(No Model.)

F. S. SEYMOUR.

WRENCH.

No. 514,781. Patented Feb. 13, 1894.

Fig. 1

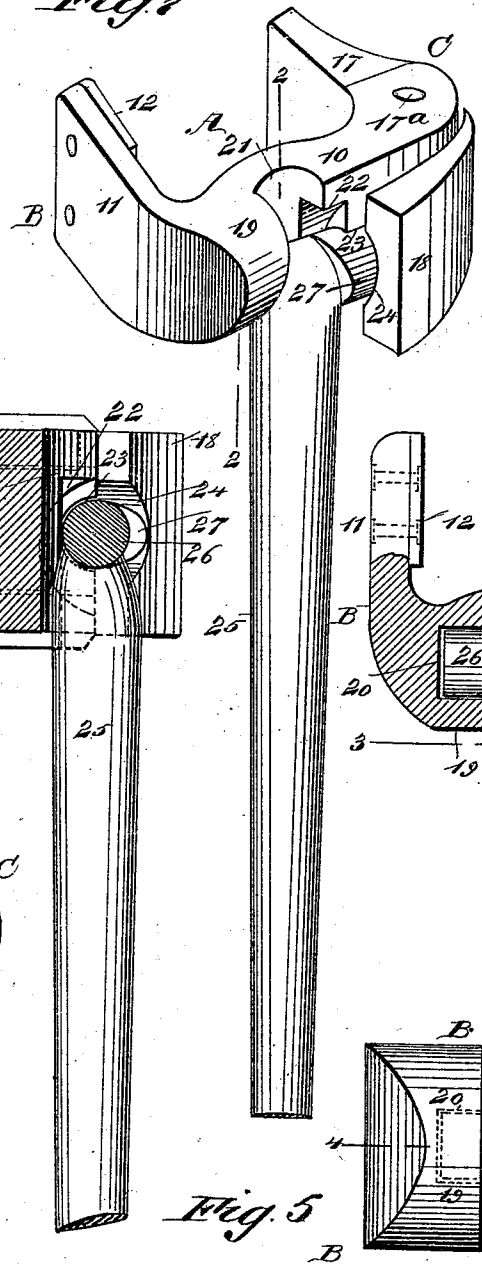


Fig. 6

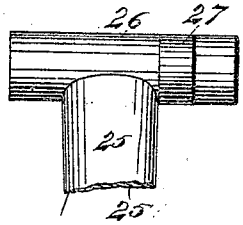


Fig. 2

Fig. 4

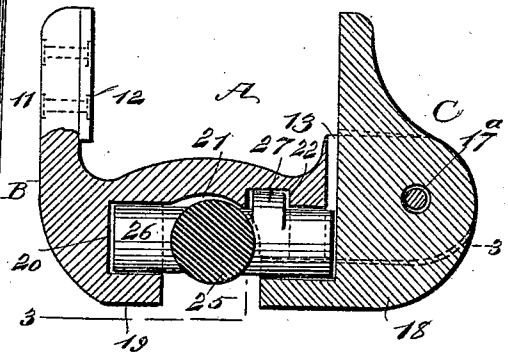


Fig. 7

Fig. 3

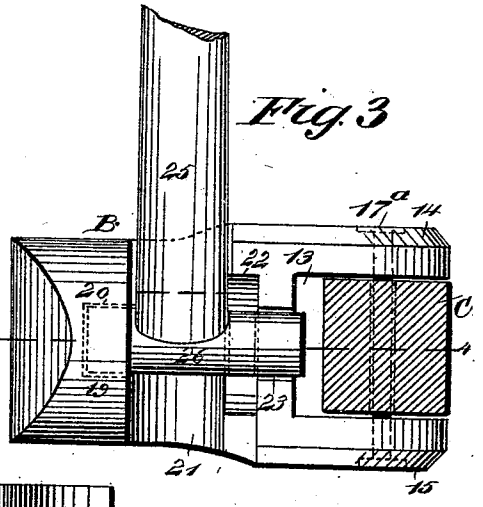
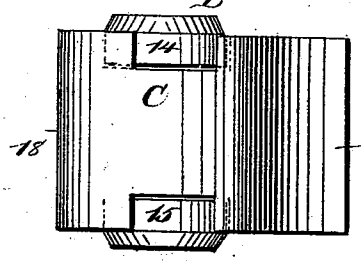


Fig. 5



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FREDERICK SANFORD SEYMOUR, OF LAKE GENEVA, WISCONSIN.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 514,781, dated February 13, 1894.

Application filed November 24, 1893. Serial No. 491,905. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SANFORD SEYMOUR, of Lake Geneva, in the county of Walworth and State of Wisconsin, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and it has for its object to construct a wrench which will be an improvement upon the wrench for which Letters Patent were granted to me July 11, 1893, No. 501,369, the object of the invention being to render the construction of the wrench more economic than heretofore, and to render the closing of the jaws more positive.

