No. 719,735. PATENTED FEB. 3, 1903.

T. G. BROWN.

SPIKE PULLER.

APPLICATION FILED FEB. 27, 1902.

NO MODEL.

Fig. 1.

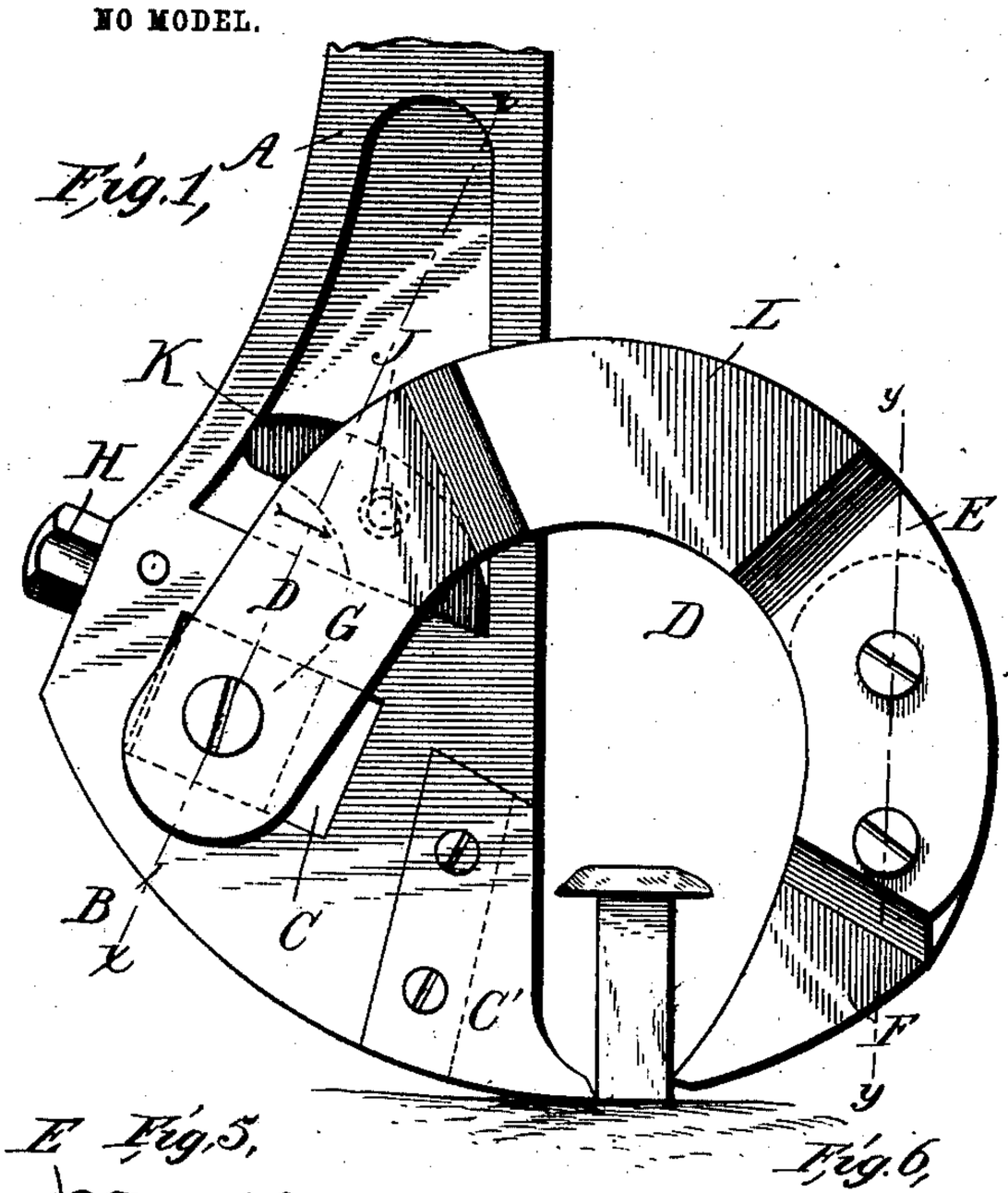

Fig. 3.

