No. 667,392. Patented Feb. 5, 1901.

M. M. HODGMAN, Dec'd.

A. F. HODGMAN, Administratrix.

WRENCH.

(Application filed May 4, 1900.)

(No Model.)

Fig. 1.

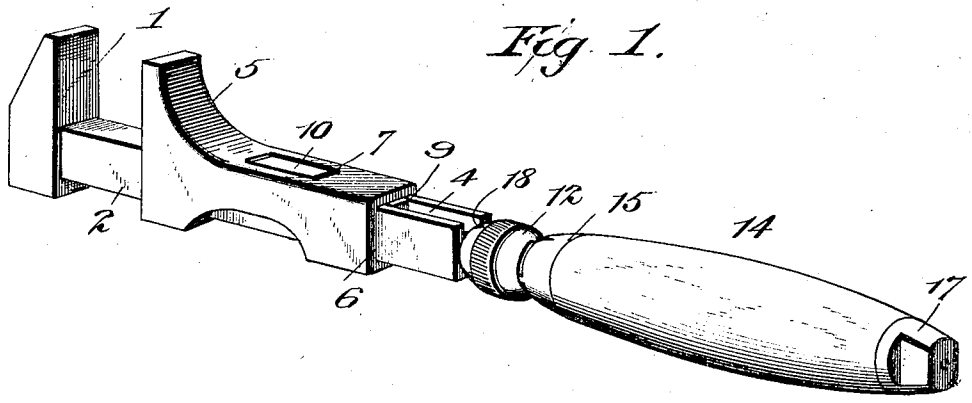


Fig. 2.

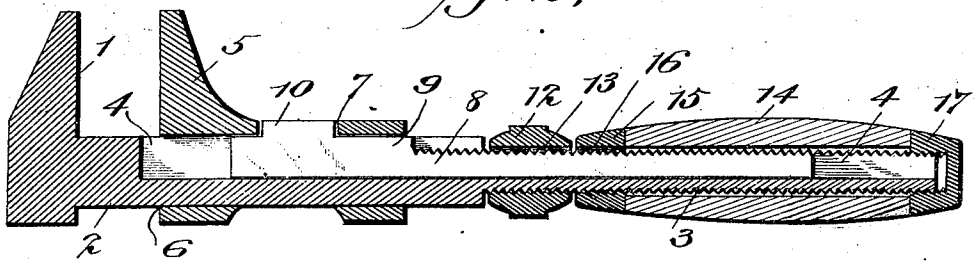


Fig. 3.

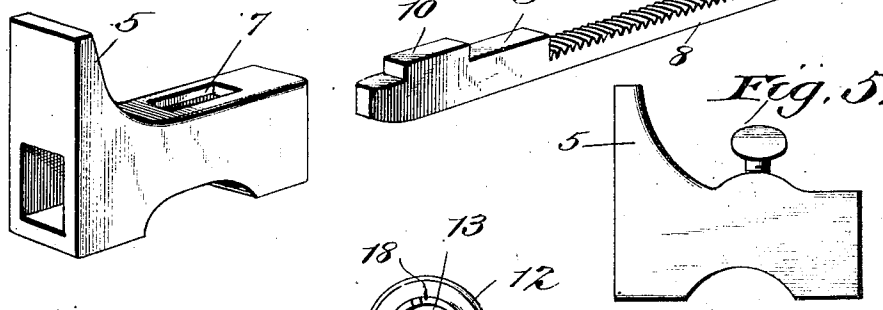


Fig. 5.

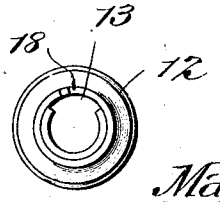


Fig. 4.

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UNITED STATES PATENT OFFICE.

ADALINE F. HODGMAN, OF DENVER, COLORADO, ADMINISTRATRIX OF MARCUS M. HODGMAN, DECEASED.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 667,392, dated February 5, 1901.

Application filed May 4, 1900. Serial No. 15,501. (No model.)

To all whom it may concern:

Be it known that MARCUS M. HODGMAN, deceased, formerly a citizen of the United States, residing at Denver, in the county of Arapahoe and State of Colorado, did invent a new and useful Wrench, of which the following is a specification.

The invention relates to wrenches, and more particularly to that class of wrenches known as "monkey-wrenches;" and it has for its objects to produce a wrench of this character which can be made very strong and durable and which can be adjusted to any point of its limit or capacity almost instantly and which can be securely locked against any movement in either direction by the partial rotation of the locking-nut.

With these objects in view the invention consists in the improved construction and novel arrangement of parts of a wrench, as will be hereinafter more fully set forth.

In the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the views in which they occur, Figure 1 is a perspective view of a wrench made in accordance with the invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 shows detail perspective views of the parts forming the movable jaw. Fig. 4 is an end view of the locking-nut, and Fig. 5 is a side elevation of the movable jaw.

Referring more particularly to the drawings, 1 indicates the rigid jaw, the shank of which is provided with the usual angular portion 2 and the screw-threaded portion 3. The upper or inner surface of the shank is provided with a longitudinal groove or recess 4, which extends substantially from end to end of the shank, the outer end being open for the insertion of a portion of the movable jaw.