The invention consists of the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved wrench. Fig. 2 is a vertical section taken practically on the line 2—2 of Fig. 1. Fig. 3 is a rear elevation, one of the jaws of the wrench being in section, which section is taken practically on the line 3—3 of Fig. 4, while the handle is illustrated in position for applying the wrench to a nut. Fig. 4 is a horizontal section taken practically on the line 4—4 of Fig. 3. Fig. 5 is an end view of the body of the wrench. Fig. 6 is a detail view of the head of the handle, showing the cam thereon; and Fig. 7 is a plan view of the movable knuckle.

In carrying out the invention the body A of the wrench consists of two jaws B and C, the jaw B being the fixed jaw and the jaw C the movable one. Both of the jaws are angular or essentially L-shaped in cross section, but what may be termed the back member 10 of the jaw B, is of a length corresponding to the entire length of the body, while the shorter or clamping member 11 of the said jaw is preferably provided upon its inner surface with a pad 12 of leather, or a like material.

The extremity of the back member 10 of the jaw B is provided with a recess 13, forming thereby an upper knuckle 14 and a lower knuckle 15. Between these two knuckles the movable jaw C, is pivoted, the said jaw being provided at top and bottom with a recess 16, adapted to receive the knuckles and of sufficient size to permit the jaw C to have play. The pivot pin 17^a, is passed through the knuckles and the recessed portion of the jaw C. Thus the forward or clamping member 17 of the jaw C, stands at right angles to the back member 10 of the jaw B, and faces the forward member 11 of said jaw, while the rear member 18 of the movable jaw C, extends some distance parallel with the rear face of the back member 10 of the fixed jaw.

The back member 10 of the fixed jaw is provided at one end with a knuckle or offset 19, in which a socket 20 is produced, as shown in dotted lines, Fig. 3; and the surface of the said member 10, adjacent to the knuckle 19, is preferably concaved or hollowed out, as shown at 21 in Fig. 1. A recess 22, is produced in the rear face of the said member 10 of the fixed jaw opposite the knuckle 19 and preferably adjacent to the cavity 21, said recess being vertically produced, while a concavity 23, is made in the same face of the said member horizontally and adjacent to the recess 22; and a cavity 24, preferably of semi-circular character is made in the inner face of the rear member 18 of the movable jaw at the inner end of said member.

In addition to the jaws the wrench consists of a handle 25, which may be of any desired length or shape, and said handle is provided with a T-head 26, preferably circular in cross section; and one branch of the head is provided upon one face with a cam 27, as shown in Figs. 1, 2 and 6. The ends of the head of the handle are journaled one in the socket 20, and the other in the concavity 23 of the rear member 10 of the fixed jaw, the rear member of the movable jaw preventing the head from disengaging with the body of the wrench. When the head of the handle is in place, the cam 27 will be opposite the recess 22 in the body of the wrench, and when the handle is turned in an upper position the cam will enter that recess, as shown in Fig. 3, and the movable jaw may be moved laterally relative to the fixed jaw, rocking upon its pivot;

and when the handle is in this position, the nut, or whatever is to be manipulated, is placed between the clamping members of the two jaws. The handle is then carried down to a vertical position, or practically until it strikes the wall of the concavity 21 in the fixed jaw, whereupon the cam 27, will have engaged with the rear member of the pivoted jaw and will have forced that member outward from the fixed jaw, thereby carrying the clamping member of the pivoted jaw in direction of the corresponding member of the fixed jaw and to positive engagement with the article to be manipulated by the wrench. The wrench may now be manipulated in the ordinary manner. The object is released by carrying the handle to an upper position, permitting the movable jaw to have movement laterally in either direction.

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

1. In a wrench, the combination of two angular jaws, one jaw being pivoted upon the other, a handle provided with a head pivoted in the rear member of the fixed jaw between the said rear member and the overlapping member of the movable jaw, and a cam carried by the head of the handle and adapted for engagement with the said overlapping member of the movable jaw, as and for the purpose set forth.

2. In a wrench, the combination, with two angular jaws, one having pivotal engagement with the other, and a member of one jaw overlapping the corresponding member of the other, of a handle provided with a T-head, said head being journaled in the fixed jaw, between said fixed jaw and the overlapping member of the movable jaw, and a cam located upon one member of the said head, adapted for engagement with the overlapping member of the movable jaw and to force the opposing member of said jaw in direction of the corresponding member of the fixed jaw, as and for the purpose set forth.

3. In a wrench, the combination, with a body comprising two approximately L-shaped jaws, one pivotally connected with the other, and the back member of the pivotal jaw overlapping the corresponding member of the fixed jaw, the back member of the fixed jaw being provided with a socket, a recess adjacent to the socket, and a second socket facing the rear member of the pivotal jaw, the rear member of the pivotal jaw being provided with a concavity in its forward face, of a handle provided with a T-head pivoted in the sockets of the fixed jaw, and a cam located upon one member of the said head, adapted to enter the recess in the rear member of the fixed jaw, and likewise to exert outward rearward pressure upon the recessed surface of the rear member of the pivotal jaw, as and for the purpose set forth.

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Witnesses:
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