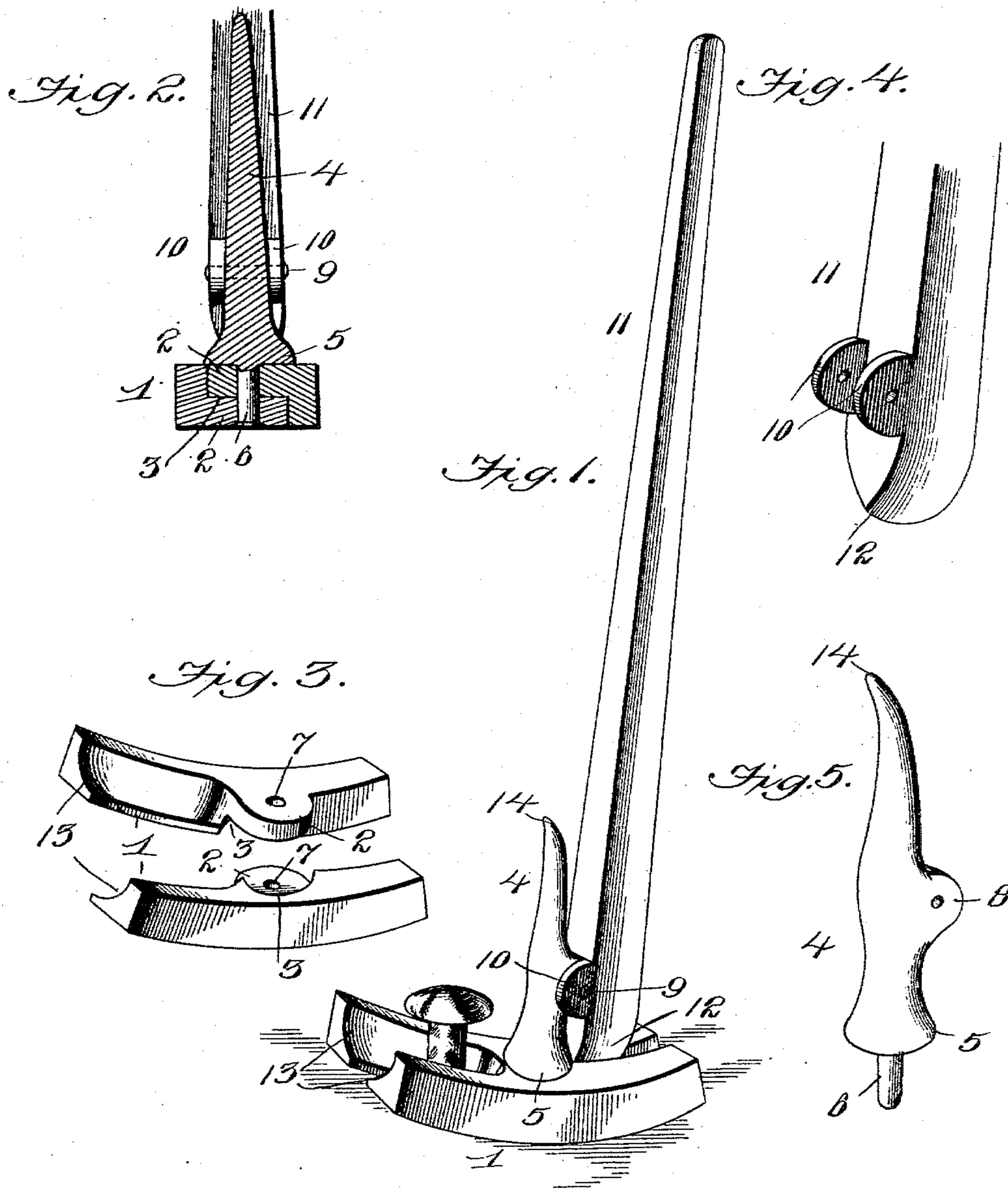


(No Model.)

A. WELSH.
SPIKE OR BOLT PULLER.

No. 571,815.

Patented Nov. 24, 1896.



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UNITED STATES PATENT OFFICE.

ARTEMUS WELSH, OF LAWRENCE, KANSAS.

SPIKE OR BOLT PULLER.

SPECIFICATION forming part of Letters Patent No. 571,815, dated November 24, 1896.

Application filed January 3, 1896. Serial No. 574,253. (No model.)

