

(No Model.)

W. W. JOHNSON.  
DEVICE FOR EXTRACTING BOLTS.

No. 461,939.

Patented Oct. 27, 1891.

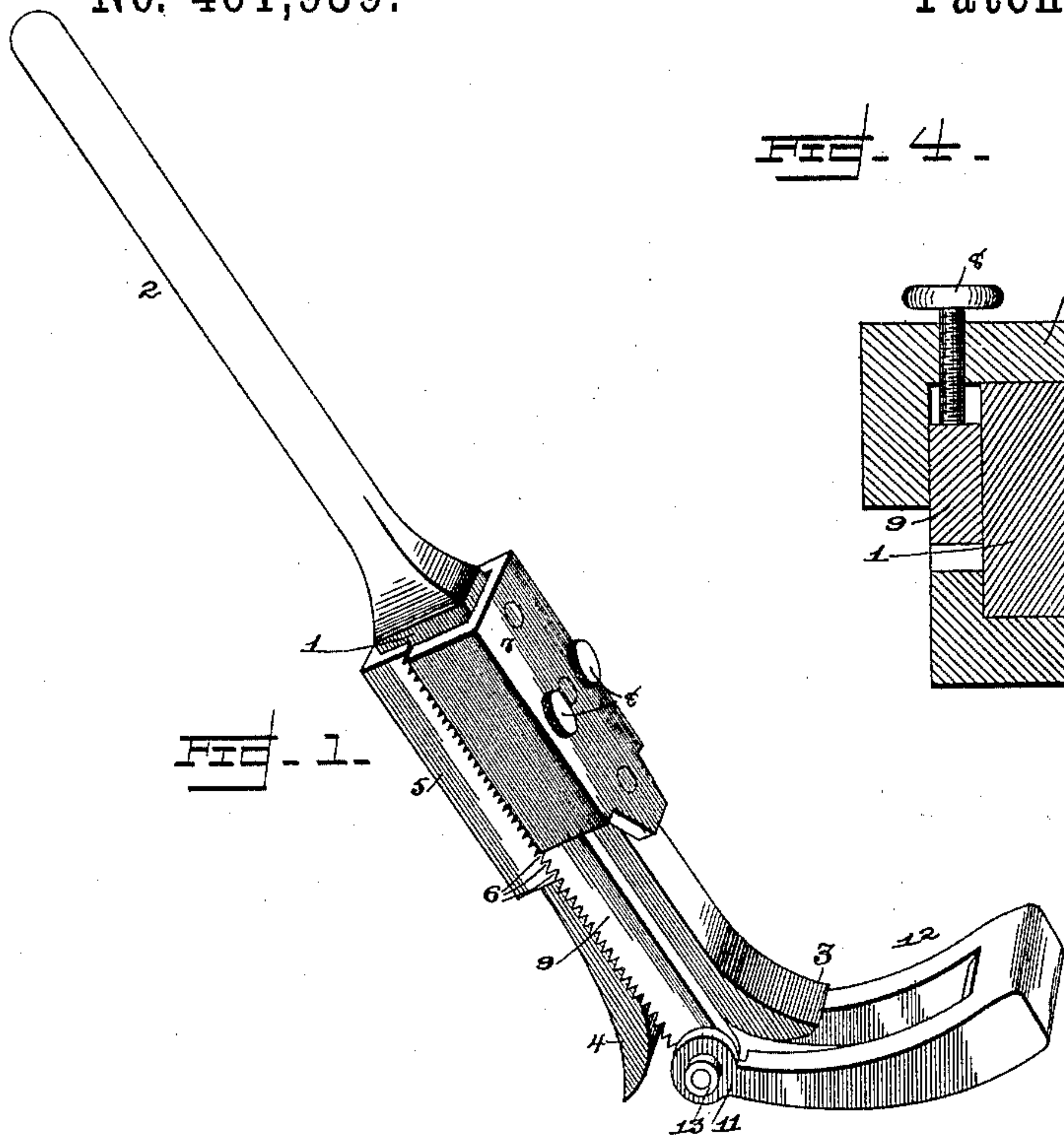


FIG. 4.

