W. A. WRIGHT.

WRENCH.

APPLICATION FILED OCT. 25, 1910.

991,925. **Patented May 9, 1911.**

Fig. 1.

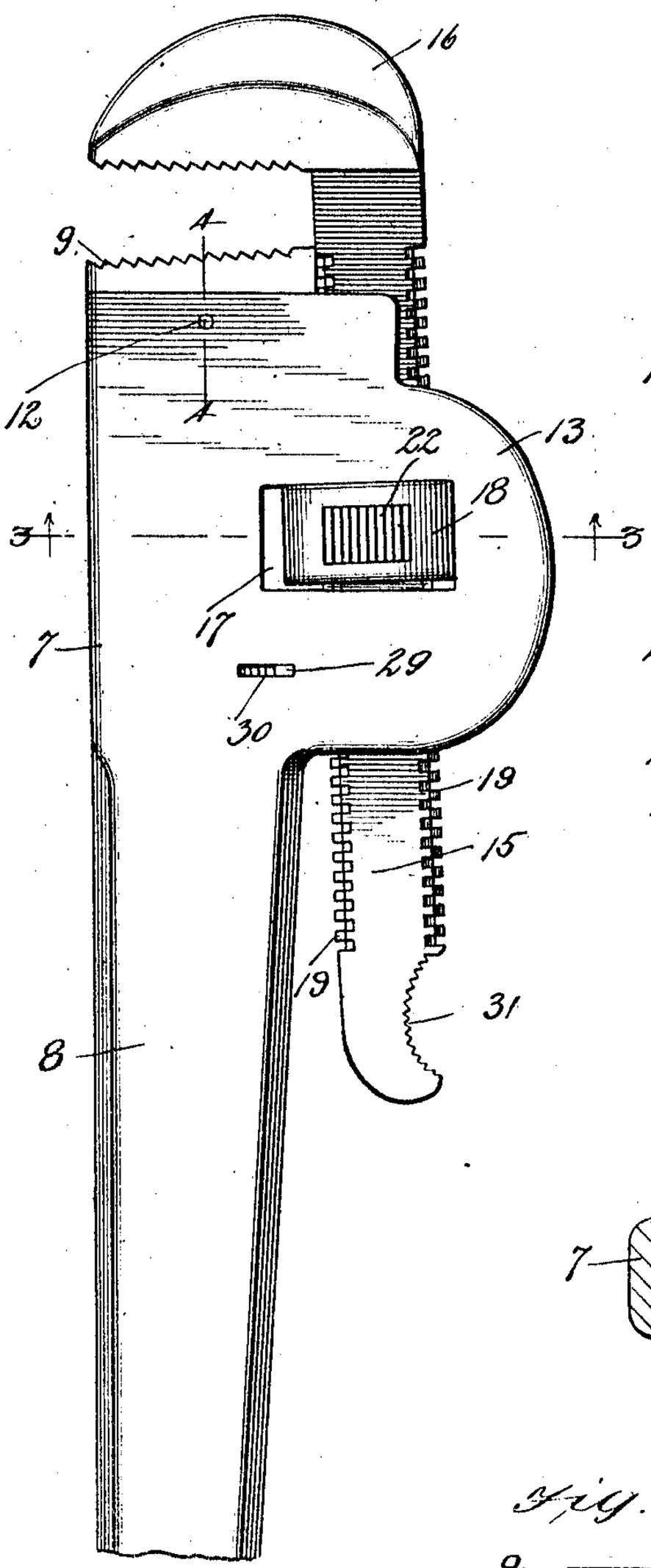

Fig. 2.

