

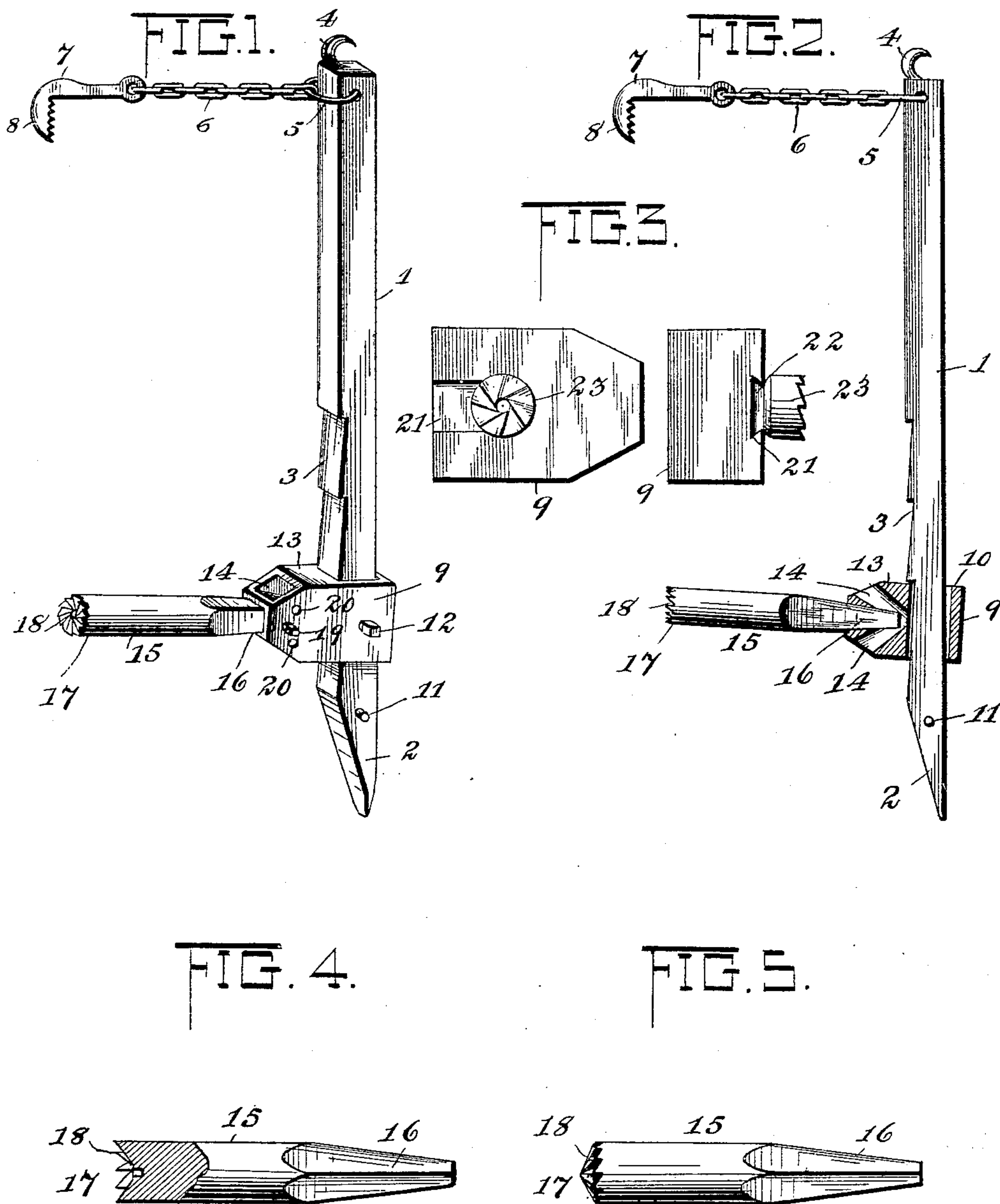
No. 616,350.

Patented Dec. 20, 1898.

E. B. PARSONS.  
BOLT HOLDER.

(Application filed Apr. 9, 1898.)

(No Model.)



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## BOLT-HOLDER.

SPECIFICATION forming part of Letters Patent No. 616,350, dated December 20, 1898.

Application filed April 9, 1898. Serial No. 677,082. (No model.)

*To all whom it may concern:*

Be it known that I, EDGAR B. PARSONS, a citizen of the United States, residing at Olympus, in the county of Harrison and State of Iowa, have invented certain new and useful Improvements in Bolt-Holders; and I do hereby 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.

This invention relates to bolt-holders; and it consists, essentially, of a bracing-lever having a bolt-holding bit-head adjustable thereon and an upper stay-hook attached thereto.

The invention further consists of the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In applying a nut to or removing it from a bolt it is very difficult to hold the latter against rotation or movement, and particularly where an intermediate deposit of rust exists or the thread has become slightly crushed. The method heretofore usually practiced in removing bolts under the resisting circumstances noted has been to cut them, thus entailing considerable labor and expense of time as well as totally destroying the bolt.

The object of this invention is to facilitate the removal or application of a bolt and nut by exerting a pressure to bear thereon through a portable tool of a simple and effective nature that can be easily and quickly applied in operative position and capable of use with bolts at varying elevations and angles.

