

(No Model.)

E. OHNSTRANO & O. GUSTAFSON.  
WRENCH.

No. 452,907.

Patented May 26, 1891.

Fig. 1

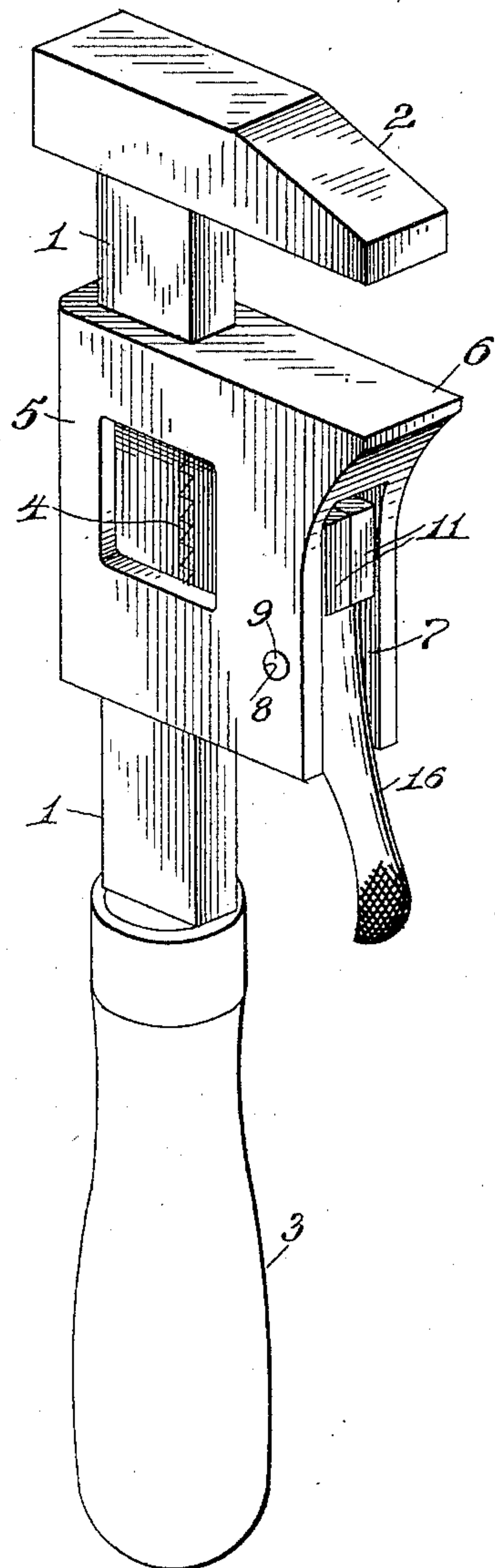
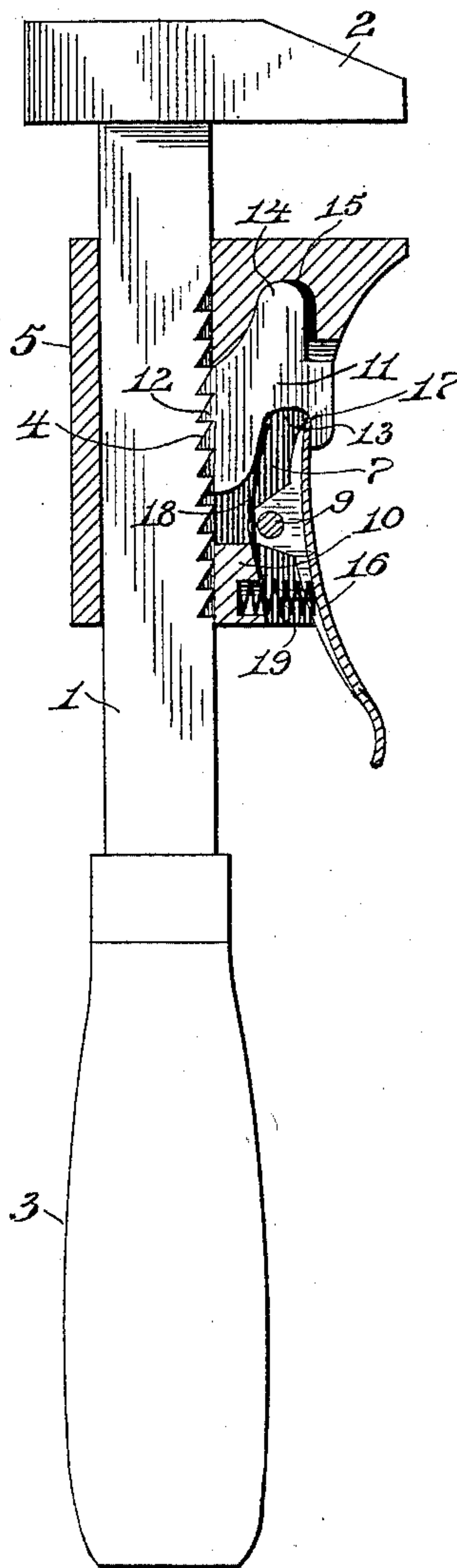


Fig. 2



Witnesses

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# UNITED STATES PATENT OFFICE.