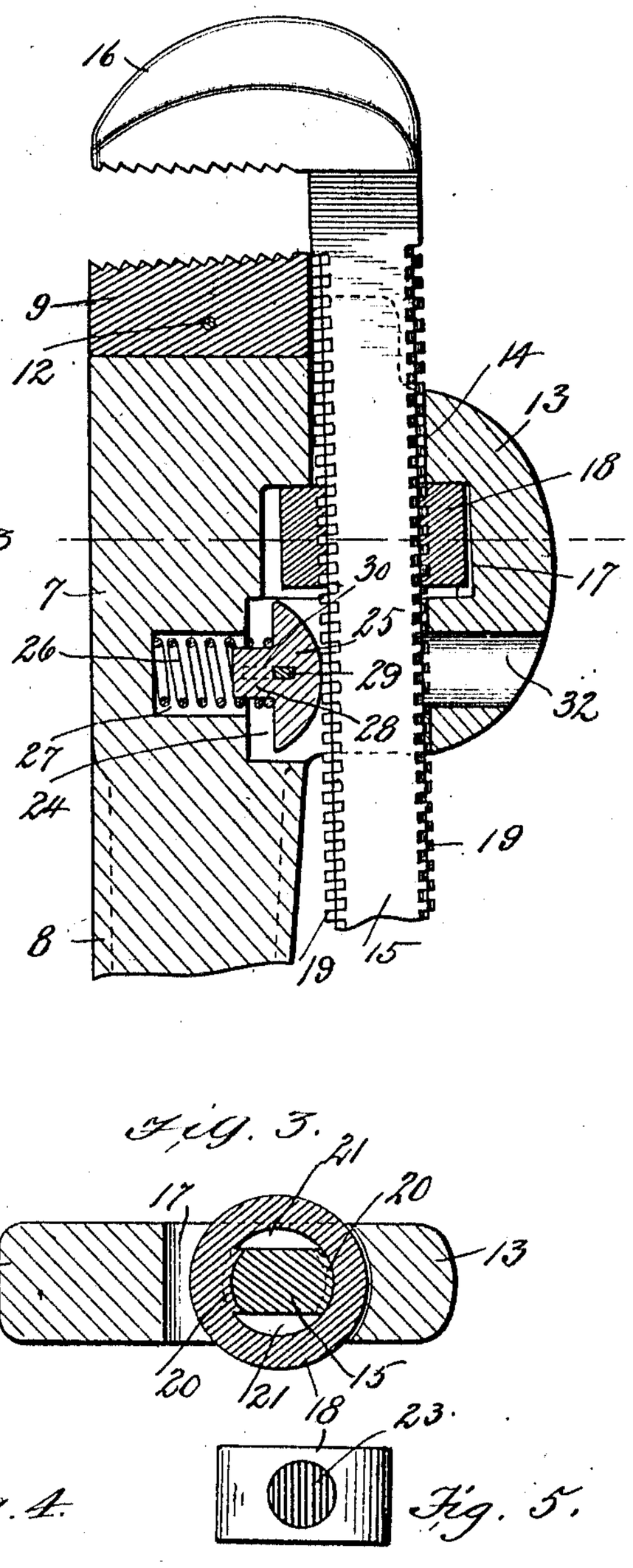

Fig. 3.

Fig. 4.

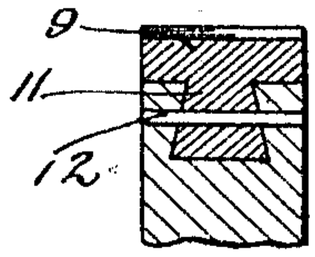

Fig. 5.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM A. WRIGHT, OF RIDGE FARM, ILLINOIS, ASSIGNOR OF ONE-HALF TO HENRY C. WOODYARD, OF RIDGE FARM, ILLINOIS.

WRENCH.

991,925. Specification of Letters Patent. Patented May 9, 1911.

Application filed October 25, 1910. Serial No. 589,059.

To all whom it may concern:

Be it known that I, WILLIAM A. WRIGHT, citizen of the United States, residing at Ridge Farm, in the county of Vermilion and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention has reference to wrenches in which an inner and an outer jaw are provided, which latter jaw swings as on a pivot, and has a threaded shank passing through an adjusting nut.

It is the object of the present invention to provide in a wrench of this kind an improved sliding adjustment, by which the wrench may be quickly adjusted to the work; and also to provide a strong and rigid structure without unduly increasing the weight of the wrench at its outer end, whereby a wrench is had which can be easily handled.

The invention also has for its object to provide a novel construction and arrangement of parts to be hereinafter described and claimed.

In order that the invention may be better understood, reference is had to the accompanying drawing, forming a part of this specification, in which drawing—

Figure 1 is a side elevation of the wrench. Fig. 2 is a similar view partly in section. Fig. 3 is a cross section on the line 3—3 of Fig. 1. Fig. 4 is a cross section on the line 4—4 of Fig. 1. Fig. 5 is an elevation of the adjusting nut removed.

Referring specifically to the drawing, 7 denotes the head of the wrench, the same having an extended handle 8 at one end, and at the opposite end is a fixed jaw comprising a block 9 which is secured to the head of the wrench by means of a shank 11 on said block, said shank fitting in a groove made in the wrench head, and being held in said groove by means of a transverse pin 12. On one side of the wrench head is an integral extension 13 having a recess 14 which extends in the direction of the length of the wrench, and receives the shank 15 of the movable jaw 16, said jaw being formed integral on one end of the shank. The recess 14 is intersected by an opening 17 in which the adjusting nut 18 of the movable jaw is located. The nut is loose in the opening so that the movable jaw may swing as on a pivot.

