

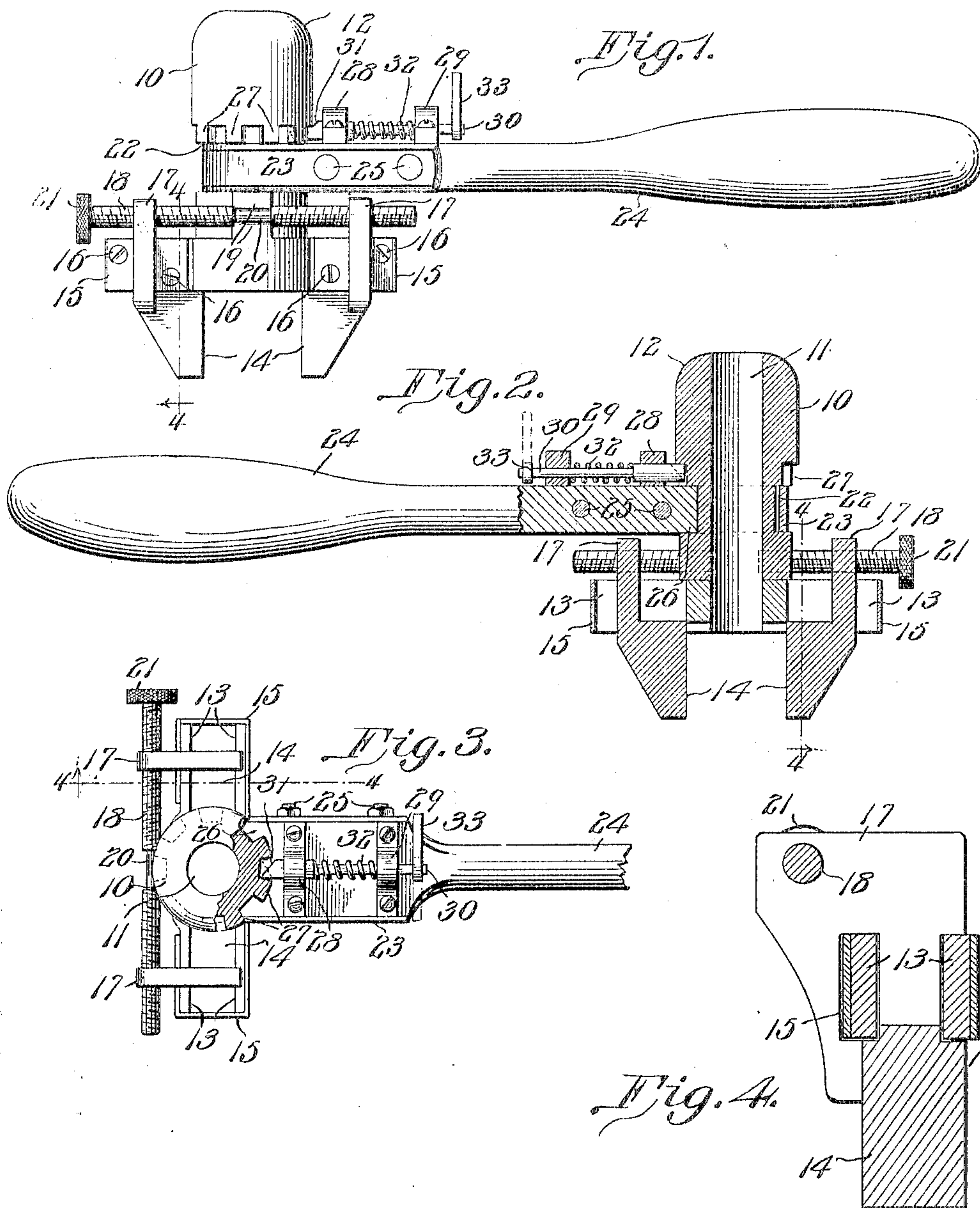
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H. T. THOMPSON.

WRENCH.

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Witnesses

E. J. Stewart
L. J. Morrill

Hamlin T. Thompson,

Inventor.

by

C. A. Snow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

HAMLIN T. THOMPSON, OF JACKSON, GEORGIA.

WRENCH.

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To all whom it may concern:

Be it known that I, HAMLIN T. THOMPSON, a citizen of the United States, residing at Jackson, in the county of Butts and State of Georgia, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches, and has for an object to provide a wrench embodying new and improved features of utility, durability, simplicity, and efficiency.

