No. 733,582. PATENTED JULY 14, 1903.

W. J. M. HAMES.

WRENCH.

APPLICATION FILED MAY 9, 1903.

NO MODEL.

Fig. 1.

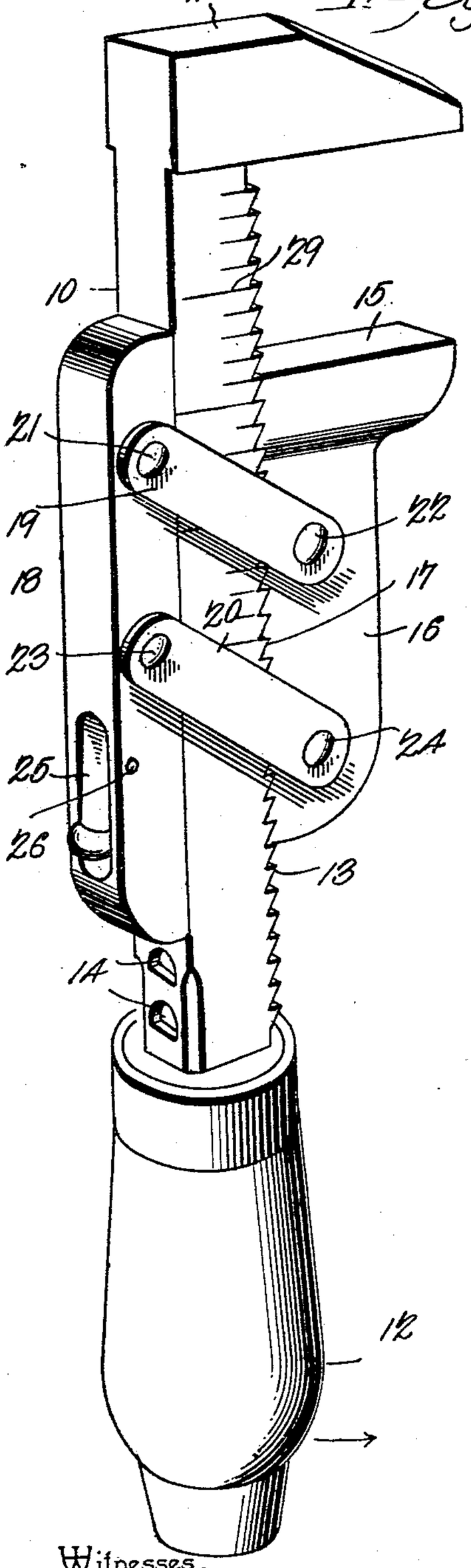
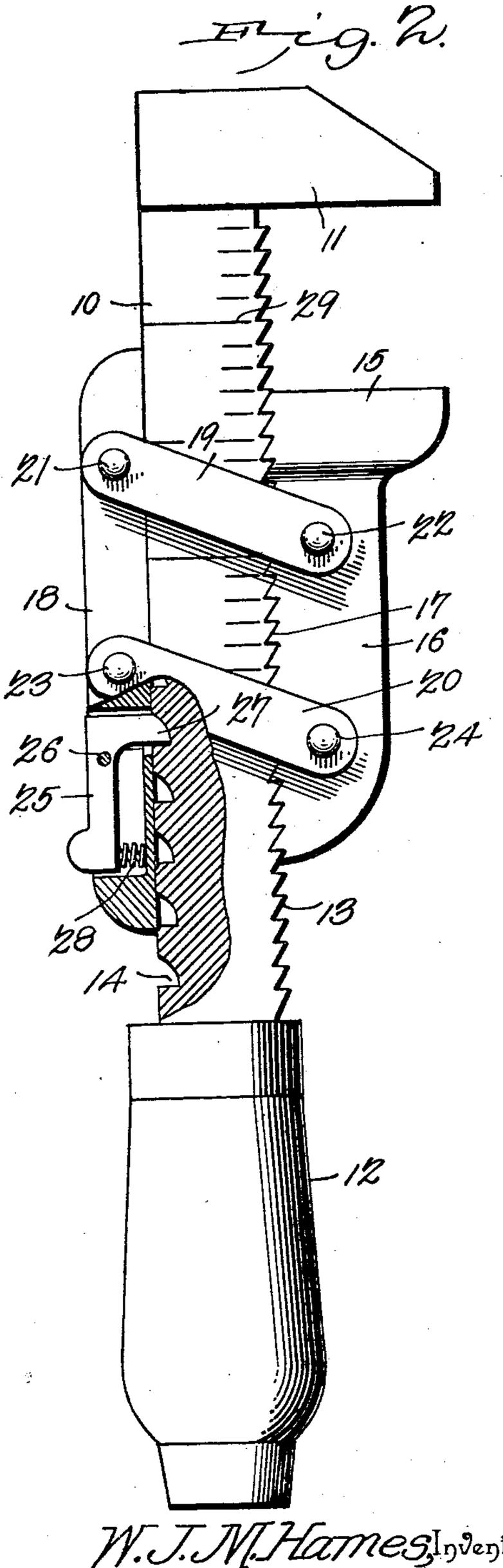


Fig. 2.