To all whom it may concern:

Be it known that I, ARTEMUS WELSH, a citizen of the United States, residing at Lawrence, in the county of Douglas and State of Kansas, have invented a new and useful Spike or Bolt Puller, of which the following is a specification.

This invention relates to an improvement in spike and bolt pullers, and has for its object to provide a simple, durable, and practical implement of the character referred to in which are employed a pair of pivoted jaws connected by a vertical pivot and an independent handle-lever having pivotal connection with said jaws and adapted to be moved between the same at one side of the pivot for moving the spike-engaging surfaces of the jaws into a close and binding engagement with the spike or bolt to be drawn.

To this end the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the improved implement, illustrating its use. Fig. 2 is a vertical transverse section through the jaws, fulcrum-post, &c. Figs. 3, 4, and 5 illustrate in detail the several parts of the implement disassociated.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates a pair of jaws, formed preferably as the segments of a circle or in the shape of rockers, as shown, whereby they are adapted to roll upon or against a railway tie or rail into which the spike or bolt to be extracted is embedded. These jaws are arranged side by side and substantially in parallelism, and each of said jaws is provided upon its inner side with an ear 2, the ear of one jaw being arranged adjacent to the bottom of said jaw, while the opposing jaw has its ear located adjacent to its upper side. Furthermore, each of the jaws is cut away or formed with a segmental recess 3 to receive the ear of the opposing jaw.

4 designates a fulcrum-post which projects

upwardly from the jaws and is formed with a horizontal shoulder 5, resting thereon. Below said shoulder the fulcrum-post is provided with a concentric pin 6, which enters and passes through vertically-aligning perforations 7 in the lapping ears 2 of the jaws, the said pin being headed below said ears in order to firmly unite the parts and prevent separation thereof. The pin 6 thus forms the pivot upon which the jaws oscillate. At a point sufficiently removed from the upper surfaces of the jaws 1 the fulcrum-post 4 is provided with an offset 8, which is perforated, as shown, to receive a horizontal pivot 9, which also passes through the twin ears 10 of a lever 11, adapted to be operated by hand. This lever is extended below its pivotal connection with the fulcrum-post, and its lower extremity is formed with a double bevel or taper and at the same time rounded, so as to constitute a segmental wedge, as shown at 12, which in the vibration of the lever enters between the rear portions of the jaws and forces the same apart. This results in forcing the forward ends of the jaws together and bringing their working faces into engagement with the spike or bolt to be drawn. The inner working faces of the jaws may be fashioned in any preferred manner, and they are preferably hollowed out or concaved, as at 13, to provide for the reception of the head of the spike or bolt and to allow the lower inwardly-projecting edges of the jaws to engage beneath such head, whereby a firmer and more effective hold is obtained upon the said spike or bolt. The fulcrum-post 4 is inclined or deflected forwardly at its upper end to form a resting-surface 14, which constitutes a stop for arresting the forward oscillation of the handle 11.

In operation the forward ends of the jaws are introduced beneath the head of the spike or bolt and thereafter the lever 11 is rocked backward, thereby forcing its lower wedge-shaped extremity between the rear portions of the jaws. This causes the working surfaces of the jaws to firmly grip the shank and head of the spike or bolt and the greater the pull applied to the lever 11 the more firmly will said jaws grip the spike or bolt. At the same time the jaws will roll upon their rocker sur-

faces, thus decreasing the leverage and increasing the throw of the forward ends of the jaws, the further the lever is vibrated.

5 The hereinabove-described spike and bolt puller, while extremely simple and inexpensive in construction, is nevertheless effective and reliable in operation, and will be found particularly useful in the repair of railway road-beds.

10 Changes in the form, proportion, and minor details may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

15 Having thus described the invention, what is claimed as new is—

1. The combination with opposing jaws provided with interlapping portions, of a fulcrum-post extending upward therefrom and having a pin which passes through the interlapping portions of the jaws and forms a com-

mon pivot therefor, and a lever having a wedge-shaped portion which enters between the jaws, substantially as described.

2. The combination with the opposing jaws formed with rocker bearing-surfaces curving 25 in coincident and regular arcs from front to rear, and also provided with interlapping portions, of a fulcrum-post having a pin which passes through said portions and forms a common pivot for both jaws, and a lever journaled 30 on the fulcrum-post and having a wedge-shaped portion entering between the heel ends of the jaws, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 35 the presence of two witnesses.

ARTEMUS WELSH.

Witnesses:

JOHN CHARLTON,

ADA CHARLTON.