(No Model.)

W. H. ROBINSON & E. J. LAWLESS.

WRENCH.

No. 605,746. Patented June 14, 1898.

Fig. 1.

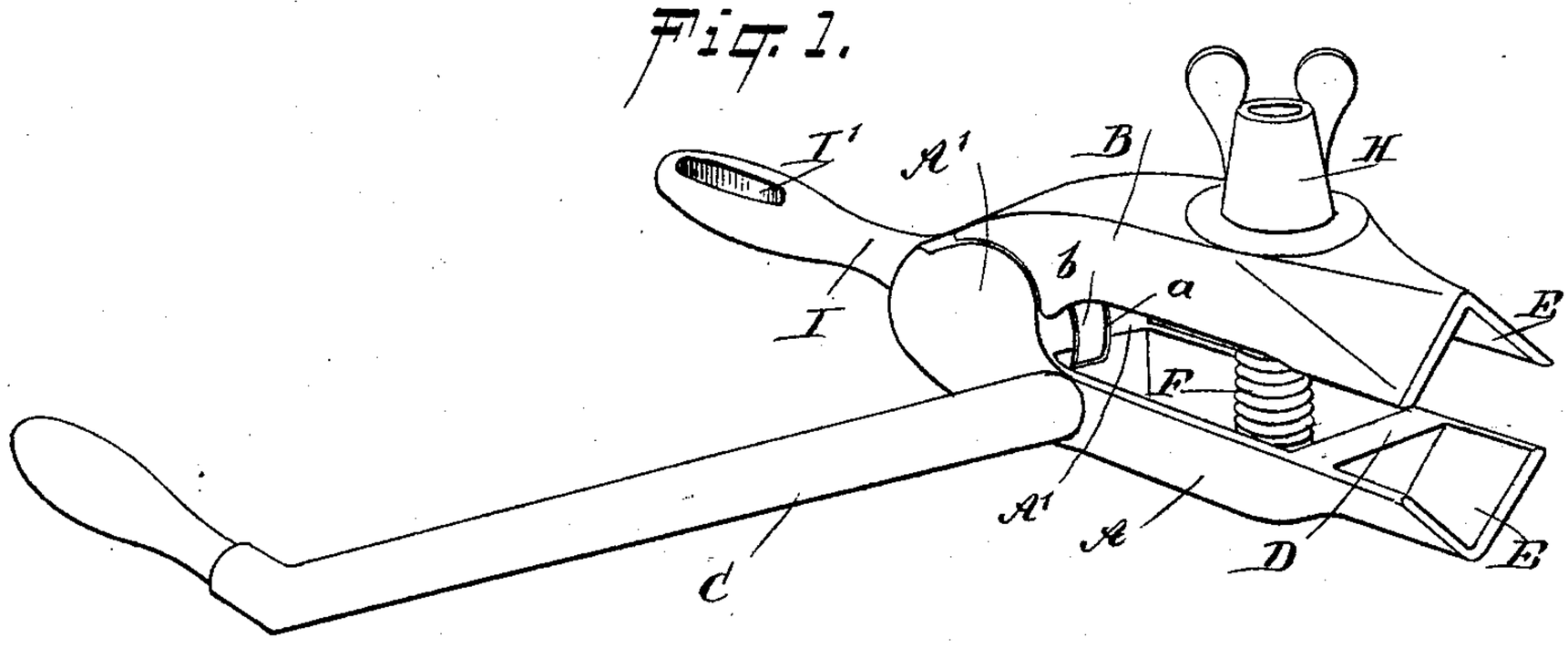
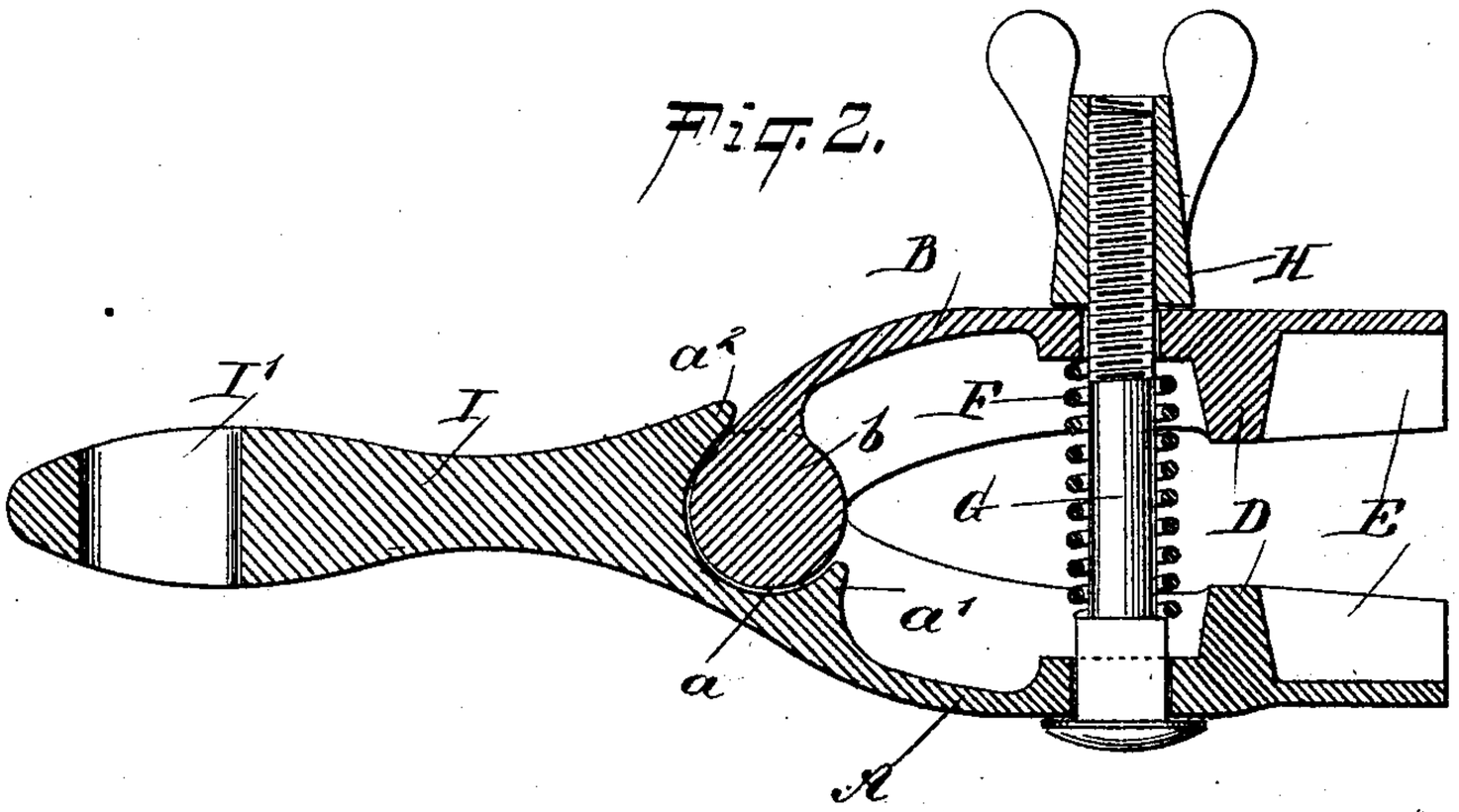


