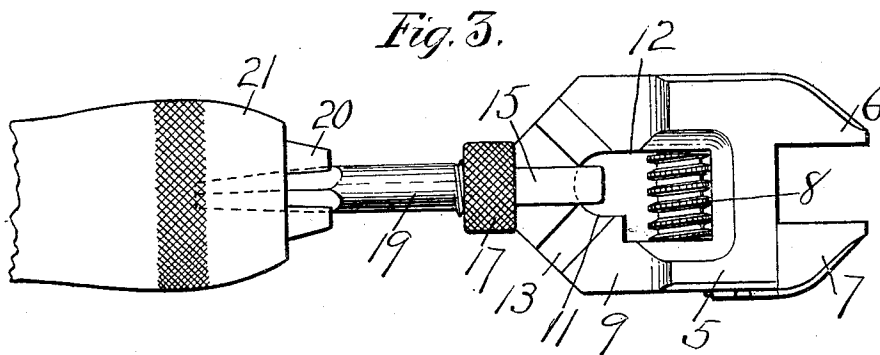
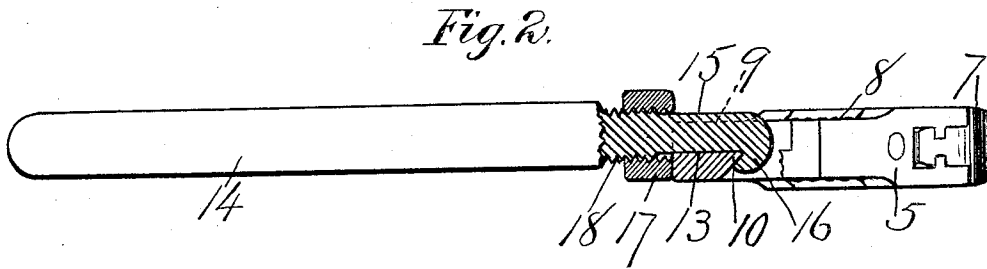
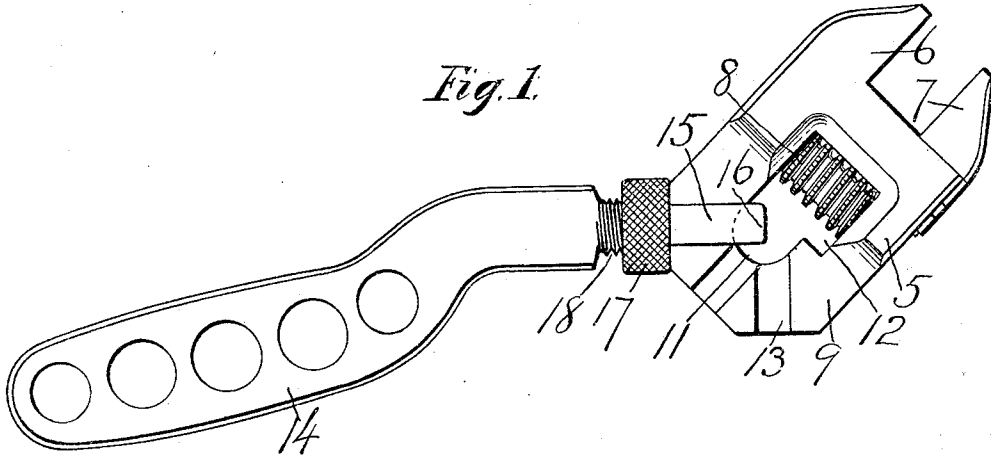


H. M. GAINES.
WRENCH.

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941,707.

Patented Nov. 30, 1909.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY M. GAINES, OF GLASTONBURY, CONNECTICUT.

WRENCH.

941,707.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HENRY M. GAINES, a citizen of the United States, and a resident of Glastonbury, in the county of Hartford and State of Connecticut, have invented a new and Improved Wrench, of which the following is a specification.

My invention relates to the class of devices more generally employed for engaging and disengaging threaded parts, and the object of the invention is to provide a device of this class having numerous novel features of advantage and utility.

One form of device in the use of which the object above set out among others may be attained is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a wrench embodying my invention. Fig. 2 is an edge view of the same with parts broken away to show construction. Fig. 3 is a side view showing the use of the wrench in connection with a bit-stock or like tool.

In the accompanying drawings the numeral 5 denotes a substantially rectangular jaw body having a fixed and a movable jaw, the fixed jaw 6 usually being formed integral with the body. The movable jaw 7 has a threaded surface to engage a feed screw 8 mounted to rotate in the body. These parts are of well known construction and form no part of the present invention, and further and detailed description is therefore deemed unnecessary herein. The body part 5 is preferably reduced in thickness, forming what may be termed a heel 9 which is provided with beveled corners. The jaw body at one side of the jaws is formed with an opening 12 through which extends a screw 8 and communicating with said opening is a recess 11 of less width than the width of the opening.

