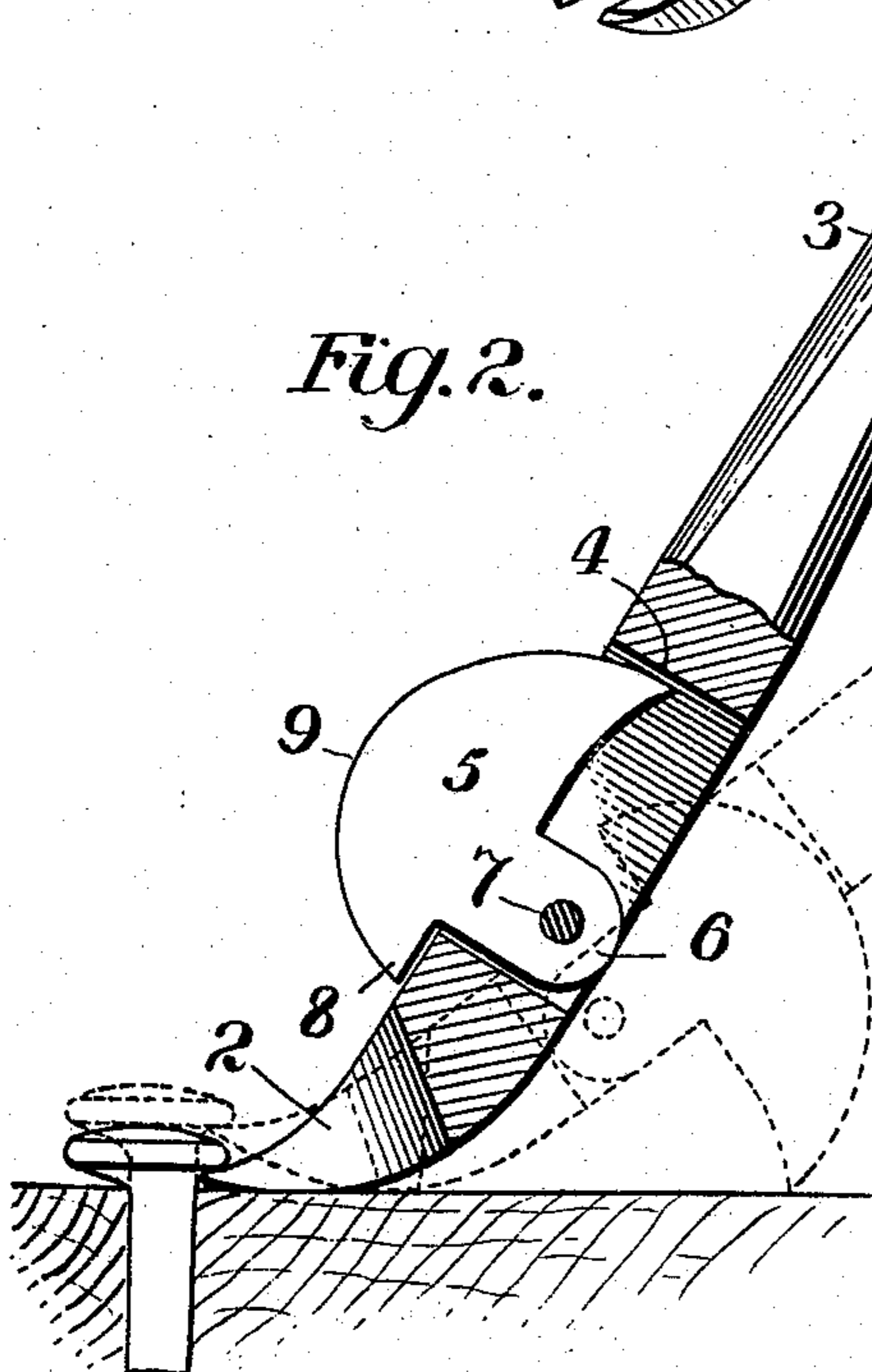
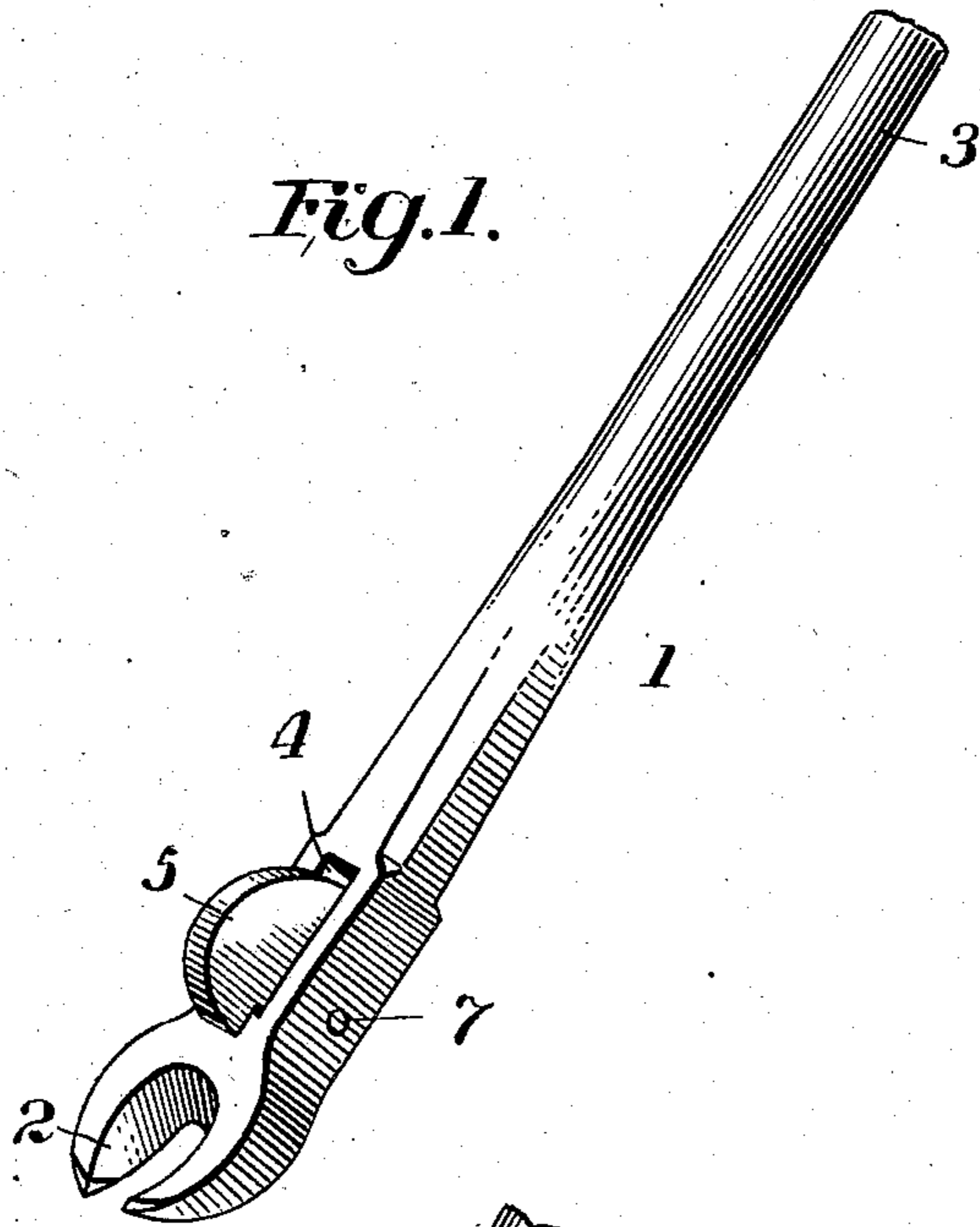


