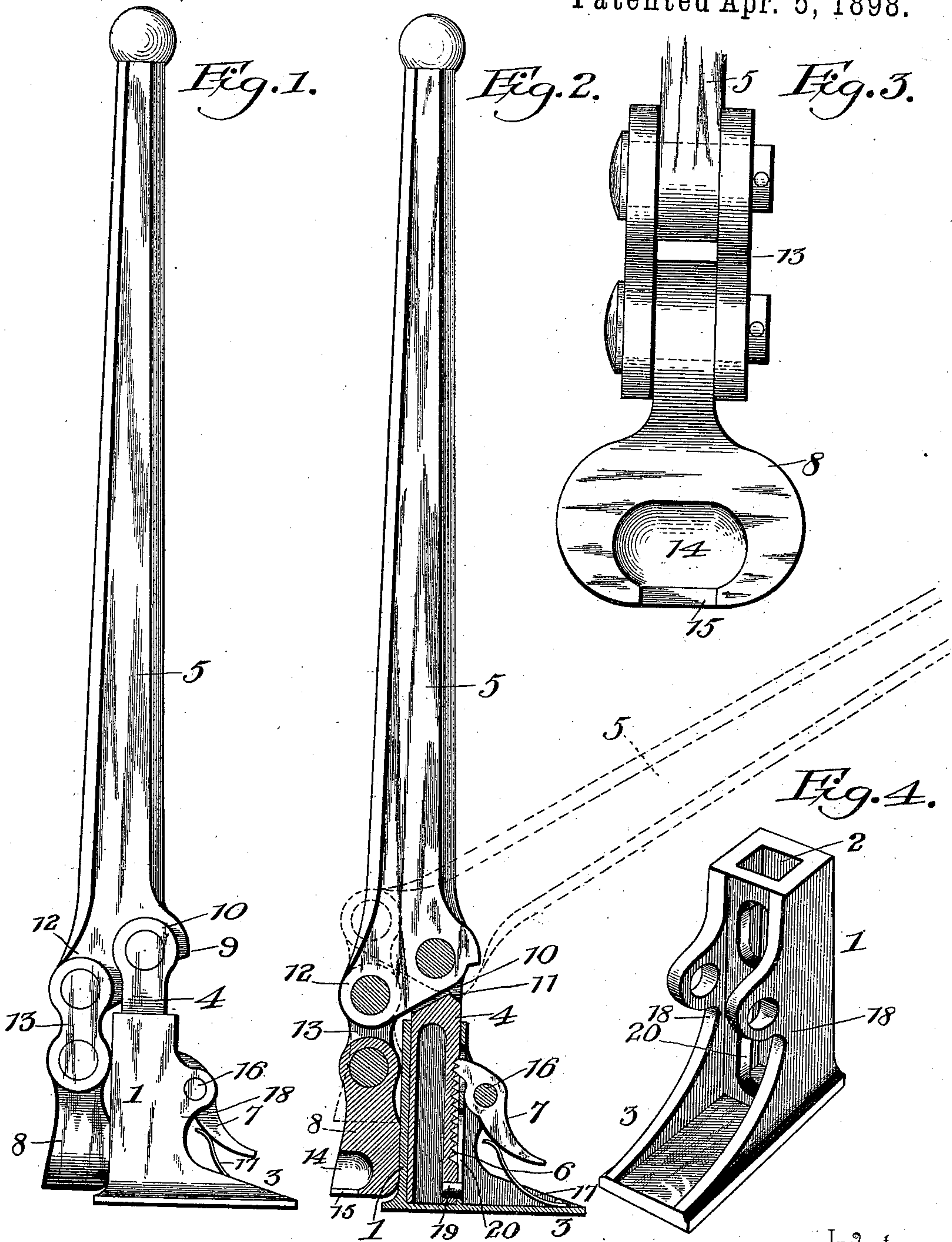


(No Model.)

A. F. JACKSON.  
SPIKE EXTRACTOR.

No. 602,048.

Patented Apr. 5, 1898.



Inventor

Ambrose F. Jackson.

Witnesses

A. P. Appleman

By his Attorneys,

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# UNITED STATES PATENT OFFICE.

AMBROSE F. JACKSON, OF OKLAHOMA, OKLAHOMA TERRITORY.

## SPIKE-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 602,048, dated April 5, 1898.

Application filed August 14, 1897. Serial No. 648,250. (No model.)

*To all whom it may concern:*

Be it known that I, AMBROSE F. JACKSON, a citizen of the United States, residing at Oklahoma, in the county of Oklahoma, Oklahoma Territory, have invented a new and useful Spike-Extractor, of which the following is a specification.

The invention relates to improvements in spike-extractors.

10 The object of the present invention is to improve the construction of spike-extractors and provide a simple, strong, and durable device capable of readily withdrawing a spike without bending or otherwise injuring it, so  
15 that the spikes may be used more than once.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed  
20 out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a spike-extractor constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view of the same, the lever being in a vertical position in full lines  
25 and in an inclined position in dotted lines. Fig. 3 is a detail view of the claw. Fig. 4 is a detail perspective view of the casing.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a casing constructed of suitable metal and provided with a vertical tubular portion 2, having its lower portion or base  
35 extended rearward at 3 to increase the base of the casing and to provide a fulcruming-toe, so that the entire device may operate as a lever in completing the extraction of a spike, as hereinafter described. The tubular portion 2, which is preferably rectangular in  
40 horizontal section, receives a vertically-movable fulcrum-block 4, having its upper end bifurcated to receive an operating-lever 5, and provided at its rear face with a series of  
45 ratchet-teeth 6, adapted to be engaged by a spring-actuated pawl 7, whereby the fulcrum-block is prevented from dropping back into the casing after it is drawn out.