A further object of the invention is to provide a wrench having a cylindrical head with an axial bolt-opening entirely therethrough and with a handle rotatably embracing the head and a ratchet connection between the handle and head.

A further object of the invention is to provide a wrench embodying simultaneously and oppositely movable jaws, carried by a head having a longitudinal central opening and with the upper end of the head rounded to form a bearing-surface for the hand of the user.

A further object of the invention is to provide a wrench having a handle and rotatable head carrying ratchet-notches and a spring-pressed pawl carried by the handle, which by a rotary movement may be arranged to hold the head rigid or permit it to ride in either direction over the inclined face of the pawl.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made without departing from the spirit or sacrificing any of the advantages of this invention.

In the drawings, Figure 1 is a view of the improved wrench in side elevation. Fig. 2 is a longitudinal sectional view of the improved wrench. Fig. 3 is a top plan view of the improved wrench, being partly in section. Fig. 4 is a transverse sectional view of the wrench, taken on line 4 4 of Fig. 3.

Like characters of reference indicate corresponding parts in all of the figures of the drawings.

In its preferred embodiment the improved wrench forming the subject-matter of this application comprises a head 10, substantially cylindrical in form and having an axial opening 11 extending entirely therethrough. The top of the head is rounded, as at 12, to form

a bearing-surface for the hand of the operator. Upon opposite sides of the base of the head are bifurcated wings 13, preferably integral with the head and upon and between which are slidably mounted the jaws 14. The extreme open ends of the wings 13 are closed by a yoke 15, secured thereon as by the screws 16 and which prevents the accidental displacement of the jaws 14, but permits their removal when desired. The jaws 14 are provided with ears 17, through which is mounted a screw 18, having oppositely-inclined threaded sections at opposite ends. The screw 18 is held from longitudinal displacement by lugs 19, formed upon one side of the head 10 and embracing a constricted portion 20 of the screw, which is rotated by a knurled head 21 upon one extremity.

About the head and intermediate its ends is formed an annular groove 22, and therein is mounted a U-shaped yoke 23, embracing the head. Between the arms of the yoke is secured a handle 24, as by the bolts 25, and having its end 26 proportioned to fit within the groove 22 and with the yoke 23 to complete the circle.

About the head and adjacent the groove 22 is provided a series of recesses forming spaced ratchet-teeth 27. Through bosses 28 and 29 upon the handle 24 is mounted a pawl 30, having an inclined face 31, held in removable contact with the ratchet-teeth 27 by the spring 32 and manipulated by a lever 33 upon the outer end. With the ratchet-pawl disposed with the lever perpendicular to the plane of the handle, as shown in Fig. 1, the inclined face 31 is uppermost and the head is held from rotary movement, thereby forming a rigid wrench. The lever 33 may, however, be turned down in either direction, forming thereby a ratchet-wrench capable of operating in either direction, dependent upon which way the pawl is turned.

In use the jaws engage a nut in the usual manner, and the extended bolt end may extend upward into the cavity 11, thus adapting the wrench for use when the bolt extends to any length. The hand of the operator is placed upon the rounded end 12 of the head to hold the wrench in proper engagement with the work and the nut rotated by the wrench either as a rigid wrench or in the well-known ratchet manner.

Having thus described the invention, what is claimed is—

1. A wrench comprising a cylindrical head

having an axial opening throughout, a handle mounted for rotation about the head, a ratchet connection between the head and handle, parallel wings outstanding upon each side of the head, jaws slidably mounted in the wings, means to move the jaws simultaneously and in opposite directions, and a yoke rigidly secured to and closing the open ends of the wings to prevent displacement of the jaws.

10 2. A wrench comprising a cylindrical head having an axial opening therethrough, a handle mounted for rotation about the head, an adjustable ratchet connection between the head and handle whereby the handle may be

15 rotated in either direction or locked rigid with

the head, parallel wings outstanding upon each side of the head, jaws slidably mounted in the wings, a screw reversely threaded at opposite ends engaging and arranged to move the jaws simultaneously in opposite directions, and a yoke rigidly secured to and closing the open ends of the wings to prevent displacement of the jaws.

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

HAMLIN T. THOMPSON.

Witnesses:

Y. A. WRIGHT,
C. S. MADDOX.