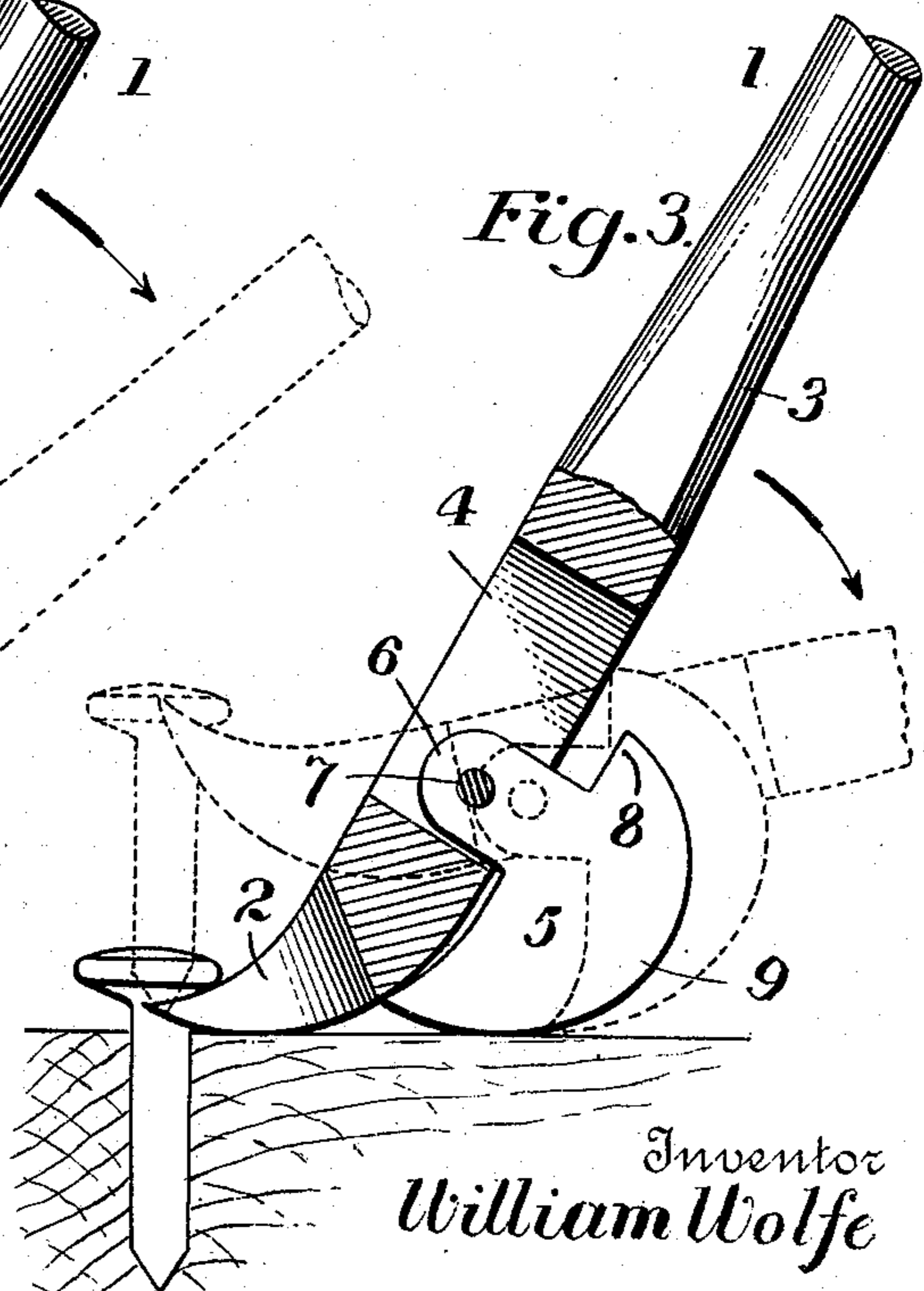
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SPIKE EXTRACTOR.
APPLICATION FILED DEC. 10, 1907.

