(No Model.)

C. TINGLÖF.

WRENCH.

No. 550,698. Patented Dec. 3, 1895.

Fig. 1.

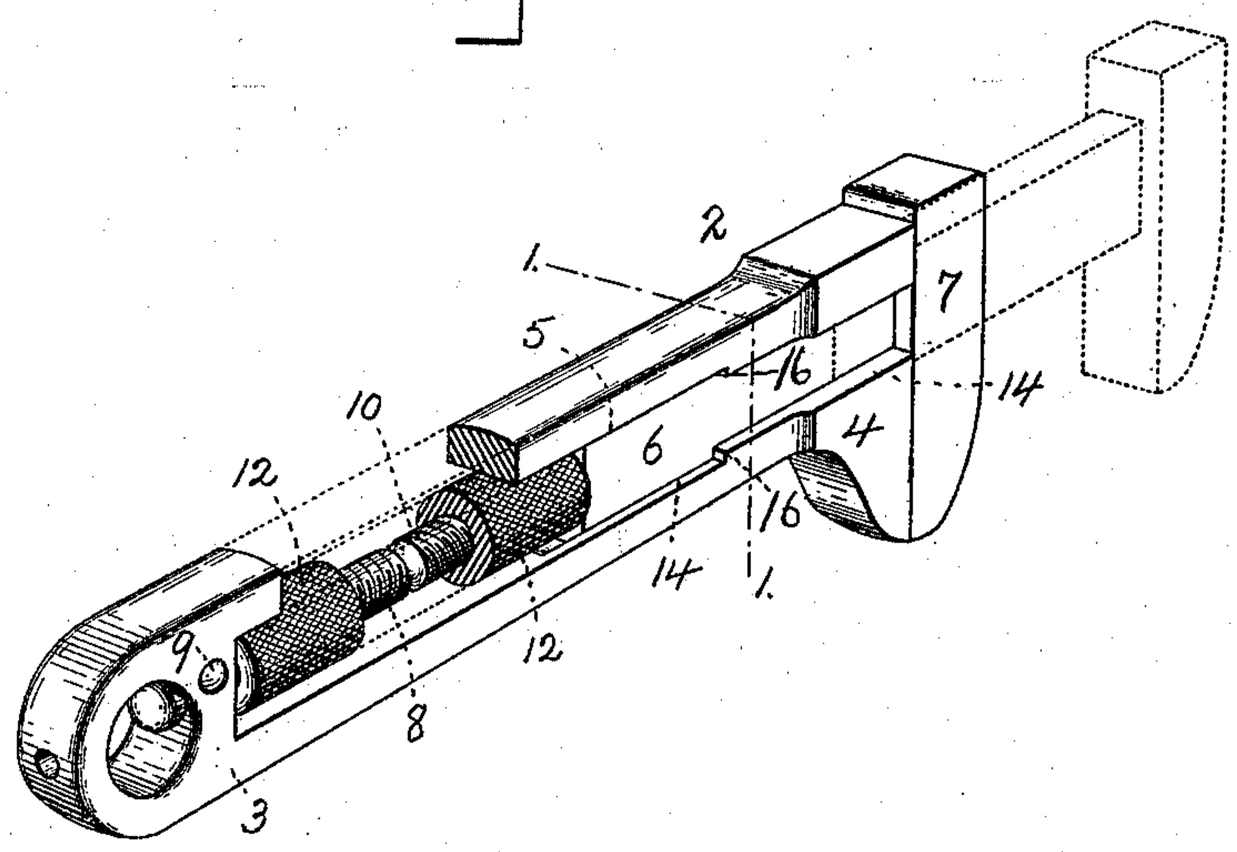
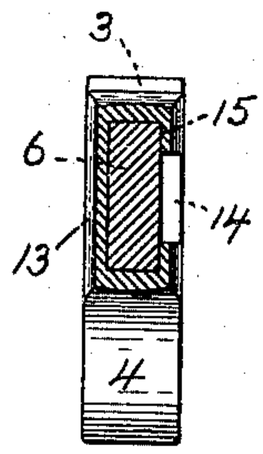


Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

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WRENCH.