50 The operating-lever 5, which has a limited swing in the bifurcation of the fulcrum-block, carries a claw 8 at its front and is provided at its back with a shoulder 9, adapted to en-

gage the fulcrum-block between the ears 10, formed by the bifurcation, whereby the swing of the operating-lever 5, independent of the  
55 fulcrum-block, is limited. The fulcrum-block is provided between the perforated ears 10 with an inclined shoulder or bearing-face 11, which forms a stop for the shoulder 9 and enables the same to fit squarely against the  
60 fulcrum-block when the operating-lever is swung partially downward. The fulcrum-block is cut away at an angle at the front of the space between the perforated ears 10, as  
65 clearly illustrated in Fig. 2 of the accompanying drawings, to provide a sufficient space to permit the necessary movement of the operating-lever. The lower end of the operating-lever is cut away at an angle to provide  
70 a toe at the front, and the toe or projecting portion 12 is perforated and has a link 13 pivoted to it and forming the connection between it and the claw 8.

The claw 8, which engages the head of a spike, is preferably provided at its front face  
75 with a recess 14 and at its bottom or lower end with an opening 15. The recess 14 conforms to the configuration of and receives the head of a spike, and the opening 15 is provided for the reception of the shank and per-  
80 mits the claw to be readily slipped over a spike-head.

The rear or inner face of the claw is straight and bears against the straight front face of the tubular portion 2 of the casing 1, and its  
85 upward movement is guided by the latter. The arrangement of the operating-lever and the disposition of the claw enables a straight lift to be exerted on a spike during the first  
90 portion of the extracting operation. In extracting the spike the operating-lever is swung down and rearward until the shoulder 9 contacts with the stop 11. It is then thrown forward, which operation raises the fulcrum-  
95 block in the casing and enables the lever to exert another straight vertical pull on the spike. When the lever is swung backward a second time, it contacts with the fulcrum-  
100 block, and the rearward movement of the lever is continued, causing the entire device to swing rearward on the fulcruming extension or toe 3 of the casing 1, which completes the extracting operation. Any amount of straight lift may be exerted on the spike by means of



the ratchet mechanism, and the pawl which is pivoted between its ends at 16 has its lower arm engaged by a spring 17, and is provided at its upper end with teeth for engaging those  
 5 of the fulcrum-block. The casing is provided at its back with vertical side flanges 18, which strengthen the structure and receive the pawl. The spring 17, which is located between the side flanges, is secured at its lower end to the  
 10 extension 3 of the casing, and the lower arm of the pawl is arranged in convenient position to be engaged by the foot of the operator. The vertical movement of the fulcrum-block is limited by a stop 19, consisting of a plug  
 15 secured in a perforation of the block near the lower end thereof and projecting therefrom into a vertical slot 20 of the casing. The plug is detachable and may be readily removed when it is desired to separate the parts.  
 20 The invention has the following advantages: The device is simple, strong, and durable, and is adapted to withdraw spikes without bending or otherwise injuring them, and enables them to be used again. It is  
 25 readily manipulated, the pawl being arranged within convenient position to be operated by the foot, and it is capable of exerting the necessary vertical lift on the spike and of being swung bodily to complete the extracting op-  
 30 eration.

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

35 What I claim is—

1. A spike-extractor, comprising a casing forming a support, a vertically-movable fulcrum-block mounted in the casing, an operating-lever fulcrumed on the block and ar-  
 40 ranged to engage the same to limit its movement and permit the device to be swung bodily, and a spike-engaging device carried by the lever, substantially as described.

45 2. A spike-extractor comprising a casing having a vertical tubular portion and a rear-

ward extension forming a fulcrum, a vertically-movable fulcrum-block mounted in the tubular portion of the casing, a lever fulcrumed on the block and adapted to engage the same to limit its swing, a spike-engaging  
 50 device carried by the lever, and a pawl mounted on the casing and engaging the block, substantially as described.

3. A spike-extractor, comprising a casing forming a fulcrum, a vertically-movable ful-  
 55 crum-block mounted in the casing and provided with ratchet-teeth, a pawl mounted on the casing and engaging the ratchet-teeth for holding the fulcrum-block elevated, a lever fulcrumed on the block, and a spike-engaging  
 60 device carried by the lever, substantially as described.

4. A spike-extractor comprising a casing provided with a straight vertical front face forming a guide, a vertically-movable ful-  
 65 crum-block mounted in the casing, a lever fulcrumed on the block, and a spike-engaging claw guided on the straight front face of the casing and connected with the lever, substan-  
 70 tially as described.

5. A spike-extractor comprising a casing provided with side flanges, a vertically-movable fulcrum-block mounted in the casing and having its upper end bifurcated and provided  
 75 between the sides of the bifurcated portions with an inclined shoulder forming a stop, a lever fulcrumed in the bifurcation of the block and having a shoulder arranged to en-  
 80 gage said stop to limit its swing, a pawl pivoted between the flanges of the casing and  
 engaging the block, and a spike-engaging device carried by the lever, substantially as de-  
 scribed.

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

AMBROSE F. JACKSON.

Witnesses:

A. P. SCHELL,

HAROLD H. SIMMS.