

No. 658,618.

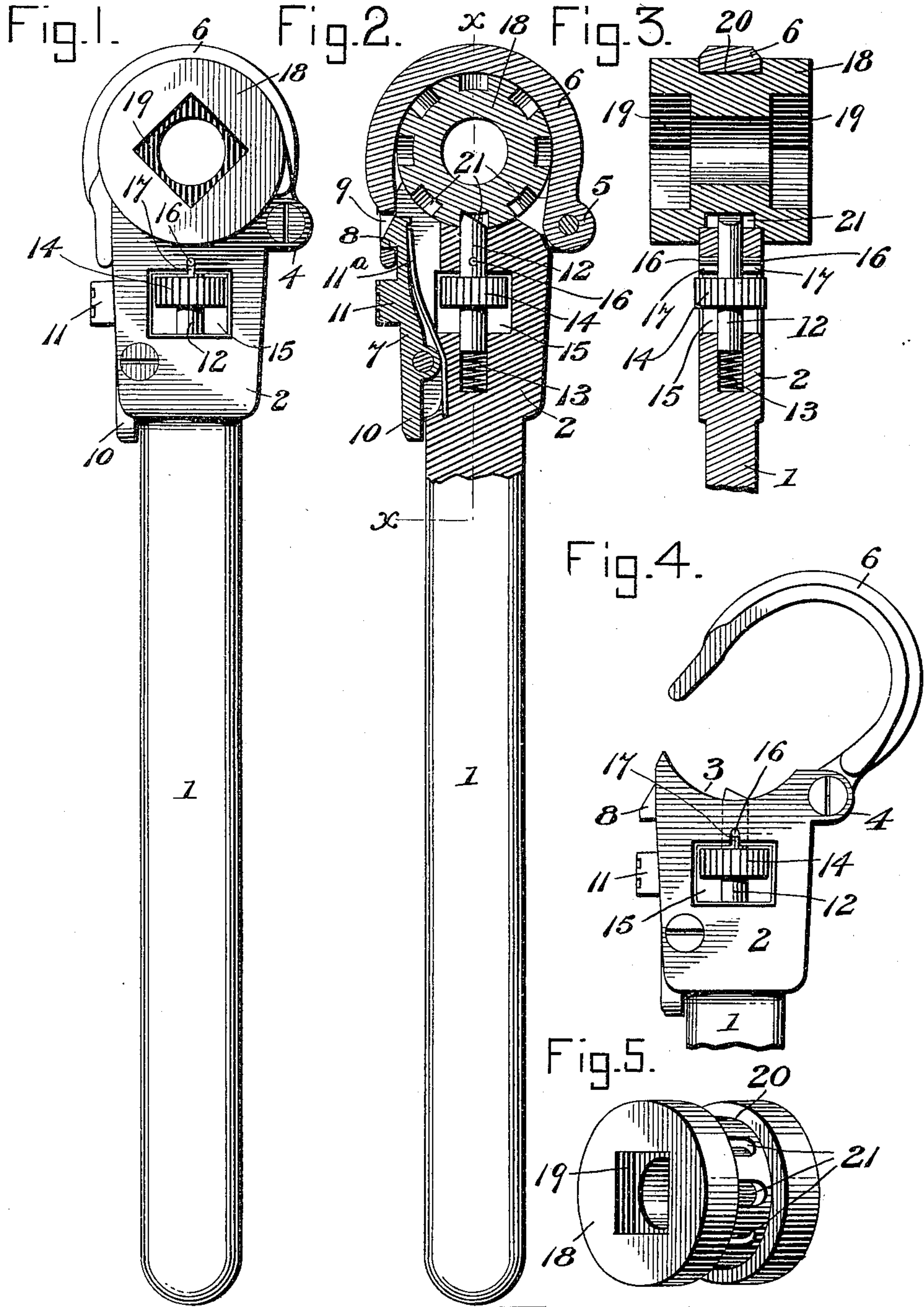
Patented Sept. 25, 1900.

F. A. CHELLIS.

WRENCH.

(Application filed Nov. 18, 1899.)

(No Model.)



Fred A. Chellis Inventor

Witnesses
Edwin G. McKee
B. J. Foster.

By *E. J. Siggers* Attorney

UNITED STATES PATENT OFFICE.

FRED A. CHELLIS, OF PORTLAND, MAINE, ASSIGNOR TO CLINTON J. STONE,
OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 658,618, dated September 25, 1900.

Application filed November 18, 1899. Serial No. 737,514. (No model.)

To all whom it may concern:

Be it known that I, FRED A. CHELLIS, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to an improvement in wrenches, particularly of the class known as "ratchet-wrenches;" and one object is to provide a device of this class wherein the rotatable socket members are easily and quickly interchanged to accommodate different-sized nuts.

A further object is to provide new and improved means for reversing the action of the wrench without removing it from the nut.

These objects are attained by the construction shown in the drawings which accompany and form a part of this specification, and in which—

Figure 1 is an elevation of a wrench constructed in accordance with my invention. Fig. 2 is a sectional view of the same. Fig. 3 is a sectional view on the line X X of Fig. 2. Fig. 4 is a view of the head and swinging hasp with the socket member removed. Fig. 5 is a perspective view of the socket member.

Similar reference-numerals designate similar parts throughout the several figures of the drawings.

