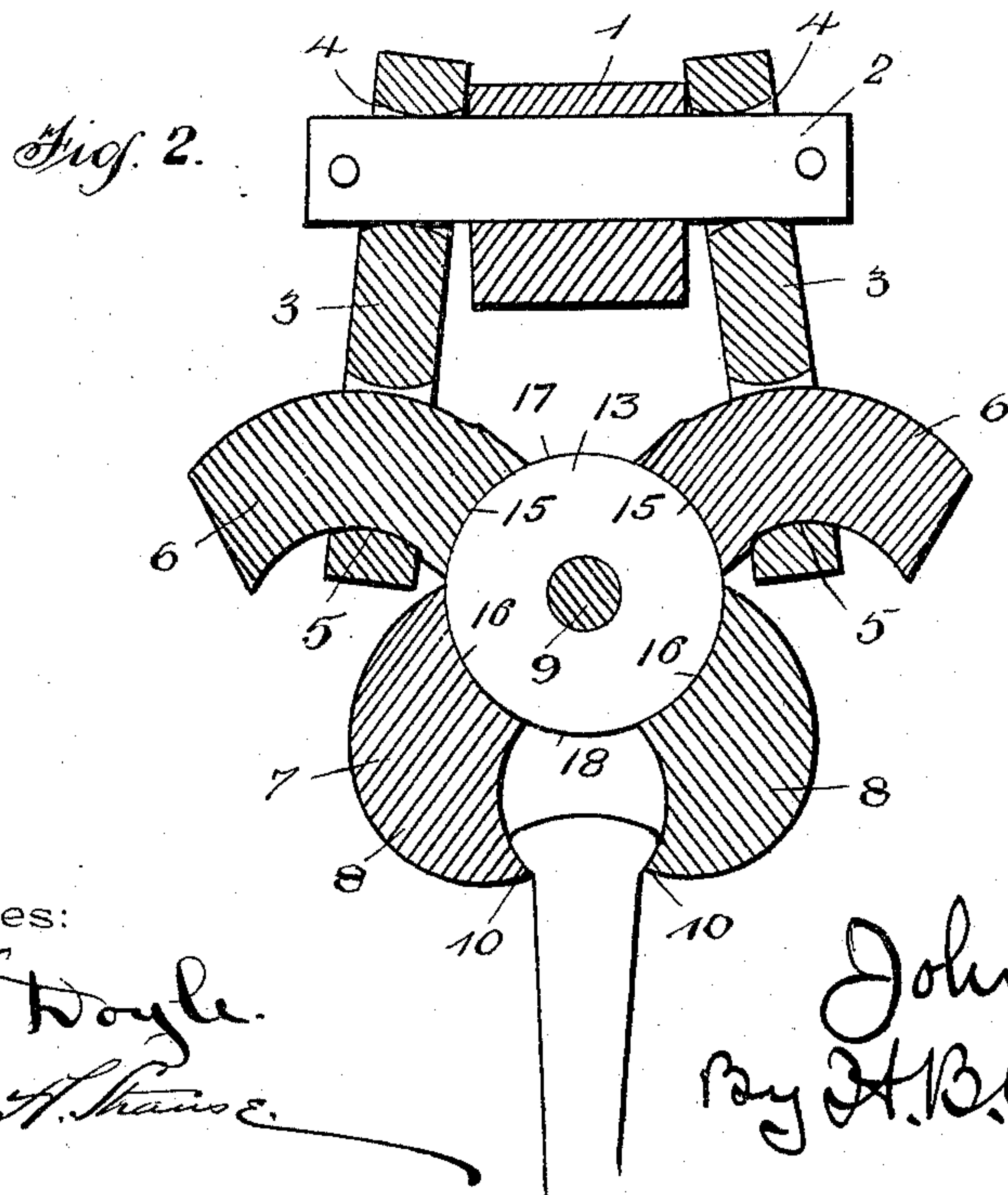
