

No. 752,811.

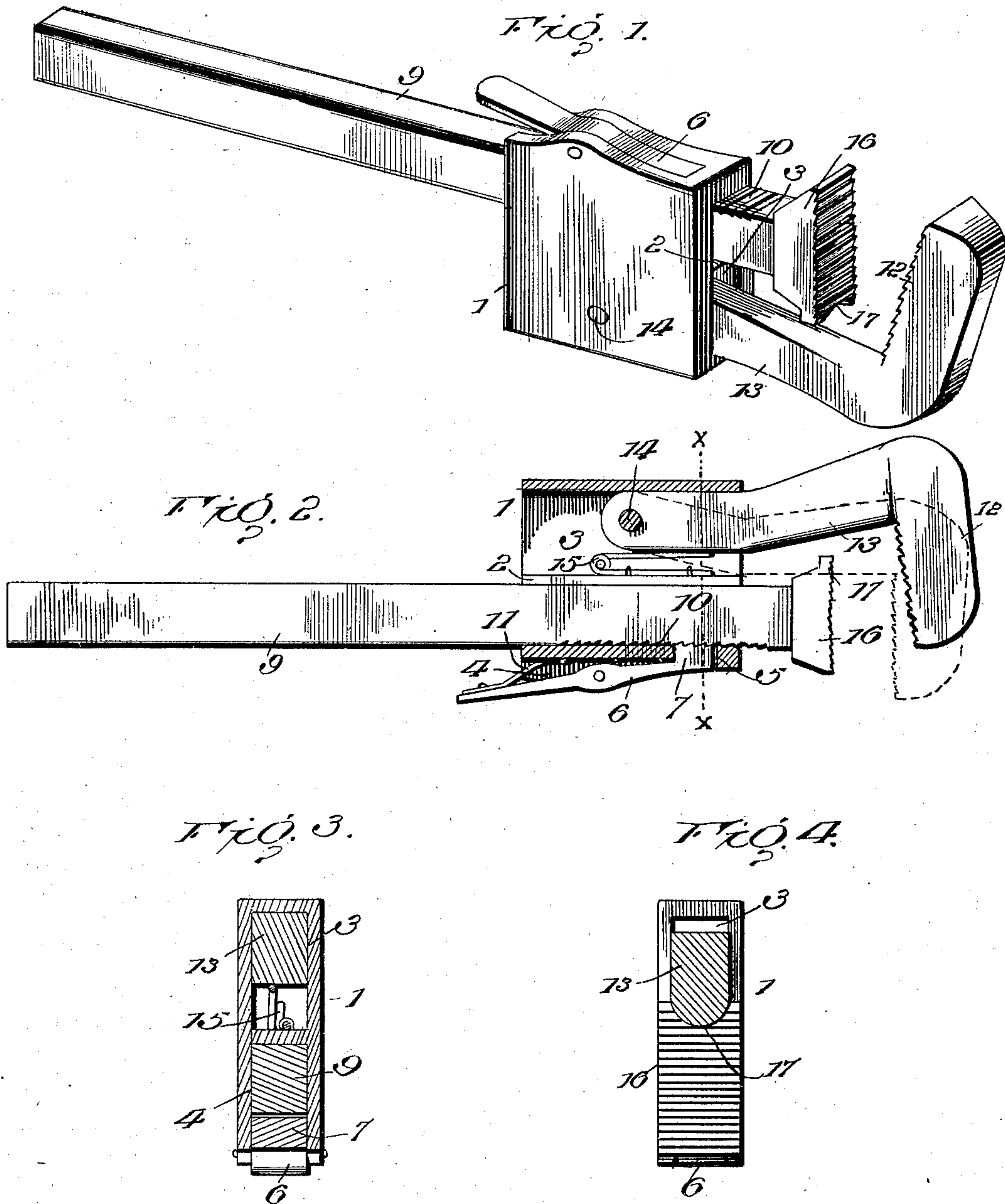
PATENTED FEB. 23, 1904.

C. W. THOMAS.

WRENCH.

APPLICATION FILED JULY 8, 1903.

NO MODEL.



Inventor

C. W. Thomas

Witnesses

George E. Hatt

By

R. S. P. Lacy

Attorneys

UNITED STATES PATENT OFFICE.

CLARK W. THOMAS, OF FRAZEYSBURG, OHIO

WRENCH.

SPECIFICATION forming part of Letters Patent No. 752,811, dated February 23, 1904.

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To all whom it may concern:

Be it known that I, CLARK W. THOMAS, a citizen of the United States, residing at Frazeyburg, in the county of Muskingum and State of Ohio, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention has relation to wrenches of the type provided with a pivoted jaw and a rigid jaw, one being adjustable with reference to the other to admit of varying the space between the jaws to adapt the wrench for different-sized objects and work.

An essential feature of the present invention is an interlocking connection between the two jaws whereby they mutually brace each other laterally or at a right angle to the plane of movement of the pivoted jaw.