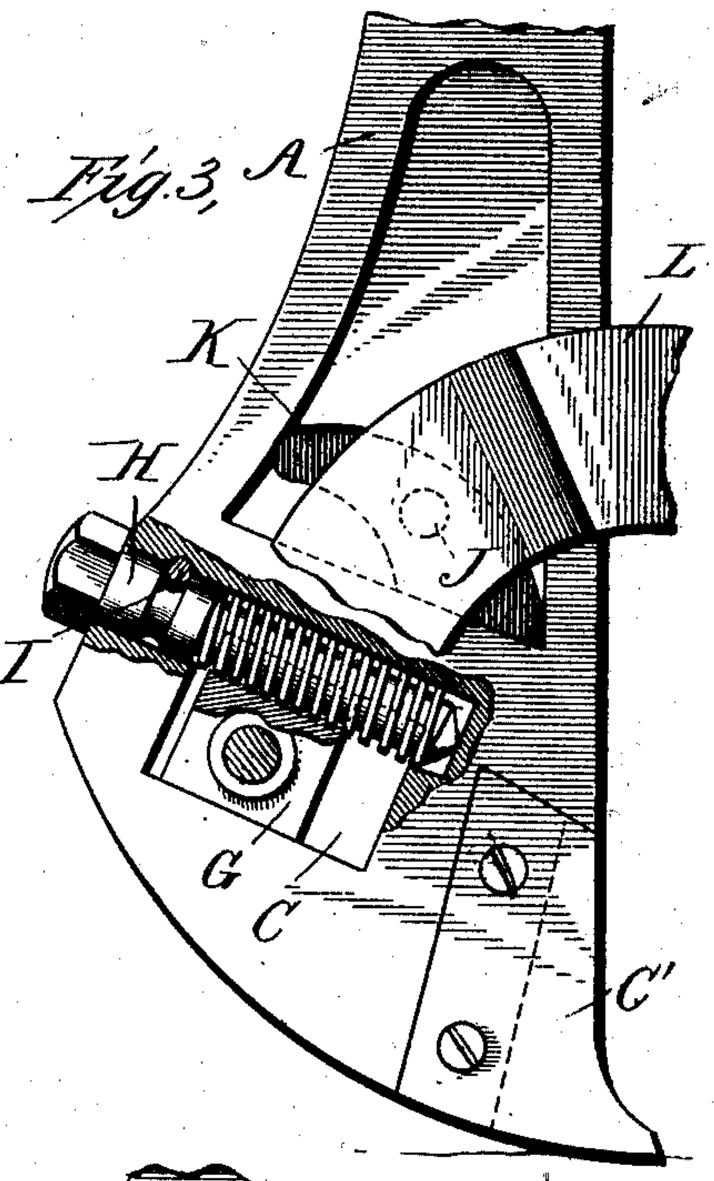

Fig. 5.