SPECIFICATION forming part of Letters Patent No. 550,698, dated December 3, 1895.

Application filed August 6, 1894. Serial No. 519,525. (No model.)

To all whom it may concern:

Be it known that I, CARL TINGLÖF, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the construction of wrenches.

The drawings herewith accompanying this specification represent, in—

Figure 1, a sectional isometric view of a wrench embodying my invention, the central part of the sleeve being cut away to show the screw-threaded rods. Fig. 2 is a cross-section on line 1 1.

The primary object in my invention is to produce a wrench which is of small size and yet one that is capable of spanning large objects—in other words, to produce a short wrench, but one that has great range between the two jaws.

Heretofore wrenches, particularly the smaller sizes, have been very limited in their uses, for the reason that their construction has been such that the movable jaw was contained within the body of the wrench and its movement accordingly was very limited, being confined by the fixed jaw, which latter formed a part of the wrench proper.

A further feature of my invention is embodied in the actuating-sleeve and in two rods with screw-threads of opposite pitch.

In the drawings I have indicated a wrench at 2 composed of a straight shank or body portion 3, which serves as the handle. This shank is constructed at one end with an enlarged part, forming the fixed jaw 4, while an aperture 5 extends longitudinally of the shank. This opening is created to receive the arm 6 of the movable jaw 7, as likewise the actuating parts. These several elements consist of a screw-threaded rod 8, made fast to the handle by aid of the pin 9 or otherwise, while a similar but oppositely screw-threaded rod 10 is made fast to the arm 6 of the movable jaw. An interiorly-screw-threaded sleeve 12 engages said rods. By this arrangement great range is afforded the movable jaw, since it is located at the extremity of the wrench and beyond or outside of the fixed jaw. Furthermore the action of the sleeve 12 serves to advance or retract the movable jaw very rapidly, since rotation of the sleeve about the rod 10 not only serves to advance the movable jaw endwise, but the sleeve revolving about the other rod 8 is given endwise movement of its own. In this way a conjoint effect, due to both rods 8 10, is produced and the travel of the jaw is accelerated.

In Fig. 2 it will be seen that one side of the body or handle portion of the wrench is a continuous plane surface 13, while on the opposite corresponding part the material is removed or cut away to make an opening 14. This form is to be preferred simply for ease in allowing the finishing-tool to be introduced to undercut the portion 15, as shown. In some instances both sides may be plane surfaces and the opening 14 omitted.

In assembling together the various parts of the wrench and in order to prevent the separation of the movable jaw from the fixed jaw that portion of the opening 14 in which the actuating-sleeve travels is somewhat enlarged, in order to create shoulders or stops 16. The diameter of said sleeve is of a corresponding size, in order that it may revolve freely, while at the same time its endwise movement toward the fixed jaw is limited by contact with said stops 16. Hence the movable jaw cannot be disconnected under ordinary operating conditions.

What I claim is—

1. A wrench comprising a fixed jaw forming one extremity of a shank, a shank provided with an opening for its entire length and uninterrupted upon one side, the side wall of the fixed jaw being removed, the opposite corresponding side wall being intact, and a sliding jaw beyond the fixed jaw and which forms one end of the wrench, together with a sleeve adapted to travel on independent screw-threaded rods of opposite pitch arranged in line with and respectively secured to the frame and the movable jaw shank, substantially as specified.

2. A wrench comprising a shank apertured

for its entire length, a fixed jaw forming one of the extremities of said shank and grooved to form a continuation of the shank aperture, a screw-threaded rod fast in the handle of the shank, a jaw to travel in right lines to and fro beyond the fixed jaw, a rod affixed to the movable jaw and oppositely screw-threaded, and an actuating sleeve adapted to interconnect the two rods and contact with shoulders on the shank of the fixed jaw to prevent detachment of the movable jaw therefrom, substantially as set forth and described.

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

CARL TINGLÖF.

Witnesses:
H. E. LODGE,
FRANCIS C. STANWOOD.