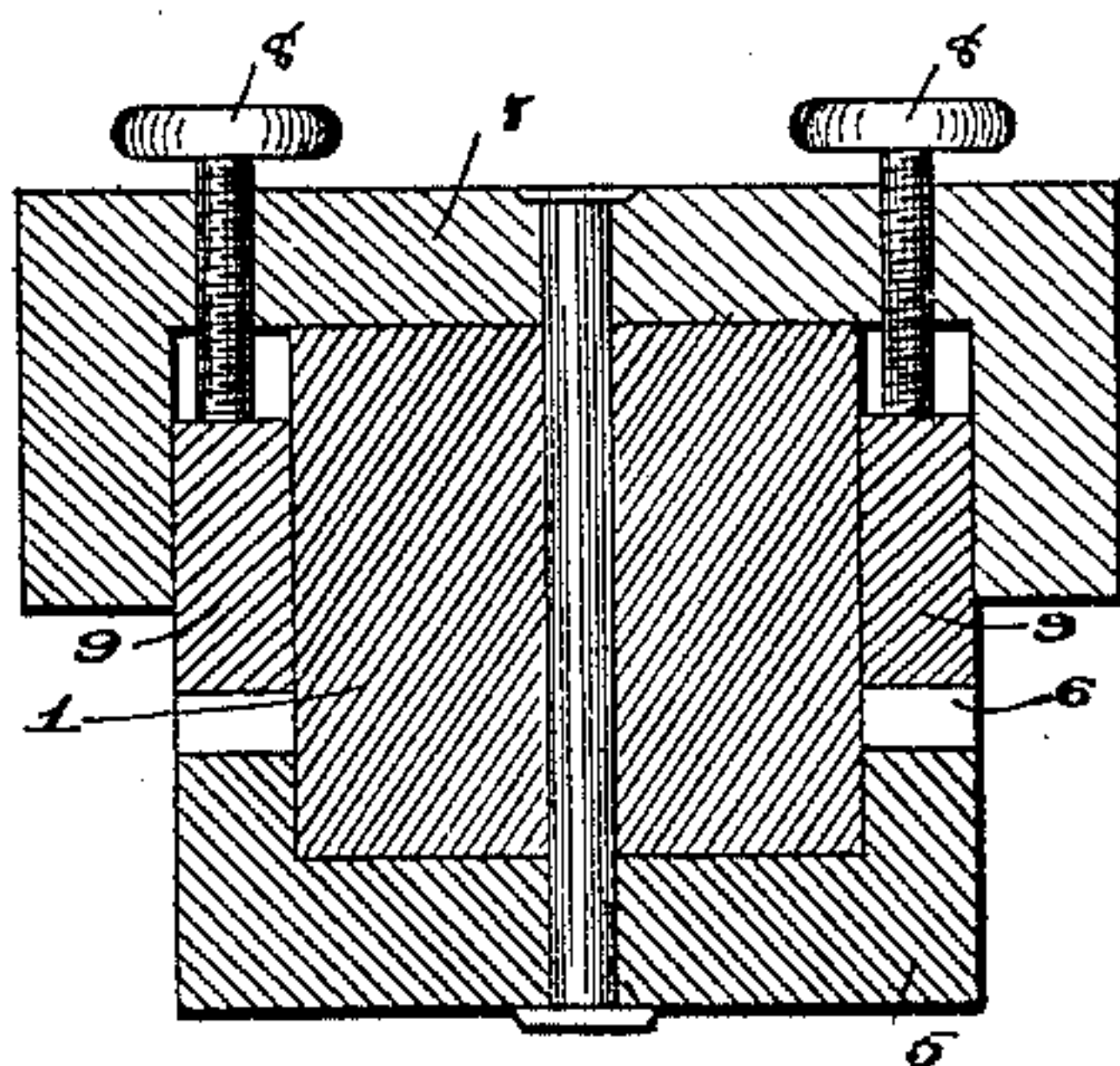


FIG. 2.