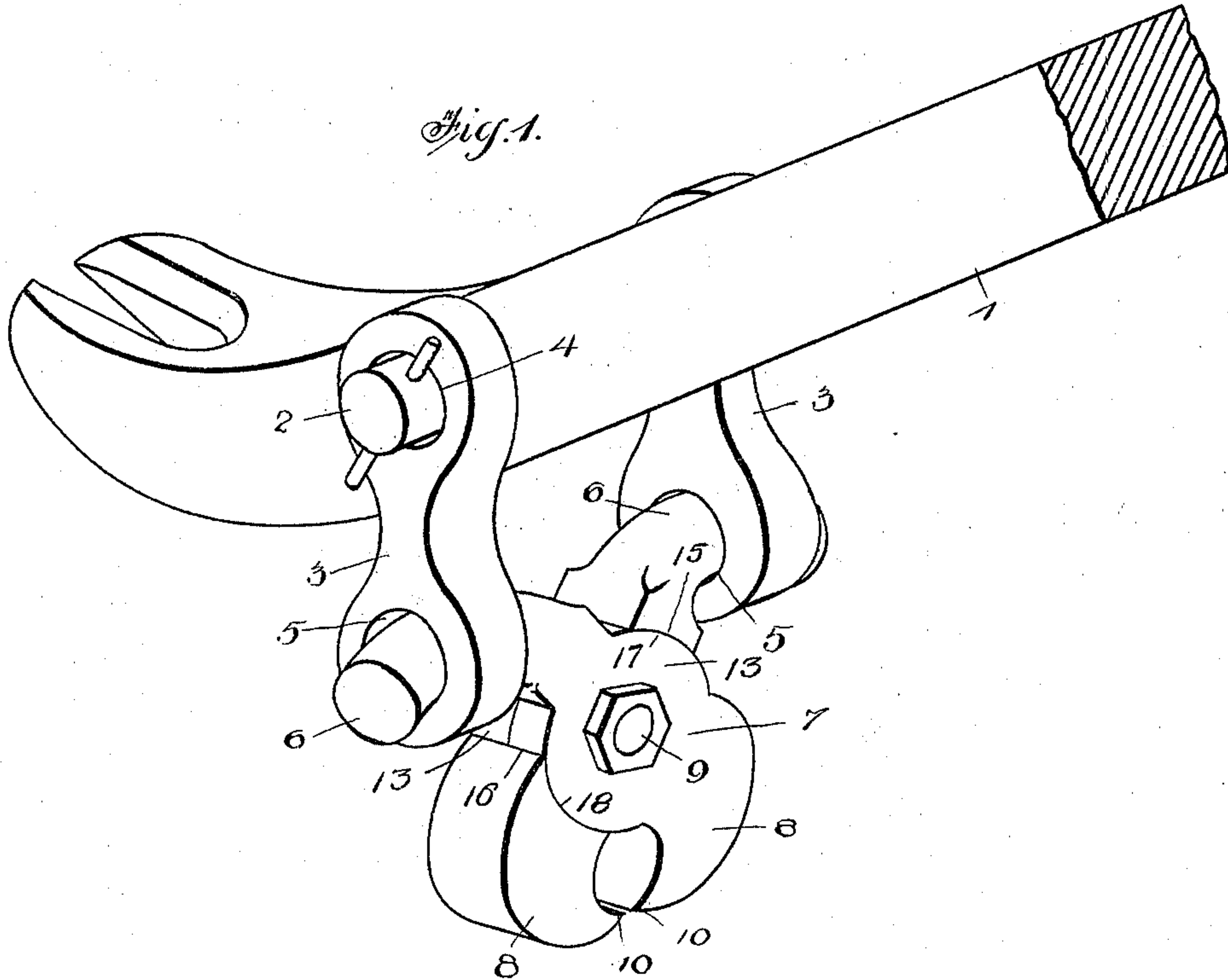