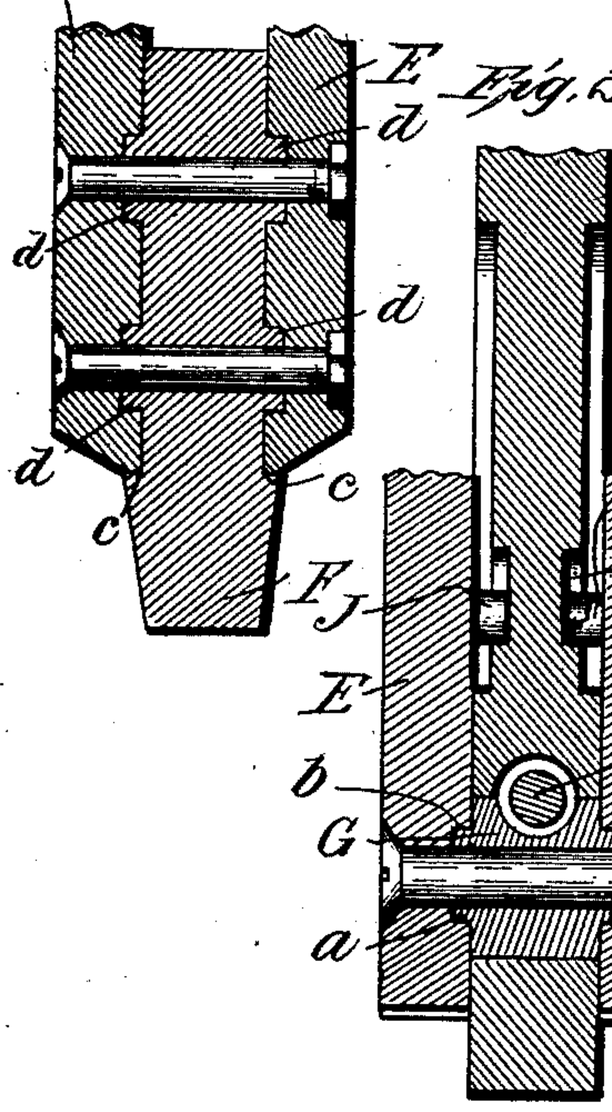

Fig. 2.

Fig. 6.

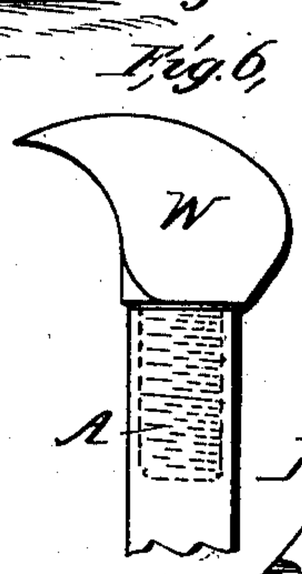

Fig. 4.

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SPIKE-PULLER.

SPECIFICATION forming part of Letters Patent No. 719,735, dated February 3, 1903.

Application filed February 27, 1902. Serial No. 95,858. (No model.)

To all whom it may concern:

Be it known that I, THURMAN G. BROWN, of Gillespieville, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Spike-Pullers, of which the following is a specification.

My invention relates to devices for pulling spikes or nails.

The invention consists in certain details of construction providing increased usefulness over spike-pullers as heretofore constructed and at the same affording maximum strength to withstand rough usage.

The invention further consists in providing adjusting means by which the pivoted jaw may be set as desired to insure proper gripping action, all as hereinafter fully described, and shown in the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation showing my spike-puller in use. Fig. 2 is a transverse section on line *x x* of Fig. 1. Fig. 3 is a view, part in section, showing the sliding block and means for adjusting it. Fig. 4 is a similar view showing the sliding block slightly modified. Fig. 5 is a detail sectional view on line *y y* of Fig. 1, and Fig. 6 is a detail view of the upper end of the lever.

In the drawings, A denotes the handle or lever. The lower end of the lever is enlarged, forming a head B, having an elongated slideway C and a detachable bit or shoe C′. The latter is grooved on its rear side to receive a tongue (shown in dotted line) rigid with the head and is fastened by flush bolts or rivets passing through the tongue and shoe. The upper end of the shoe is inclined, as shown, and the head B constructed to conform thereto. With these parts constructed as stated and in such relation as shown it is apparent that the overhanging solid part of the head will relieve strain on the bolts securing the shoe when prying action is exerted in drawing a spike.

The pivoted member D, which with the head B and removable bit C′ form the two jaws for gripping a spike, consists of two curved arms or arches E, spaced apart and joined at their outer ends by a removable toe or bit F, secured by flush-bolts, as shown, or by other suitable and desired method. The inner ends of the arches E are perforated and countersunk, as shown in Fig. 2, to receive a bolt or other pivoting means fastening them to block G, arranged in a slideway C. The sides of the block G are formed with a boss or lug *a*, which enters similar-shaped countersinks *b* in the pivoted end of the arch members E. Such construction of the parts just described obviates any shearing action on the pivot-bolt or other fastening.

The bit F is provided with shoulders *c* and lugs or bosses *d*, which respectively fit against the end of and in corresponding countersinks in the outer ends of the arches E. With such construction shearing action on the bolts is obviated, thus rendering the parts able to withstand excessive strain.