The shank 15 is rectangular in cross section, and has threads 19 on its narrow sides. The threads 20 of the nut 18 are interrupted at two diametrically opposite points, as indicated at 21, so that when the nut is adjusted so as to place said parts opposite the threads of the shank, the shank will be loose, and can then be slid freely back and forth in the nut to effect a quick adjustment of the jaw 16 to the work.

In order that the nut 18 may be at once placed in the desired position, I provide the outer surface thereof with distinguishing marks. The marks indicating the threads 20 comprise a series of ridges 22 arranged in a rectangular field, as shown in Fig. 1, the same being so located with respect to the threads that the latter are in mesh with the threads of the shank when the ridges are on the outside of the opening 17. These marks are located on diametrically opposite sides of the nut, so that they may be visible from both sides of the wrench, and can also be felt when two fingers are used for adjusting the nut. The marks for the interrupted portions 21 of the nut threads comprise a series of ridges 23 arranged in a circular field, and occupying the same relation to the parts 21 as the ridges 22 do to the nut threads. By these two distinguishing marks the position of the two parts of the nut is always apparent to the eye as well as to the touch, in view of which the nut can be at once placed in the desired position.

In the wrench head 7 is a recess 24 which extends at a right angle to and opens into the recess 14. In said recess 24 is mounted a spring-pressed plunger 25 which engages the inner edge of the shank 15. The spring for actuating said plunger is indicated at 26 and is located in a reduced portion 27 of the recess 24. The rear end of the plunger has a reduced portion 28 around which a portion of one end of the spring 26 is coiled, said end of the spring engaging the plunger. The opposite end of the spring is in contact with the inner end of the reduced portion 27 of the recess 24. The plunger carries a transverse pin 29 which projects from opposite sides thereof, and

works in slots 30 in opposite walls of the recess 24, said slots opening through the wrench head, and being in alinement. The function of the pins and slots is to guide the plunger.

The shank 15 is sufficiently loose in the recess 14 so that it may rock in said recess, thereby giving the jaw 16 a swinging movement toward and from the jaw 9. The spring-pressed plunger 25 serves to normally force the jaw 16 in the direction of the fixed jaw 9, and in this position the outer edge of the shank 15 is in engagement with the corresponding wall of the recess 14, and the top of the nut 18 is in contact with the adjacent wall of the opening 17. The nut 18 therefore sustains the thrust on the jaw 16 when the wrench is in operation, and said jaw is firmly and rigidly held in adjusted position on the work. To release the jaw 16 from the work without manipulating the nut 18, it is necessary only to press inwardly on the lower end of the shank 15, whereupon the said shank is rocked in the recess 14 in a direction to swing said jaw away from the work. In order to facilitate the last described manipulation of the shank 15, the outer edge thereof, at its lower end, is made concave and serrated as indicated at 31 to afford a convenient hold for the thumb.

In the extension 13, in line with the reduced portion 27 of the recess 24, is an opening 32 to enable the spring 26 to be put in place.

I claim:

1. A wrench comprising a head having at one end a fixed jaw, and an extension on one side adjacent to said jaw, said extension having a recess extending in the direction of the length of the wrench, and the extension also having an opening intersecting said recess, the wrench head having a recess extending at a right angle to the first-mentioned recess and opening thereinto, said second-mentioned recess having a reduced inner portion, a spring seating in the reduced portion of the recess, a plunger mounted in the second-mentioned recess, and having a reduced inner end around which one end of the aforesaid spring is coiled, a movable jaw having a threaded shank passing through the first-mentioned recess, and free to rock therein, said shank being engaged by the aforesaid plunger, and an adjustable nut through which the shank is threaded, said nut being located in the aforesaid opening intersecting the first-mentioned recess, the end of said nut which is nearest the jaws normally engaging the adjacent wall of the opening.

2. A wrench comprising a head having at one end a fixed jaw, and an extension on one side adjacent to said jaw, said extension having a recess extending in the direction of the length of the wrench, and said extension also having an opening intersecting said recess, a movable jaw having a threaded shank passing through the aforesaid recess and free to rock therein, an adjustable nut through which the shank is threaded, said nut being located in the aforesaid opening, and resilient means engageable with the shank for swinging the same in a direction to advance the movable jaw in the direction of the fixed jaw, the end of the aforesaid nut nearest the jaws engaging the adjacent wall of the aforesaid opening when said movable jaw is swung in the last-mentioned direction.

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

WILLIAM A. WRIGHT.

Witnesses:
H. C. Woodyard,
R. W. Fisk.