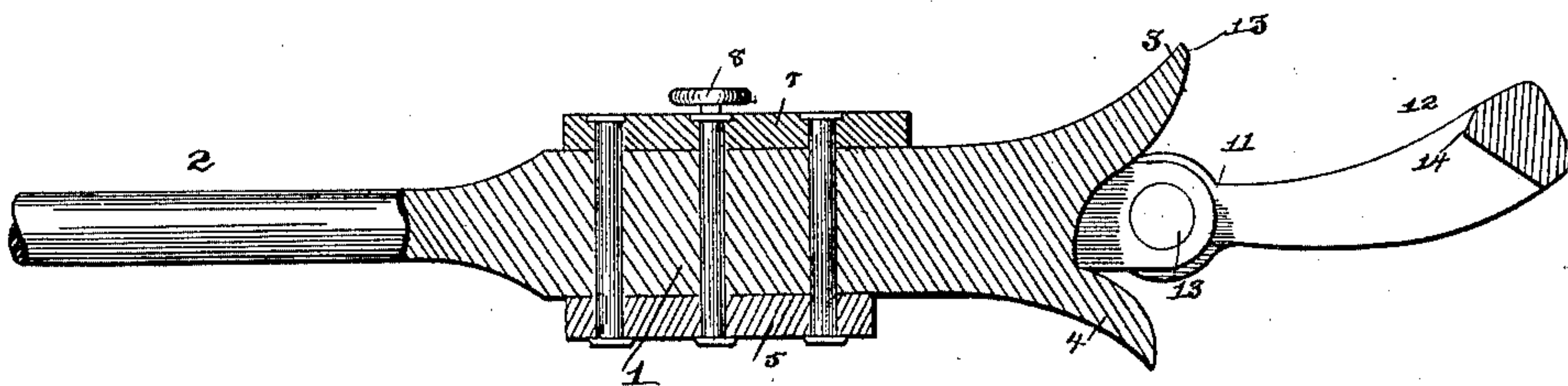
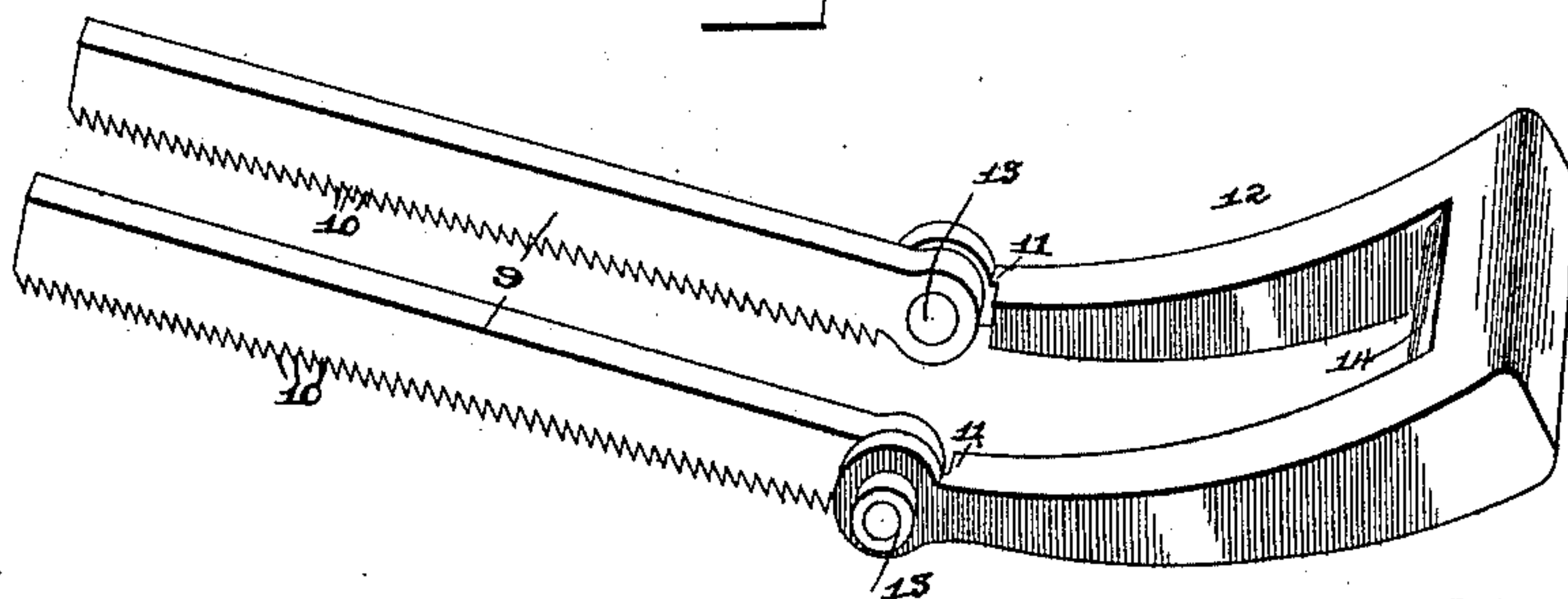


FIG. 3.



Witnesses:

E. S. Duwall & Co. by their Attorneys,  
W. S. Duwall.

Inventors  
William W. Johnson.

C. A. Snow & Co.



# UNITED STATES PATENT OFFICE.

WILLIAM WILLEY JOHNSON, OF BEEBE, ARKANSAS.