The movable jaw 5 is provided with the usual recess 6 to fit upon the angular portion of the rigid jaw and has its upper wall provided with an opening 7. A bar 8 is arranged to slide in the groove 4 and has its head or enlarged portion 9 provided with a projection 10, which fits within the opening 7 for the purpose of moving the movable jaw back and forth upon the rigid jaw. The rear end of the bar has its upper surface provided with mutilated screw-threads to correspond with the mutilated threads upon the portion 3 of the shank of the rigid jaw.

Fitting upon the screw-threaded portion of the shank of the rigid jaw is a collar or locking-nut 12, the interior of which is screw-threaded and provided with a longitudinal groove 13 of a greater width than the width of the screw-threaded portion of the bar 8. To the rear of the nut 12 is a handle 14, one end of which is preferably provided with a ferrule 15, the interior of which is screw-threaded and provided with a groove or recess 16 to correspond with the groove in the nut 12. A nut 17 fits upon the extreme end of the shank 3 and prevents the removal of the handle 14 and nut 12. One or both ends of the nut 12 may be provided with a notch or mark 18, preferably located directly above the groove 13, which will indicate when the groove of the nut registers with the bar 8, and thereby releases the bar, so that the movable jaw can be moved back and forth the desired distance relatively to the rigid jaw. The ferrule on the handle is also preferably provided with indicating-marks, by means of which it can be so adjusted relatively to the bar 8 that the groove 16 will register therewith and permit of the free reciprocation of the bar at all times, the handle being locked in this position by means of the nut 17, which acts as a jam-nut and prevents the rotation of the handle after having been properly adjusted.

In using the wrench as above described the parts are assembled by inserting the head of the bar into the angular recess of the jaw with the projection thereon extending into the opening of the jaw. The shank of the rigid jaw is then inserted through the movable jaw and the locking-nut screwed on as far as it will go. The handle is then screwed upon the shank of the rigid jaw and locked in its relative position by means of the jam-nut, as above described. When it is desired to adjust the wrench, the nut 12 is rotated until its indicating-mark shows that the groove upon its inner surface registers with the bar 8, when the movable jaw can be moved into its desired position, after which a partial rotation of the nut will cause its screw-threads to engage with the screw-threads upon

the bar, and thereby lock the bar and the movable jaw against any possible movement in either direction. When it is desired to again adjust the jaw, the nut is again partially rotated until its groove registers with the bar, when the bar and the movable jaw can be again moved and again locked in their adjusted positions by the rotation of the nut. It is preferable to so arrange the parts that when the nut is screwed up as far as it can go—that is, with its forward end abutting against the rear end of the angular portion 2 of the shank of the rigid jaw—its groove will register with the bar and permit of the reciprocation of the bar. The handle is preferably screwed up to within less than one screw-thread's distance to the rear end of the nut, so that it will be impossible to rotate the nut one complete revolution in either direction. In this manner the wrench can be operated in places where it will be impossible to see the marks upon the nut, as all that would be necessary to adjust the wrench would be to turn up the nut as far as it would go, which would release the bar and permit of its being moved back and forth to properly adjust the movable jaw. As soon as the jaw has been adjusted a partial rotation of the nut to the left or so as to turn it backward upon the shank would lock the bar rigidly in its desired position. If it were then desired to release the jaw, the nut could be again turned up as far as it would go and the jaw released in the same manner as before and again adjusted and locked in the desired position by the reverse movement of the nut.

Having thus fully described this invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a wrench, the combination, with a rigid jaw, the shank of which is grooved longitudinally and has a portion thereof provided with screw-threads, of a movable jaw upon said shank, a bar detachably connected with the movable jaw and adapted to fit within said groove, a portion of said bar being screw-threaded to correspond with the screw-threads of the shank, and a grooved locking-nut upon the shank and the bar substantially as described.

2. In a wrench, the combination, with a rigid jaw, the shank of which is grooved longitudinally and is provided with an angular and a screw-threaded portion, of a movable jaw upon the angular portion of said shank, a bar detachably connected with the movable jaw and adapted to fit within the groove of the shank, the rear end of which is provided with mutilated screw-threads to correspond with the screw-threads on the shank, a nut upon the shank and the bar provided with an internal, longitudinal groove to correspond with the bar, a handle upon the shank to the rear of the nut, the bore of which is provided with internal screw-threads and a longitudinal groove, and a jam-nut for locking the handle upon the shank at less than the distance of one screw-thread to the rear of the nut, substantially as described.

3. In a wrench, the combination, with a rigid jaw, the shank of which is provided with an angular and a screw-threaded portion and is slotted longitudinally, of an angularly-recessed movable jaw upon the angular portion of said shank, the upper wall of which is provided with an opening, of a bar within the groove of the shank, the head of which is provided with a projection which extends into the opening of the wall of the movable jaw and the rear end is provided with mutilated screw-threads in position to register with the screw-threads of the shank, a handle upon the shank, and a locking-nut upon the shank between the handle and the angular portion of the shank, the interior of which is grooved longitudinally to register with the bar and one end is provided with an indicating-mark to correspond with said groove, substantially as described.

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