The numeral 1 designates the handle of the wrench, which is enlarged at one end, forming a head 2. This head 2 is provided with the circular recess 3 to form a bearing-seat, and one edge has an extension 4, forming hinge-eyes for the reception of the hinge-eye 5 of the pivoted circular hasp 6. The opposite edge of the head 2 is bifurcated to form a socket for the reception of the pivoted latch 7. This latch is provided at one end with a beveled catch-shoulder 8, which engages the opening 9 in the unpivoted or free end of the hasp 6. The opposite end of the latch extends beyond the pivot-point and forms a stop 10 to limit the outward movement of its catch end, and a finger-boss 11 is arranged between the catch and the pivot-point, whereby the latch may be easily operated. Arranged behind the latch is a flat curved spring 11^a, which normally holds the same in operative

position in engagement with the opening 9 of the hasp.

Arranged in the head is the locking device, which consists of a sliding bolt 12, the beveled end of which projects into the circular recess 3. Behind the opposite end of the bolt is arranged the coiled spring 13, which holds the same in operative position. Rigidly secured to the bolt is the adjusting-collar 14, which extends through the opening 15, said opening being materially wider than the collar 14, and hence large enough to allow the end of the bolt 12 to be withdrawn flush with the edge of the recess 3. A pin 16, rigidly secured to the bolt 13, normally engages in the notches 17 at one side of the opening 15, and thereby serves the double function of forming a stop to limit the forward movement of the bolt and also as a retaining-guide to prevent the bolt turning while holding it to a fixed reciprocation.

Coöperating with the several parts described is the rotatable socket member 18. This socket member is formed with the usual nut-receiving sockets 19 and has the annular peripheral groove 20, the base of which is provided with a plurality of notches 21, which form a ratchet-face. The socket member fits in the depression or seat 3, and the hasp 6 embraces it, fitting snugly in the groove 20, thereby holding it securely against accidental displacement. The sliding bolt 12 coöperates with the ratchet-face 21, the end engaging in the depressions when moved in one direction and because of its inclined face sliding over the same when operated in the opposite direction.

To operate the device when the socket member is engaged over a nut, the handle is reciprocated, and the socket member is thereby rotated. To reverse the motion of the socket member, the bolt is withdrawn by means of the adjacent collar until the pin 16 is clear of the notches 17, the bolt being then given a half-turn. The beveled end of the bolt is then in an opposite relation to the ratchet-face, and the socket member will be rotated in an opposite direction. To accommodate nuts of different sizes, a plurality of socket members having different-sized nut-receiv-

ing sockets are used. To interchange these, it is only necessary to unlock the hasp by pressing upon the finger-boss of the latch, thereby unlocking the hasp and releasing the
 5 socket member, which can be taken out and replaced by another having recesses of the desired size.

It will thus be seen that I have constructed a very simple, efficient, and inexpensive
 10 wrench that may be used where the space is limited, that can be reversed without removing it from the nut, and that has simple means for quickly changing the socket members.

15 It will be understood that I do not desire to be limited to the exact construction shown, as changes in the form, proportion, and minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing
 20 any of the advantages of the invention.

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

25 1. In a wrench, the combination with a handle, of a removable socket member mounted upon the handle, a hasp pivoted to the handle and adapted to embrace the socket member, and fastening means for locking the free
 30 end of the hasp rigidly to the handle, so that said hasp when in locked position will have no independent movement from the handle and will detachably secure the socket member in place, substantially as described.

35 2. In a wrench, the combination with a handle having a bearing seat or recess, a removable socket member rotatably mounted in said seat or recess, a hasp pivoted at one end to the handle and adapted to embrace the
 40 socket member, and a catch arranged to lock the free end of the hasp rigidly to the handle so that there will be no independent movement between the handle and the hasp, substantially as described.

45 3. In a wrench, the combination with a han-

dle having a bearing seat or recess at one end, a rotatable socket member fitting in said seat or recess, a circular hasp pivoted at one end to the handle and adapted to embrace the
 50 socket member, and a spring-catch mounted on the handle and adapted to engage with the free end of the hasp, substantially as described.

4. In a wrench, the combination with a handle provided at one end with a head having
 55 a bearing seat or recess and having one of its edges bifurcated, a pivoted latch having a beveled catch-shoulder at one end and provided with a finger-boss, said latch being pivoted in the bifurcated edge of the head, a ro-
 60 tatable socket member, a circular hasp pivoted to the head and having an opening which is adapted to be engaged by the pivoted latch, said hasp being adapted to embrace the socket member and hold the same upon the head,
 65 substantially as described.

5. In a wrench, the combination with a handle having at one end a head provided therein with an opening and notches at one side of the opening, a socket member rotatably
 70 mounted upon the head and having a peripheral ratchet-face, a spring-pressed sliding and rotatable bolt carried by the handle and adapted to engage the ratchet-face of the socket member, an adjusting-collar rigidly
 75 secured to the sliding bolt, said collar being located within the opening of the head and of a less width than said opening, and a pin secured to the sliding bolt and adapted to engage in the said notches of the opening, said
 80 pin forming a stop and a guide for the sliding bolt, substantially as described.

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

FRED A. CHELLIS.

Witnesses:

CHARLES E. PERKINS,
 BARREY SILVERMAN.