Witnesses
E. D. Stewart
C. N. Woodward

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by Crosby & Co
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No. 733,582. Patented July 14, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM J. M. HAMES, OF MARIETTA, GEORGIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 733,582, dated July 14, 1903.

Application filed May 9, 1903. Serial No. 156,468. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. M. HAMES, a citizen of the United States, residing at Marietta, in the county of Cobb and State of Georgia, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches, more particularly to the class of quick-action wrenches, and has for its object to simplify and improve devices of this character and produce a device which may be cheaply constructed, easily and quickly adjusted, and which will firmly grip the nut or other object with which it is engaged; and the invention consists in certain novel features of construction and combination of parts, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a perspective view of the implement. Fig. 2 is a side elevation, partially in section.

The wrench comprises a stock or shank 10, having an integral jaw 11 extending laterally from one end and terminating in a handle 12 at the other end. The stock 10 is provided upon opposite sides with spaced ratchet-teeth, (denoted, respectively, at 13 14.) The movable jaw is formed with the opposing grip-head 15 and shank 16, the latter having ratchet-teeth 17, adapted to interengage the teeth 13, as shown. Upon the opposite side of the stock 10 from the movable jaw 15 16 is a grip-plate 18, connected to the movable jaw member by spaced bars 19 20, pivotally connected, as by rivets 21 22 23 24, upon opposite sides of the stock 10 and disposed at an angle to the plane of the stock, as shown. By this simple arrangement the jaw and plate members 16 18 may be detached from engagement with the stock by merely moving the jaw member outward and toward the jaw member 11 and may be thus adjusted to fit any-sized nut, and when so adjusted the pressure of the thumb of the operator upon the lower end of the plate 18 will firmly clamp both the parts 18 16 to the stock, with the teeth 17 interengaging the teeth 13 and effectually preventing any longitudinal movement of the movable jaw upon the stock and causing the wrench to thereby firmly grip the nut when the handle 12 is moved in the direction of the arrow in Fig. 1. A light pressure of the thumb only will be required upon the clamp-plate to engage the parts to the stock, and as soon as the strain of the handle is exerted the engagement of the jaw 16 and stock becomes firmly established, and any increase of strain will correspondingly increase the grip, as the greater the strain the stronger the grip, as will be obvious.

The grip-plate 18 is provided with a cavity in which a detent 25 is pivoted, as at 26, and having one end 27 adapted to engage the ratchet-teeth 14 and held yieldably in engagement therewith by spring 28, as shown in Fig. 2. By this means the action between the parts is rendered partially automatic and relieves the thumb of the operator from strains and decreases the pressure required to operate the clamp-plate. This an important feature of the invention, and materially decreases the labor necessary to operate the implement.

The stock 10 will be provided with a graduated scale 29 to enable the jaw member 15 16 to be "set" to the required size of nut before the wrench is applied. This is a very convenient adjunct to the implement and materially assists in the operation and reduces the time required to adjust the movable jaw member.

The implement will preferably be formed of steel, but may be of other metal, if required, and may be constructed in various sizes to enable it to be employed for various kinds of work.

I claim—

1. A wrench comprising a stock having a stationary jaw extending laterally at one end and provided with spaced ratchet-teeth, a movable jaw having opposing ratchet-teeth adapted for engagement with the ratchet-teeth on said stock, a grip-plate movable over the side of the stock opposite to said movable jaw, and diagonally-disposed spaced bars connecting said clamp-plate and movable jaw, substantially as described.

2. A wrench comprising a stock having a stationary jaw extending laterally at one end

and provided with spaced ratchet-teeth, a movable jaw having opposing ratchet-teeth adapted for engagement with the ratchet-teeth on said stock, a grip-plate movable over the side of the stock opposite to said movable jaw, and spaced bars connecting said movable jaw and said clamp-plate upon opposite sides of said stock and disposed at an angle to the plane of the stock, substantially as described.

3. A wrench comprising a stock having spaced ratchet-teeth upon opposite sides and with a stationary jaw extending laterally at one end, a movable jaw having opposing ratchet-teeth adapted for engagement with the ratchet-teeth upon one side of said stock, a clamp-plate movably engaging the opposite side of said stock and having a spring-controlled detent movably carried by said clamp-plate and operating against the ratchet-teeth on the adjacent side of the stock, and spaced bars movably connecting said movable jaw and said clamp-plate and disposed at an angle to the plane of the stock, substantially as described.

4. A wrench comprising a stock having a stationary jaw extending laterally at one end and provided with spaced ratchet-teeth, a movable jaw having opposing ratchet-teeth adapted for engagement with the ratchet-teeth on said stock, a grip-plate movable over the side of the stock opposite to said movable jaw, diagonally-disposed spaced bars connecting said clamp-plate and movable jaw, and graduated-scale lines upon said stock to enable the movable jaw member to be set at a predetermined gage, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM J. M. HAMES.

Witnesses:
J. H. MURRAY,
J. W. MORRIS.