(No Model.)

N. SPOFFORD.

RATCHET BIT BRACE.

No. 246,233. Patented Aug. 23, 1881.

Fig. 3.

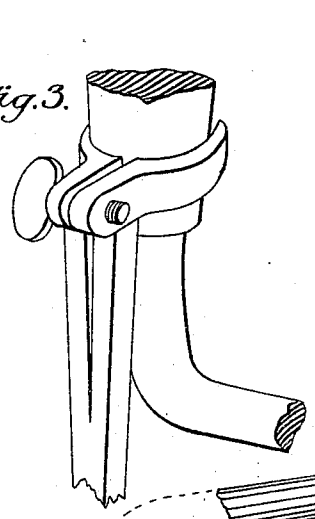


Fig. 1.

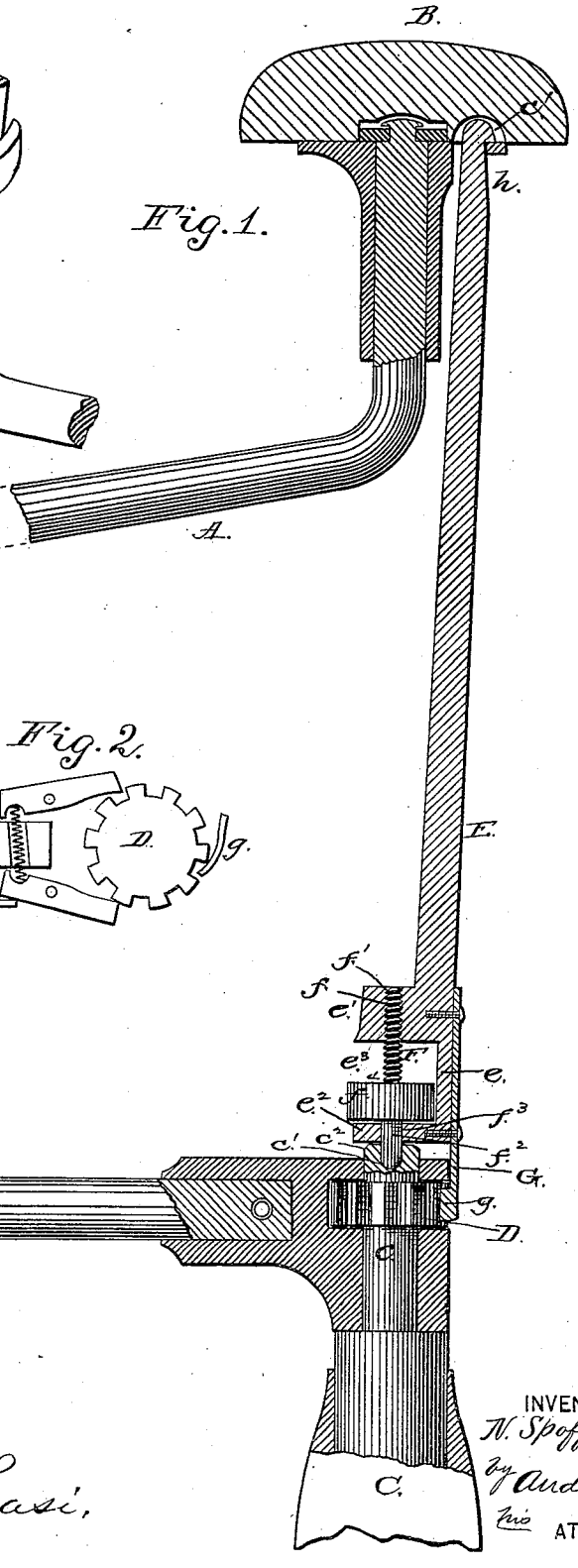


Fig. 2.

WITNESSES

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UNITED STATES PATENT OFFICE.

NELSON SPOFFORD, OF HAVERHILL, MASSACHUSETTS.

RATCHET BIT-BRACE.

SPECIFICATION forming part of Letters Patent No. 246,233, dated August 23, 1881.

Application filed March 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, NELSON SPOFFORD, a citizen of the United States, resident at Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Ratchet Bit-Braces; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a representation of a vertical section, and Fig. 2 a detail view. Fig. 3 is a modification of the connection for the rod E.

This invention relates to ratchet bit-braces.

Previous to this invention no means have been devised to prevent the backward motion of the bit at the moment of starting the same in the wood.

The object of this present invention is to overcome this difficulty.

The invention consists in a locking device constructed and arranged as hereinafter set forth.

In the annexed drawings, A is the body of an ordinary bit-brace provided with the ratchet device. B is the head; C, the bit-holder, and D the ratchet, the end *c* of the holder passing through the ratchet, to which it is loosely secured, and said ratchet having a cavity, c', in its extreme end c^2.

E is a bar, having at its end *e* the arms e' e^2, with space e^3 between.

F is a screw-rod, having one end, *f*, in a screw-threaded hole, f', in arm e', and the other end, f^2, passing through the plain hole f^3 in arm e^2. Between these arms the rod F is provided with a thumb-wheel, f^4, for turning it.

G is a spring-pawl attached to the other side of this bar, and having an end, *g*, at right angles to its stem. This rod E, thus provided, is made fast by its end *h* to the head B in any suitable manner. The upper or outer end of the rod E is inserted in the cavity c', and turned until the device is tight. The end *g* of pawl G now rests against the ratchet, allowing the latter to turn forward, but preventing any back action. In this manner, when the bit is started, it is kept from slipping out from the wood.

The device is taken from the brace when it is desired to draw the bit from the wood.

Fig. 2 shows the ratchet device and the manner in which the pawls operate the same as usual.

The handle has only an oscillating movement while the rod E is in place; but when this rod has been removed the brace-bit may be used in the ordinary manner.

I claim—

In a ratchet bit-brace, the rod E, provided with the arms e' e^2 and spring-pawl G, in combination with the screw-rod F, having thumb-wheel f^4, the ratchet, and the bit-holder, substantially as and for the purposes set forth.

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

NELSON SPOFFORD.

Witnesses:

HENRY N. MERRILL,

J. OTIS WARDWELL.