## DEVICE FOR EXTRACTING BOLTS.

SPECIFICATION forming part of Letters Patent No. 461,939, dated October 27, 1891.

Application filed April 29, 1891. Serial No. 391,172. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM WILLEY JOHNSON, a citizen of the United States, residing at Beebe, in the county of White and State of Arkansas, have invented a new and useful Bolt-Extractor, of which the following is a specification.

This invention relates to an improvement in bolt-extractors, the objects in view being to provide a device for this purpose and also adapted to be readily adjusted, whereby its capacity is not limited to a few sizes, but whereby the device may be adjusted so as to be capable of operating upon a bolt of the largest size or a rod of fine wire.

A further object of the invention is to secure the above advantages by simple and inexpensive means.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a bolt-extractor constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section. Fig. 3 is a detail in perspective of the bolt-embracing link and its toothed adjusting-bars. Fig. 4 is a transverse section through the adjusting-bars and the stock of the device.

Like numerals of reference indicate like parts in all the figures of the drawings.

The stock of the device is formed of metal, as is usual, and comprises a rectangular body portion 1, which is reduced at its upper end and shaped to form a handle 2. At the opposite end of the stock a foot is provided, the same consisting of a curved toe 3, and in rear thereof a bearing-heel 4, from which the toe diverges. To the under side of the body portion is securely riveted or otherwise connected a U-shaped plate 5, the side walls of which embrace the sides of the body portion and are provided with a series of rearwardly-inclined teeth 6. Above the plate 5 there is secured by rivets or otherwise to the upper side of the body portion of the stock an inverted-U-shaped plate 7, the side walls of which are located beyond the side walls 6 of the plate 5 and those of the stock, so that they combine with the latter to form inter-

mediate spaces or ways. Through the plate 7 pass set-screws 8, the inner ends of which extend into the space or passage-ways just mentioned.

In the spaces or passage-ways there is located a pair of bars 9, slightly narrower than the height of the passage-ways and adapted for sliding therein. These bars are provided upon their under edges with a series of forwardly-disposed teeth 10, which may be thrown into engagement at any portion of their length by means of the set-screws 8. In this manner the bars may be adjusted, as will be readily understood and apparent. The forward ends of the bars are perforated and are embraced by the rear recessed ends 11 of a U-shaped bail or link 12, said ends being pivoted to the bars by pivot-bolts 13, and the link when pivoted in position, as shown, embracing the toe 3, to and from which it may be adjusted by the adjustment of the bars 9.

The toe 3, it will be observed, is beveled, as indicated at 13, while the inner edge of the link is likewise beveled, though to a greater degree, as indicated at 14.

The operation of bolt-extractors of this class is so well known as to require but little explanation, but may be briefly stated as follows: The size of the bolt is first approximated and the link set at a proper distance from the toe, so as to be readily introduced over the end of the bolt. It simply remains to elevate the handle 2, and, using the heel 4 as a fulcrum, exert power upon the handle, when the toe engaging with the bolt tightly clamps the same between itself and the link, and the bolt is thus elevated from its opening.

Having described my invention, what I claim is—

1. In a bolt-extractor, the combination, with the stock terminating in a lower beveled end forming a foot and heel, of a link pivotally and adjustably connected to the stock, substantially as specified.

2. In a bolt-extractor, the combination, with the stock provided at opposite sides with a series of teeth, of a pair of bars loosely mounted for movement at opposite sides of the stock and having their under edges

toothed to engage the teeth of the stock, the  
U-shaped link pivoted to the bars, and de-  
vices for adjusting the teeth of the bars into  
engagement with those of the stock, substan-  
5 tially as specified.

3. In a bolt-extractor, the combination, with  
the stock, rectangular in cross-section, termi-  
nating at its upper end in a handle and at  
its lower end in a diverging foot and heel, of a  
10 U-shaped plate secured to the under side of  
the stock and having its sides toothed and  
embracing said stock, the inverted-U-shaped  
plate secured to the stock and wider than the  
same, combining therewith to form opposite  
15 ways, the opposite bars mounted in the ways

and having their under edges toothed in a  
direction opposite to those of the sides of the  
plate, the set-screws passing through the up-  
per plate and impinging upon the bars, and  
the U-shaped link beveled at its inner front 20  
edge and pivoted at its terminals to the front  
ends of the bars, substantially as specified.

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

WILLIAM WILLEY JOHNSON.

Witnesses:

J. K. PICKERING,  
M. C. MORRISON.