Fig. 2.



WITNESSES:

William P. Goebel.

H. L. Reynolds.

INVENTORS

W. H. Robinson.

E. J. Lawless.

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WALTER H. ROBINSON, OF NEW YORK, N. Y., AND EDWARD J. LAWLESS, OF ORANGE, NEW JERSEY.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 605,746, dated June 14, 1898.

Application filed December 9, 1897. Serial No. 661,255. (No model.)

To all whom it may concern:

Be it known that we, WALTER H. ROBINSON, of New York city, in the county and State of New York, and EDWARD J. LAWLESS, of Orange, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in wrenches of that class having two pivotally-connected jaws and provided with means for clamping the jaws together, so as to secure the nut in a socket formed in the ends of said jaws, the wrench being turned by an arm connected to one of said jaws.

The invention consists of certain peculiarities of construction, which will be hereinafter described, and particularly pointed out in the claims.

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

Figure 1 is a perspective view showing our improved wrench, and Fig. 2 is a sectional elevation taken through the pivoted jaws.

The two jaws A and B are shaped at one end so as to form a socket E, which is adapted to embrace and securely hold a nut. As shown in the drawings, this socket is shaped so as to hold a square nut. It may, however, be shaped so as to hold any other form of nut, if desired. The jaws are pivoted one upon the other by means of a loose joint, consisting of a socket in one member which receives a pivot-lug in the other member. This joint is preferably constructed as shown in the drawings, but may be reversed, so as to have the socket in the opposite member, if desired.

The jaw A is provided with two side flanges A′, and between which flanges is the socket *a*. The jaw B is provided with a central lug *b*, which is circular in outline and adapted to fit within the socket *a*. Upon each side the socket *a* is provided with the lips a' and a^2, which extend upward a sufficient distance to prevent accidental displacement of the lug *b*. These parts are so constructed that the jaw B may be entirely removed from its pivot-socket when freed of its clamping-bolt.

The two jaws are held toward each other and clamped upon a nut by means of a bolt G, which passes through holes in both jaws and is provided with a thumb-nut H. The two jaws are separated by means of a spiral spring F, which is placed between the jaws and about the bolt G. The jaws are prevented from separation at the pivot by reason of the fact that the flange a^2 extends slightly over the center of the pivot-lug *b*. The jaw A is provided with a rearwardly-extending handle I, which is placed substantially axial to the two jaws. This forms a steadying-handle for holding the wrench when starting the nut.

To turn the wrench, an arm C is extended from one side of one of the jaws, preferably from the jaw A, and at its outer end is provided with a handle. By reason of this construction the jaws forming the socket may be firmly clamped upon a nut and sufficient power applied to the crank-arm C to readily start the nut, the wrench being in the meantime steadied by grasping the steadying-handle I with one hand. After the nut has been started the wrench may be revolved by one hand holding the handle upon the crank-arm C, the motion being a continuous rotary motion, as of a crank.

To stiffen the jaws A and B and also to form a gripping-surface, so that the same may be used as a vise, ribs or partitions D are formed, extending across each jaw a short distance from the outer end thereof and just outside of the location of the bolt and spring. This enables the wrench to be used for clamping articles which extend across the jaws and to hold the same as if in a vise.

For convenience in hanging the wrench up the steadying-handle I may be provided with a hole I′, adapted to receive a nail.

This wrench, it will be seen, is one in which the body is formed of two pieces only, and the same are formed directly in the mold by casting, so that they will fit together without any machine-work thereon. This makes possible the manufacture of the wrench at a small price, so that it may be sold at a price which will render its use general.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A wrench provided with two jaws, one

of said jaws being cast in one piece with converging sides forming one half of a nut-receiving socket, a partition flush with the opposite edges of said sides and forming a vise-surface and a rear wall for the nut-receiving socket, flanges at its rear end and separated from each other and an undercut curved socket between said flanges, and the other jaw being cast also in one piece with correspondingly-shaped sides and partition, whereby the other half of the nut-socket and the other vise-surface are provided, and at its rear end with a central curved lug fitting in the socket between said flanges, there being provided adjusting means for said jaws, which means prevents longitudinal movement of one jaw with respect to the other, whereby to securely hold the said lug in place, as and for the purpose set forth.

2. A wrench comprising the two jaws formed with a nut-receiving socket and a partition extending across each jaw and flush with the edges of the same, one of said jaws having side flanges separated from each other and having formed between them a curved undercut socket, a steadying-handle integral with said jaw and extending rearwardly from the point where the said socket is located, a crank-handle integral with said jaw and extending laterally therefrom at a point in advance of said socket, and the other jaw being formed with a curved lug extending from its rear end and removably received in said socket and with a curved surface on each side of said lug, said curved surfaces having bearing upon the said flanges, and a spring-encircled adjusting-bolt inserted through said jaws and preventing longitudinal movement of either jaw with respect to the other and the removal of the said lug from its place, as and for the purpose set forth.

WALTER H. ROBINSON.
EDW. J. LAWLESS.

Witnesses:
EVERARD BOLTON MARSHALL,
H. L. REYNOLDS.