A. G. HUNTER.

WRENCH.

APPLICATION FILED OCT. 15, 1910.

999,167.

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Fig. 1.

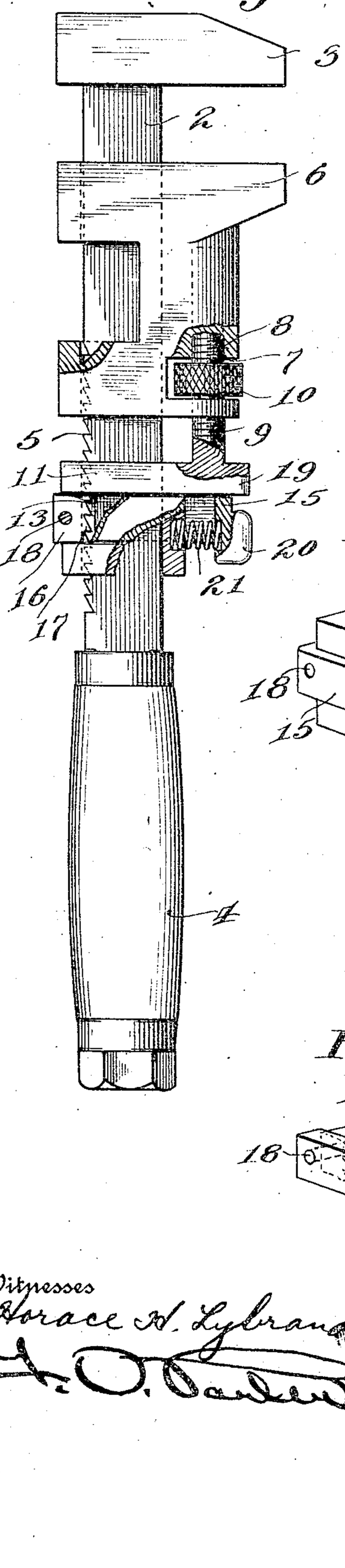


Fig. 2.

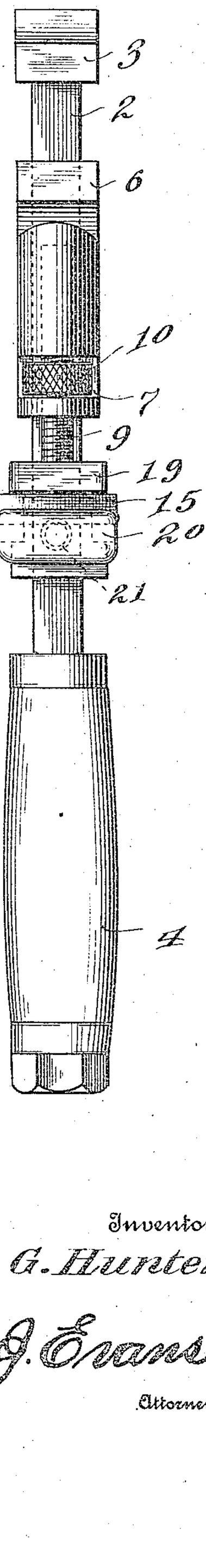


Fig. 3.

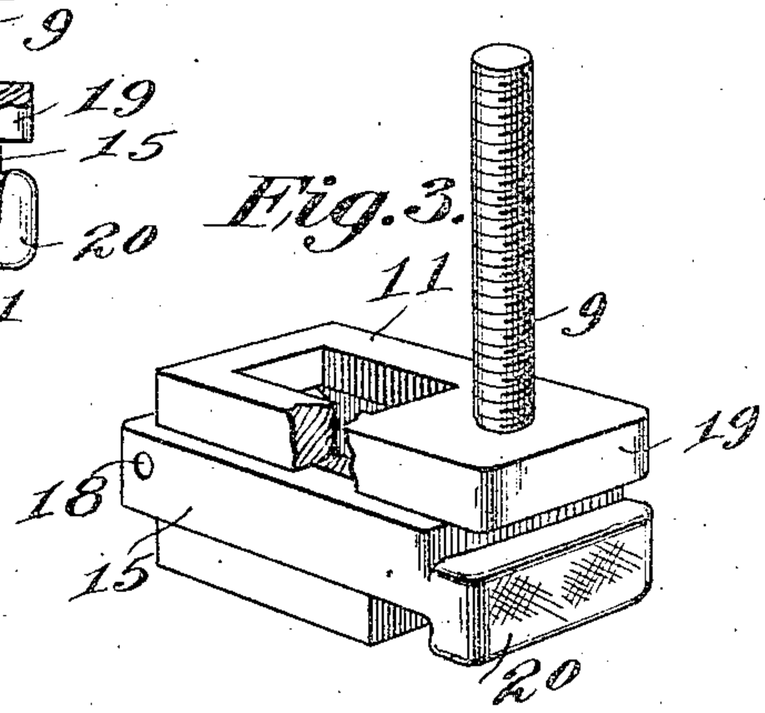
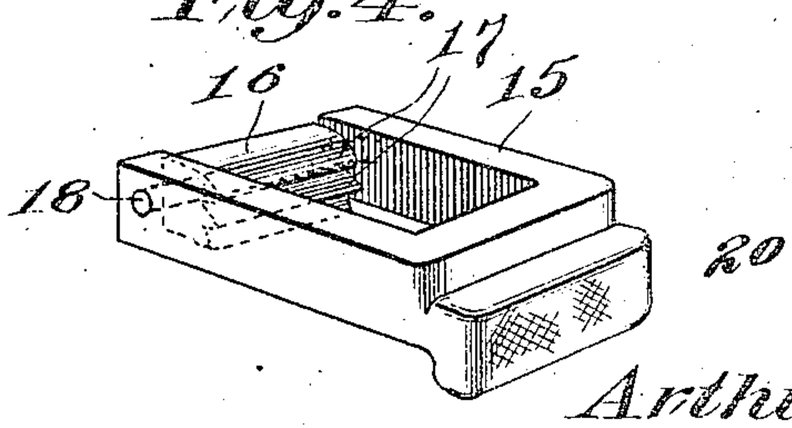


Fig. 4.