While my invention is shown and described herein with reference to a special kind of wrench, it will be obvious that the invention is not limited to use with any specific form of construction of wrench, but may be embodied in many different forms, and I do not therefore limit the invention to use with any specific form of wrench.

The wall of the recess or opening 11 is properly formed to receive an attaching hook located upon a handle to be hereinafter described. In the preferred form of construction and as shown herein the wall of the recess is beveled or undercut or

otherwise reduced as at 10, this beveled or otherwise reduced portion being located with special reference to grooves 13 formed in one face of the heel 9 and extending from the outer edge of the heel 9 to the wall 10. These grooves are located at angles with respect to each other, as shown in Fig. 1 of the drawings.

A handle 14 for use in operation of the wrench has a shank 15 terminating in a hook 16 formed to receive the lip 10. This shank is threaded as at 18 for the reception of a nut 17, this threaded portion being located on the shank at a distance from the hook 16 but in such position that when the nut is turned up against the edge of the body part or heel 9 the hook 16 will be drawn into engagement with the lip 10, thus securely fastening the handle to the body part. This forms a ready means of engagement and disengagement of the handle from the wrench body and is of especial advantage in a tool of this class in which the handle is frequently attached or detached as when operating upon a threaded member located in a comparatively inaccessible position and in which only a slight movement of the handle may be obtained to operate the wrench, and which thus necessitates the engagement and disengagement of the handle several times during each revolution of the part being operated upon.

The nut is so located that it may be readily manipulated with the hand grasping the handle so that only one hand is required both to operate the wrench and to engage and disengage the handle therefrom. This method of attachment is of especial advantage in the forms of device shown in Fig. 3, as it enables the end 19 of the shank to be readily formed for engagement as with the jaws 20 of a bit-stock 21. By thus constructing the tool with the attaching means as herein shown the wrench may be employed with a handle, the connection being such as to readily suit the device for uses in places where a threaded member is practically inaccessible, and at the same time provides for means for using in the place of the handle a shank constructed for use with a bit-stock by means of which the wrench may be readily operated to quickly place or remove a threaded member.

While I have shown and described herein one means of attachment of the handle or like part to the body, I do not limit myself

to the exact form shown and described, as this may be departed from to a greater or lesser extent without avoiding the invention.

I claim—

5 1. A wrench comprising a body portion provided with a pair of jaws and a heel, said heel formed with an inner and an outer edge, said inner edge being beveled, said heel having beveled outer corners and further having in one face a plurality of
10 grooves angularly disposed with respect to each other and extending from the outer edge to the inner edge of the heel, a handle terminating in a threaded extension provided at its outer end with a hook beveled to engage said beveled edge, the shank of said hook adapted to be seated in one of said
15 grooves and a nut mounted upon said handle and adapted to engage the outer edge of the heel for maintaining the hook in engagement with the inner edge of the heel whereby the handle is coupled to the heel.

2. A wrench including a body portion having a pair of jaws and further having a
25 heel formed with an inner and an outer edge, one of said edges being beveled, said heel further provided with a groove in one face extending from the outer to the inner edge, a handle having a hook beveled to engage said beveled edge, the shank of said
30 hook seated in said groove, and a nut mounted upon the handle and adapted to engage the other edge of the heel whereby the handle is coupled to the heel.

35 3. A wrench including a body portion having a fixed and a movable jaw and further having a heel formed with an inner and an outer edge, one of said edges being beveled, said heel having a groove in one face
40 thereof extending from the inner to the

outer edge, a handle having a hook and a shoulder, one of which is beveled to engage said beveled edge, the shank of said hook being seated in said groove, and a nut mounted upon the handle and adapted to engage the heel whereby the heel is coupled thereto. 45

4. A wrench including a body portion having a pair of jaws and further having a heel formed with an inner and an outer
50 edge, one of said edges being beveled, said heel further provided with a plurality of grooves in one face thereof, said grooves angularly disposed with respect to each other and extending from edge to edge of
55 the heel, a handle having a hook beveled to engage said beveled edge, the shank of said hook adapted to be seated in one of said grooves, and a nut mounted upon the handle adapted to engage the heel whereby the handle is coupled thereto. 60

5. A wrench including a body portion having a fixed and a movable jaw and further having an opening and a recessed heel whereby said heel is provided with an inner
65 and an outer edge, an adjusting means for the movable jaw, said opening permitting access to said adjustable means, said heel having its inner edge beveled and further having one face provided with a groove, a
70 handle having a hook beveled to engage said beveled edge, the shank of said hook being seated in said groove, and a nut mounted upon the handle and adapted to engage the other edge of the heel whereby the handle is coupled to the body portion. 75

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Witnesses:

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