A further purpose of the invention is to devise a simple, compact, and effective construction, easy of operation, comprising a minimum amount of material in its organization, durable, and readily accessible to all of its parts to admit of necessary repairs being quickly and economically made.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the results reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a wrench embodying the essential features of the invention. Fig. 2 is a side elevation showing the operation of the pivoted jaw by dotted lines and having the inner side of the slide-frame omitted. Fig. 3 is a transverse section on the line X X of Fig. 2. Fig. 4 is a detail view showing more clearly the interlocking connection between the two jaws.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The wrench comprises, essentially, a slide-

frame 1, which is subdivided by a longitudinal partition 2 to form longitudinal parallel compartments 3 and 4. The lower edge of the slide-frame is recessed, as shown at 5, to receive the latch-lever 6, which is pivoted intermediate of its ends to the side wall bordering upon said recess. The inner end of the latch-lever is provided with a projection 7, adapted to pass through the opening 8, so as to extend into the compartment 4 and make positive engagement with the handle-bar 9 slidable therein. The inner face of the projection 7 is toothed and is adapted to engage with corresponding teeth at the outer or lower edge of the handle-bar 9, so as to hold the latter at an adjusted position with reference to the slide-frame 1. A spring 11 presses outward upon the rear end of the latch-lever, thereby forcing the projection 7 inward, whereby its toothed portion is normally held in engagement with the teeth 10.

The pivoted jaw 12 is approximately of elbow or right-angular formation, and its shank 13 is let into the compartment 3 and is pivoted to the slide-frame by the pin 14, passed through openings in the side walls of the frame and in the said shank. A spring 15, located within the compartment 3, normally exerts an outward pressure upon the shank 13 of the pivoted jaw, so as to hold it away from the handle-bar 9, as indicated most clearly in Figs. 1 and 2.

The handle-bar 9 is slidable in the compartment 4 and is provided at its inner end with a jaw 16, the inner end of which is notched, as shown at 17, to receive the shank 13 of the pivoted jaw, which, in effect, constitutes an interlocking connection, so as to enable the jaws to mutually brace each other when subjecting the wrench to lateral strain in a direction at a right angle to the plane of movement of the pivoted jaw. By pressing upon the rear end of the latch-lever 6 the handle-bar is released, thereby permitting the slide-frame to move thereon in the event of the handle-bar being held stationary or the handle-bar to be slid in the compartment 4 upon holding the slide-frame stationary. The teeth between the latch-lever and handle-bar are of such formation as to admit of relative movement of the

jaws to diminish the space between them without necessitating operation of the latch-lever by hand; but when it is required to move the jaws apart it is incumbent upon the user to
 5 operate the latch-lever so as to release it from the handle-bar, when the parts 1 and 9 may be relatively moved to separate the jaws. The gripping-faces of the jaws have their teeth facing in opposite directions, and when the work
 10 is gripped between the jaws and the wrench turned forward by grasping the handle-bar the pivoted jaw moves so as to more effectually grip the work proportionate to the amount of force expended for operating the
 15 wrench.

Having thus described the invention, what is claimed as new is—

1. In a wrench, the combination of a slide-frame comprising independent longitudinal
 20 compartments, a jaw of approximately elbow form having its shank inserted in one of said compartments and pivoted therein, a spring normally exerting an outward pressure upon the pivoted jaw, a handle-bar slidable in the
 25 other compartment and provided at its inner end with a jaw for coöperating with the said pivoted jaw, and a latch-lever pivoted to the slide-frame and adapted to make positive engagement with the said handle-bar to hold it in
 30 an adjusted position with reference to the slide-frame, substantially as set forth.

2. In a wrench, the combination of a slide-frame subdivided by a longitudinal partition into parallel longitudinal compartments, a jaw
 35 of approximately elbow form having its shank

pivoted in one of said compartments, a spring located in the compartment with the pivoted shank and normally exerting an outward pressure thereon, a handle-bar slidably mounted
 40 in the other compartment and provided at its inner end with a jaw notched at its inner end to receive the shank of the pivoted jaw when the same moves inward to cause the jaws to mutually brace each other, and a latch-lever
 45 applied to the slide-frame for securing it and the handle-bar in a relative adjusted position, substantially as described.

3. In combination, a slide-frame having independent longitudinal compartments and having a recess in its lower edge, a jaw of ap-
 50 proximately elbow form having its shank pivoted in one of said compartments, a handle-bar slidably mounted in the other compartment and provided at its inner end with a jaw having a notch to receive the shank of the piv-
 55 oted jaw to enable the jaws to mutually brace each other, and a spring-actuated latch-lever pivoted in the recess of the slide-frame and having a projection at its inner end passed through
 60 an opening of the wall separating said recess from the adjacent longitudinal compartment so as to engage with the handle-bar and secure it and the slide-frame in a relative adjusted position, substantially as specified.

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

CLARK W. THOMAS. [L. S.]

Witnesses:

WALTER B. BRIGGS,
 E. F. PORTMAN.