Witnesses

Horace N. Lybrand

H. O. Parker

Inventor

Arthur G. Hunter

By Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

ARTHUR G. HUNTER, OF DORCHESTER, TEXAS.

WRENCH.

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To all whom it may concern:

Be it known that I, ARTHUR G. HUNTER, a citizen of the United States, residing at Dorchester, in the county of Grayson and State of Texas, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to a wrench, and more particularly to the class of adjustable wrenches.

The primary object of the invention is the provision of a wrench in which the movable jaw thereof may be accurately adjusted, so as to rigidly clamp a nut or the like for the turning thereof.

Another object of the invention is the provision of a wrench in which the movable jaw may be rapidly and easily adjusted, whereby to conform to the different sizes of nuts on which the wrench is to be employed.

A further object of the invention is the provision of a wrench in which the movable jaw thereof is so mounted upon the shank of said wrench, whereby it may be quickly adjusted upon said shank and subsequently the said movable jaw moved into close and accurate position with respect to a nut for gripping the same, whereby it may be turned upon a bolt without any possibility of the wrench becoming loose upon the nut.

A still further object of the invention is the provision of a wrench which is cheap of construction, and thoroughly reliable and efficient in operation.

With these and other objects in view, the invention consists of the construction, combination and arrangement of parts, as will be more fully described hereinafter, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

In the drawings: Figure 1 is a side elevation of a wrench constructed in accordance with the invention. Fig. 2 is an edge elevation thereof. Fig. 3 is a detail perspective view of the carriage and the gripping yoke. Fig. 4 is a detail perspective view of the gripping yoke removed from the carriage.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, 2 designates the shank of the wrench, the same being preferably rectangular-shaped in cross section and having at one end thereof a rigid jaw 3 and at its opposite end a handle 4. In the rear edge of the shank 2 for a portion of its length is provided a rack formed of a plurality of teeth 5 for a purpose, as will be hereinafter more fully described.

Mounted upon the shank 2 of the wrench is a movable jaw 6, the same being of the usual form and is provided in its front edge with a notch 7, the latter being intersected by alining apertures 8, in which is mounted an adjusting screw 9, the latter having threaded thereon a knurled head or disk 10, the same being confined within the notch 7 in the movable jaw.

Slidably mounted upon the shank 2 is a carriage comprising a rectangular-shaped sleeve 11, the same being formed in opposite side faces with guide grooves 12, while in its rear face is provided an opening 13 and engaged in the grooves 12 are the side arms 14 of a U-shaped laterally movable yoke 15, the latter carrying a pivotal locking member comprising a block 16 having at its inner face a plurality of teeth 17, the same being adapted to mesh with the teeth 5 formed on the shank 2 of the wrench, the block 16 being connected between the arms 14 of the yoke by means of a pivot pin 18 passed through the said arms and the block. This block 16 works through the opening 13 in the sleeve 11, whereby the teeth 17 of the said block will mesh with the teeth 5 in the shank of the wrench.

Formed on the sleeve 11 and extending forwardly therefrom is an extension 19, in which is swiveled in any suitable manner the adjusting screw 9 mounted in the movable jaw 6 of the wrench. The yoke 15 is formed with a finger lug 20, between which latter and the forward end of the sleeve 11 is mounted a coiled expansion spring 21, the latter serving to sustain the teeth 17 of the block 16 in intermeshing engagement with the teeth 5 in the shank, the sleeve 11 being counter-bored to receive the spring, thus forming a seat for one end thereof and to prevent any possibility of the spring becoming accidentally detached from between the carriage and the said yoke.

The operation of the wrench may be explained as follows: The primary adjustment of the sliding jaw may be obtained by gripping the carriage and sliding it toward the rigid jaw upon the shank of the said wrench. After the adjustment, if it be found that the nut is not securely gripped, the secondary adjustment may be resorted to, which is ob-

tained by turning the knurled head 10, thus causing the latter to be rotated on the screw 9 thereby moving the movable jaw 6 away from the carriage, thus enabling the said movable jaw to accurately grip the said nut, thereby enabling the fine adjustment of the wrench.

It will be noted that by reason of the formation of the guide grooves 12 in opposite sides of the sleeve 11 it prevents any possibility of the disengagement of the locking member with the shank, for the reason that the yoke 15 is held securely on the sleeve by having the arms engaged in the grooves in the latter.

What is claimed is:

The combination of a wrench including a shank having a fixed jaw and provided with a rack, a movable jaw slidable on said shank, a carriage having a central opening slidably receiving said shank and having guide grooves in opposite sides and one end thereof, the said groove in the end of the carriage intersecting its central opening, a yoke embracing the carriage and slidably engaged in the side grooves therein, a toothed locking member pivoted in the yoke and working in the said end groove for engaging the rack, an adjusting screw integrally formed with the carriage, said movable jaw being formed with an opening adapted to receive said screw and having a recess dividing the path of said opening, a knurled nut for the recess and adapted to engage with the screw thereby connecting said movable jaw and carriage together, said carriage and yoke having alining counter sockets, and an expansion spring interposed between the yoke and the carriage and engaged in said sockets for sustaining the locking member in engagement with the rack.

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

ARTHUR G. HUNTER.

Witnesses:

MURRAY C. CAUDLE,

ALBERT DUKE.