *d* the yoke *h* is attached, and upon the same, and in line with the axis of the spring-barrel, is the socket *i*, for the reception of the drill, and the same may be held or clamped by the screw *o* or otherwise.

The drill will be rotated in one direction as the cord or strap *f* is drawn off by hand or by a movement from the foot, and the recoil of the spring *e* gives the movement in the other direction, and the drill being close to the cord is a great facility to a workman, (as with a drill-bow,) he frequently requiring to use both hands in getting his work into position for the drill, and the spring itself is not liable to become injured in use.

I claim as my invention—

The spring-barrel *d* upon the gudgeon *c*, that projects from the stock *a*, and the yoke *h* and socket *i*, connected to such spring-barrel, in combination with the volute spring *e* and the cord or strap *f*, as and for the purposes set forth.

Signed by me this fifth day of December, A. D. 1870.

W. H. RAND.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.