For adjusting the block G, I arrange in the head B a feed-screw H, with the threads of the screw engaging a threaded portion of the sliding block, as shown. Any suitable means may be utilized for holding the feed or adjusting screw in the head, such as a transverse pin I, engaging a groove in the screw, as shown and well known.

For limiting the movement of the pivoted jaw I provide curved members or arms E thereof on their inner side with a lug or roller J, which travels in a depressed and substantially crescent-shaped portion or recess K of the head B. The object of making the depressed portion K crescent-shaped is to permit free movement of the lugs J at any adjustment of the sliding block G. In some instances it is necessary to provide the arms E with increased space between them to accommodate large-size spikes, and in such cases the said arms E may be bulged or bent outwardly, as at L.

As a modification of the adjusting means for the pivoted jaw D, I would refer to Fig. 4 of the drawings, in which the lower part of the slideway C is provided with inclined teeth *b′*, which engage similar teeth *c′* on the sliding block F′. It is evident that with such construction as last described—*i. e.*, the modified form—the guideway in the head must be wide enough to permit the teeth *a′* on the block G to ride free of the teeth *b′* in the guideway.

For holding the slide-block with the teeth *a′* and *b′* in engagement I arrange in the guideway above the block a cam M, having

a knob N located on the outside and at the rear edge of the head B. The knob N being flush with the rear edge of the head and arranged in an enlarged recess, as shown, is protected and not liable to be engaged when the spike-puller is in use.

With the adjusting means as described in its modified form when it is desired to adjust the pivoted jaw, adapting it to a large spike, it is apparent that when the cam M is turned, removing pressure upon the sliding block, the latter can be slid from end to end of the slideway C. With the screw adjustment, however, a much finer movement of the pivoted jaw can be had, as evidently by simply working the head on the screw with a wrench or by hand the sliding block is moved a little or as desired from end to end of the slideway.

As an especial feature of novelty I would call attention to the chisel-shaped points of the bits C′ and F, the bevel of one point being in reverse position to that of the other point, whereby an effective grip may be had on very hard and smooth spikes.

A feature of novelty and much utility in my spike-puller resides in the means for adjusting the pivoted jaw to effectively grip spikes of varying sizes.

In Fig. 6 I show the upper end of the lever A provided with a pinch-bar point W. The utility of this feature is apparent in turning up a bent spike, so it can be properly gripped and extracted. In some instances it is necessary to remove wood around a spike before an effective grip on it can be had, and to such end the sharp edge of the point W provides a chiseling-tool specially adapted for such use.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a spike-puller having a fixed jaw and a pivoted jaw, of a slideway in the fixed jaw, an adjustable block arranged in said slideway to which one jaw is pivoted, and means whereby the said block may be secured to an adjustment substantially as described.

2. In a spike-puller having a fixed jaw and a movable or pivoted jaw, the combination therewith of a sliding block to which one jaw is pivoted and a screw device engaging the sliding block for moving the same substantially as described.

3. In a spike-puller having a fixed jaw and a pivoted jaw as shown, and a handle or lever for operating the device as stated, the combination therewith of an enlarged head at the lower end of the handle having an elongated slideway, a block arranged in the slideway supporting the pivoted end of the movable jaw, means for adjusting the slide-block and a detachable shoe, the latter forming the fixed jaw substantially as described.

4. In a spike-puller substantially as described consisting of a handle or lever and fixed and movable jaws as set forth, the combination therewith of a slide-block to which the movable jaw is pivoted, means for adjusting the slide-block, knobs on the inner side of the curved arms and depressions in the enlarged end or head of the lever adapted to receive the said knobs and limit the pivotal movement of the movable jaw substantially as described.

5. The combination with a spike-puller having a fixed jaw and a pivoted jaw, of detachable bits on each jaw, and means for securing them, said means consisting in grooving one bit adapted to fit a like-shaped tongue on the fixed jaw, providing the other bit with bosses on opposite sides adapted to fit like-shaped recesses in the pivoted jaw members and flush bolts extending transversely through each jaw and its bit substantially as described.

THURMAN G. BROWN.

Witnesses:
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