In the accompanying drawings, Figure 1 is a perspective view of the bolt-holder embodying the invention. Fig. 2 is a side elevation thereof, partially in section. Fig. 3 shows a side and end elevation of a part of the device. Figs. 4 and 5 are detail views of other parts of the device.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates a bracing-lever of any suitable length and material and having a lower reduced or wedge-shaped end 2 and teeth or notches 3 along one edge. On the upper end of said lever is a hook 4, and below the latter a ring 5 is movably attached to

the lever and has the inner end of a chain 6 connected thereto. To the outer end of the chain a stay-hook 7 is movably secured and provided with an angular projection 8, having an inner straight face formed with serrations or otherwise roughened to prevent slipping.

The lever 1 has a bit-holding head 9 loosely engaging the same, and the opening 10 there-through, for the reception of said lever, is slightly larger than the cross-sectional extent of the latter to allow sufficient play for movement of said head into the teeth or notches 3. The head is inseparably held on the lever by a lower stop-pin 11, and to hold the said head at any desired elevation a set-screw 12 projects through one side thereof and is adapted to firmly impinge against the lever. This set-screw can be used alone or as an auxiliary to the teeth or notches 3, and under some conditions the latter might efficiently serve as the sole means of sustaining the necessary adjustment independent of the said set-screw. The head also has an extension 13 at one end having tapered bit-sockets 14 opening outwardly therefrom, as shown, one being in the center and others above and below to accommodate various angular positions of bits 15. These bits are formed differently in some particulars and will be furnished in sets, each one having a rear tapered shank 16 and an outer engaging end 17, which may be concave or convex, as illustrated by Figs. 4 and 5, to fit around square or other shapes of bolt-heads. The engaging ends 17 are formed with teeth 18, which converge toward the center and provide a plurality of biting-shoulders. These bits vary in length and diameter, and to hold them in place when mounted in the head a set-screw 19 is adapted to be inserted in one of a series of openings 20, in accordance with the socket occupied, and acts as a temporary lock, as will be readily understood.

At times it may not be practicable to use the device with the extension of the head in forward or normal position, and particularly in a confined space, and to render the device practicable under all contingencies a dovetail slot 21 is formed in the side thereof opposite to that in which the set-screw 12 is located and opens at the rear. (See Fig. 3.)



Within this slot the dovetail shank 22 of a slot-bit 23 is removably mounted, and this latter bit may be also slightly varied as to its engaging end, length, and diameter.

5 The bits shown in position in Figs. 1 and 2 and in detail in Figs. 4 and 5 can be used with an ordinary hand-brace, if desired; but it will be found that ordinary manual power is insufficient in a majority of instances to  
10 accomplish the desired result.

In operation the lower wedge-shaped end 2 of the lever is inserted in a crevice or forced against a lower projection at a suitable distance from the bolt to be removed. The bit  
15 15, of requisite length and form of engaging end, is then arranged in proper position in the head and the latter adjusted to required elevation and the teeth 18 brought to bear against the head of the bolt to be held. The  
20 stay-hook 7 is then thrown over an upper projection under tension, which is accomplished by forcing the upper part of the lever over and thereby institute a holding pressure on the bit and retain the latter in contact with  
25 the bolt-head. To adjust the length of the chain 6 to proportionately correspond to the distance of the lever 1 from the bolt and also to attain the necessary binding tension, the links thereof are thrown over or connected to  
30 the hook 4 or released from the latter to shorten or lengthen said chain.

In utilizing the bit 23 the adjustable features of the head 9 will be employed, and said lever will be arranged to bring the side face  
35 of the said head carrying the said bit adjacent the bolt to be operated on. Hand-pressure on the lever will then be brought into play or the chain and stay-hook used as previously set forth to cause the engaging end  
40 of the bit to bear on the bolt-head. The lever can also be arranged in angular position or even horizontally and its usefulness still be preserved, and it is obviously apparent that changes in the proportions, dimensions, and  
45 details of construction may be resorted to without departing from the spirit of the in-

vention or sacrificing any of the advantages thereof.

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

1. In a bolt-holder, the combination of a lever having a reduced end and notches in the body thereof, a head adjustably mounted thereon, and a bit removably carried by said  
55 head, substantially as described.

2. In a bolt-holder, the combination of a lever, a head adjustably mounted thereon, a bit removably carried by said head, and a stay device adjustably attached to one end of said  
60 lever, substantially as described.

3. In a bolt-holder, the combination of a lever having teeth or notches in one edge, a head adjustably mounted on said lever and having sockets therein, a bit for removably  
65 engaging said sockets, and means for temporarily securing the upper end of said lever, substantially as described.

4. In a bolt-holder, the combination of a lever, a head adjustably mounted thereon and  
70 having a slot in one side and a bit removably mounted in said slot, substantially as described.

5. In a bolt-holder, a lever, a head adjustably mounted thereon, and a bit removably  
75 mounted in one side of said head, substantially as described.

6. In a bolt-holder, the combination of a lever having teeth or notches in one edge and provided with a lower wedge-shaped end, a  
80 head adjustably mounted on said lever and having sockets in one end and a set-screw in one side, a bit removably held in said head, and a stay-hook adjustably attached to the upper end of said lever, substantially as de-  
85 scribed.

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

EDGAR B. PARSONS.

Witnesses:

A. E. DE CON,  
E. R. HEFLON, Jr.