900,338.

Patented Oct. 6, 1908.



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WILLIAM WOLFE, OF PATTON, PENNSYLVANIA.

SPIKE-EXTRACTOR.

No. 900,338.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed December 10, 1907. Serial No. 405,871.

To all whom it may concern:

Be it known that I, WILLIAM WOLFE, a citizen of the United States, residing at Patton, in the county of Cambria and State of Pennsylvania, have invented new and useful Improvements in Spike-Extractors, of which the following is a specification.

My invention relates to improvements in spike-extractors and has for its object to provide an implement for this purpose of novel and simple construction, easily operable, and by means of which spikes may be extracted in a direct, straight line, so that they are not bent or otherwise mutilated and are fit for further use, and without mutilating the material from which they are extracted.

Devices embodying my invention may perhaps be found chiefly useful in withdrawing spikes from timber-work and the like in and about mines, and for withdrawing spikes from railway ties, but obviously will be useful in many other relations.

The invention consists in a spike-extractor embodying the features hereinafter described and illustrated in the accompanying drawing.

That which is regarded as new will be set forth in the accompanying claims.

In the said drawing illustrating the invention, Figure 1 is a perspective view of the spike-extractor; Fig. 2 is a view partly in section, illustrating in full lines the normal position of the self-adjusting fulcrum and in dotted lines the initial active position assumed by said fulcrum; Fig. 3 is a similar view illustrating in full lines the position of the fulcrum when the spike is partially withdrawn, and in dotted lines the position of said fulcrum when the spike is entirely withdrawn.