(No Model.)

J. LINDGREN.  
CLAW BAR.

No. 591,172.

Patented Oct. 5, 1897.



Witnesses:

*Wm. F. Doyle.*  
*Edmund A. Thayer.*

Inventor.

*John Lindgren*  
*By H. B. Wilson.*  
Attorney.



# UNITED STATES PATENT OFFICE.

JOHN LINDGREN, OF PORTER'S MILLS, WISCONSIN.

## CLAW-BAR.

SPECIFICATION forming part of Letters Patent No. 591,172, dated October 5, 1897.

Application filed December 5, 1896. Serial No. 614,643. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN LINDGREN, a citizen of the United States, residing at Porter's Mills, in the county of Eau Claire and State of Wisconsin, have invented certain new and useful Improvements in Claw-Bars; and I do 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.

My invention has relation to claw-bars for withdrawing railroad-spikes from ties and the like; and the object is to provide a simple, durable, and effective device of this kind; and to this end the novelty consists in the construction, combination, and arrangement of the same, as will be hereinafter more fully described, and particularly pointed out in the claim.

In the accompanying drawings the same reference-numerals indicate the same parts of the invention.

Figure 1 is a perspective view of my improved claw-bar, and Fig. 2 is a transverse section of the same applied to a spike.

1 represents the ordinary claw-bar, and it is provided with a transverse bolt 2.

3 3 represent connecting-links, the upper ends of which are formed with eyes 4, by means of which said links are swiveled on the outer ends of the bolt 2 on each side of the bar 1. The lower ends of these links 3 3 are formed with eyes 5 5, which receive the curved arms 6 6 of the grip-vise 7. 8 8 represent the jaws of the said vise hinged together by the pivot-bolt 9. The lower ends of said jaws 8 8 terminate in parallel grip-teeth 10 10, which engage the opposite sides of the spike, and when an upward pressure is applied to the bar in the act of drawing the spike the force exerted on the arms 6 6 presses the teeth 10 10 into the spike with a vise-like grip and prevents the possibility of the jaws slipping while the spike is being withdrawn. In this connection it will also be observed that the curves of the cylindrical arms 6 are so proportioned as to permit said arms to automatically slide inwardly through the apertures in the links as the gripper-jaws are closed.

The grip-vise 7 consists of two counterpart members 12 12, each formed with the integral curved arm 6 and jaw 8, joined together by a central disk 13, provided with a central

transverse orifice 14, the disk portion of each member being about one-half the width of the jaw and arm. This construction provides a curved shoulder 15 on the inner half of the arm 6 and a correspondingly-shaped shoulder 16 on the inner end of the jaw 8, which leaves curved bearing-surfaces 17 and 18 on the disk. The curved bearing-surfaces 17 on one disk have a radial bearing in the correspondingly-curved shoulders 15 and 16 of the opposite member. This relieves the bolt 9 of all strain, its only office being to hold the jaws together. This is a very important feature, as the immense strain required to draw a railroad-spike is transmitted direct from the disk to the bearing-shoulders, thereby dispensing with a large pivot-bolt, which would require correspondingly-large orifices in the opposite members to receive it and consequently weaken the members at the very point where they should possess greatest strength.

I am aware of the construction shown in the patent to McCann, No. 565,687, dated August 11, 1896.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus fully described my invention, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

The herein-described claw-bar comprising the curved claw 1, the transverse bolt 2, the links 3, pivoted on the outer ends of said bolt, the gripping device 7, consisting of the crossed gripper-jaws, halved in, and pivoted together as described, and formed with the cylindrical curved arms 6, adapted to automatically slide inward through the apertures in the outer ends of said links, as the gripper-jaws are closed, substantially as and for the purpose set forth.

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

JOHN LINDGREN.

Witnesses:

JOHN C. RUSSELL,  
CHAS. E. WESTBERG.