ENOCH OHNSTRANO AND OSCAR GUSTAFSON, OF JAMESTOWN, NEW YORK.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 452,907, dated May 26, 1891.

Application filed January 7, 1891. Serial No. 377,000. (No model.)

*To all whom it may concern:*

Be it known that we, ENOCH OHNSTRANO and OSCAR GUSTAFSON, citizens of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to improvements in wrenches; and the objects in view are to provide a wrench of cheap and simple construction, consisting of few easily-assembled parts, capable of fine adjustment, and to be readily operated and applied to a nut by one hand of the operator.

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 nut-wrench constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section.

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

1 designates the shank or stock of the wrench, preferably rectangular in cross-section, terminating at its upper end in the usual fixed head 2 and having its opposite end provided with an ordinary handle 3. The inner face of the wrench is provided with a series of teeth 4, forming a ratchet and disposed toward the upper or fixed head 2 of the stock.

5 designates a sleeve mounted upon the stock and adapted for movement. The upper end of the sleeve constitutes a movable jaw 6, and below the same the sleeve is provided with a recess 7, the opposite walls of which are perforated, as at 8, for the reception of a transverse bearing-pin 9, the lower edges of the walls being connected by a transverse block 10.

11 designates a pair of pawls, the inner faces of which are provided with a series of teeth 12. The rear sides of the pawls have a recess 13 formed therein, while the upper ends thereof have bearing-shoulders 14 formed thereon. The pawls 11 are mounted side by side in the recess 7 of the sleeve immediately below the movable jaw, and the shoulders 14 are loosely seated in a bearing-groove 15, formed in the under side of the fixed jaw,

the teeth of the pawls being designed for engagement with the ratchet 4 of the stock and disposed in a contrary direction to the teeth of said ratchet.

16 designates a thumb-lever, terminating at its lower end in a broadened thumb-plate and at its inner end in a reduced finger 17. The lever is mounted upon the bearing-pin 10, the finger engaging the recesses 13 of the two pawls, and the thumb-plate of said lever extending below and from the sleeve 5. A flat spring 18 is secured to the block 8 of the sleeve and bears lightly against the inner wall of the recesses 13 of the pawls and serves to normally press the same into engagement with the ratchet-face of the stock. A light coiled spring 19 is interposed between the inner side of the lever 16 and the block 8, and a pin secured to the lever depends through and serves to act as a retaining device for the spring, said spring serving to normally press the lower or outer end of the lever outwardly.

In operation the handle of the wrench is grasped by one hand of the operator, while the thumb of the same hand may be employed to operate the thumb-lever. By depressing said lever or forcing the same toward the stock the upper or inner end of the same serves to swing the pawls out of engagement with the ratchet of the stock, and the sleeve is free to move toward or away from the fixed head. In this manner the wrench may be readily adjusted to fit various sizes of nuts, the adjustment being both fine and positively maintained. If by accident, owing to great strain, a tooth of one of the pawls should become broken, such will not cause a slipping of the wrench, as a series of such teeth are in engagement. So, also, if the teeth of one pawl should break or become out of engagement with the ratchet the remaining pawl remains operative and the efficiency of the wrench is not impaired.

Having described our invention, what we claim is—

1. In a wrench, the combination, with the stock terminating at its upper end in a fixed head and below the same having its inner face provided with a series of ratchet-teeth, of a sleeve mounted for sliding upon the stock, terminating at its upper inner end in a fixed jaw, provided below the same with



a recess, having a block at its lower end, a pair of pawls mounted side by side in the recess, each having an inner ratchet-face, upper bearing-shoulders bearing in a groove 5 in the under side of the jaw and at their lower ends provided with recesses, a bearing-pin passed through the sides of the sleeve below the pawls, a thumb-lever fulcrumed on the pin and having its lower end extending 10 below the sleeve and its upper end engaging the recesses of the jaws, and a spring for pressing the pawls normally into contact with the stock, substantially as specified.

2. The combination, with the stock terminating at its upper end in a fixed jaw and having its inner face provided with the ratchet-teeth, of a sleeve movable upon the stock, terminating at its upper end in a jaw and below the same provided with a recess, in the

roof of which is formed a transverse bearing- 20 groove, a pawl having an inner ratchet-face, an upper transverse bearing-rib taking in the groove of the recess and at its lower end provided with a recess, a lever pivoted within the recess, extending therefrom, and forming 25 a thumb-plate and at its inner end engaging the recess of the pawl, and a spring for normally pressing the teeth of the pawl into engagement with the ratchet of the stock, substantially as specified. 30

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

ENOCH OHNSTRANO.  
OSCAR GUSTAFSON.

Witnesses:

JAMES L. WEEKS,  
JNO. I. FOWLER.