In the said drawing the reference numeral 1 designates, generally, the spike-extractor which comprises a body, a pair of claws, or jaws 2 at one end thereof to take under the head or shoulder of a spike, or to engage the shank of a spike for the withdrawal or extraction thereof, said claws or jaws being provided with convex fulcrum surfaces. The opposite end of the implement constitutes a handle 3 by which the same is manipulated in the spike extracting operation.

Near the claw end of the implement the self-adjusting fulcrum 5 is pivotally connected and, as shown this fulcrum is freely pivotally arranged in a slot or opening 4 extending through the body of the implement,

the walls of which serve to guide and laterally support said fulcrum. As shown, this fulcrum has a lug or ear 6 extending laterally from the body thereof and through this lug or ear passes a pivot pin 7 located at the forward end of the slot 4. In advance of the ear 7 the body of the fulcrum is provided with a lip 8, which, when the parts are in normal position, as illustrated in Figs. 1 and 2, rests against the face of the body of the implement. The fulcrum 5 has an extended convex active face 9, which, in use of the implement, presents a continuously shifting rolling surface of equal fulcrum value. The entire convex surface of the fulcrum is not active in the operation of withdrawing a spike. Only so much thereof is active as has actual contact with the bearing surface, substantially as shown in the drawings; that portion which is not active may be termed the tail of the fulcrum and serves to balance the fulcrum when in its normal position, as shown in Fig. 1 and in full lines in Fig. 2, ready to automatically drop into active position, as herein after referred to.

The lug or ear 7 is so arranged that the preponderance of weight of the fulcrum is behind the pivotal point of connection to the body of the implement, so that said fulcrum is in a state of unstable equilibrium, and so that in use the fulcrum will come into action automatically by gravity as shown in dotted lines in Fig. 2 and will automatically adjust itself in the continued use of the implement in the extraction of a spike as shown by the full and dotted lined positions thereof in Fig. 3.

The foregoing is a description of the construction and arrangement of the elements of the device; its operations or manner of use may be briefly described as follows. The implement is first adjusted with the jaws 2 beneath the head or shoulder of a spike or in engagement with the shank thereof as illustrated in full lines in Fig. 2. The handle end of the implement is then pressed downward as indicated by the arrow in said figure, whereupon the implement, working on the convex faces of the jaws 2, initiates the extraction of the spike, and the self-adjusting fulcrum automatically and by gravity assumes the position shown in dotted lines in said figure. The handle end of the implement is then lifted or moved in a direction the reverse of the arrow in Fig. 2, whereupon

the said fulcrum falls and assumes substantially that illustrated in full lines in Fig. 3. Then, in the course of the natural downward and forward pressure upon the handle by the operator the self-adjusting fulcrum shifts gradually from the position shown in the full lines, Fig. 3, to the position shown in dotted lines in said figure riding upon its convex face 9, the said fulcrum and the jaws shifting laterally as shown in said Fig. 3, and the spike being completely withdrawn in a direct, straight line. The self-adjustment of the fulcrum is such that it assumes the different positions with respect to the jaws 2 and the spike necessary to enable the device by manipulation of the handle end thereof to extract the spike in a direct, straight line without bending or otherwise distorting the same, so that it will remain after extraction fit for subsequent use, and also without mutilating in any wise the material from which the spike is withdrawn. In practice, the final position of the fulcrum in the withdrawal of spikes of the ordinary length met in common usage is substantially illustrated in dotted lines in Fig. 3.

By my invention I provide a spike extractor which is extremely simple of construction and which operates in a simple, satisfactory manner to extract spikes in a direct line without distortion or bending thereof and without mutilating the material from which the spikes are extracted.

Having thus described the invention what is claimed is:

1. A spike extractor, consisting of a body provided with a handle and with claws or jaws for engagement with the spike, and a self-adjusting continuously shifting fulcrum freely pivoted thereto to automatically assume active position and having an extended active convex rolling surface of equal fulcrum value.

2. A spike extractor, consisting of a body 1, provided with a handle portion 3 and jaws or claws 2, and having an opening 4, a fulcrum 5 provided with an ear 6 projecting therefrom, and having an extended convex rolling fulcrum surface and a stop lip 8, and a pivot passing through the opening 4 and through the ear 6, substantially as described.

3. A spike extractor, consisting of a body provided with a handle and with fulcrum claws or jaws for engagement with a spike, and a supplemental self-adjusting continuously shifting fulcrum freely pivoted thereto and having an extended active convex rolling surface of equal fulcrum value.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM WOLFE.

Witnesses:

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