

932,951.

A. R. BELL.
WRENCH.
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Fig. 1.

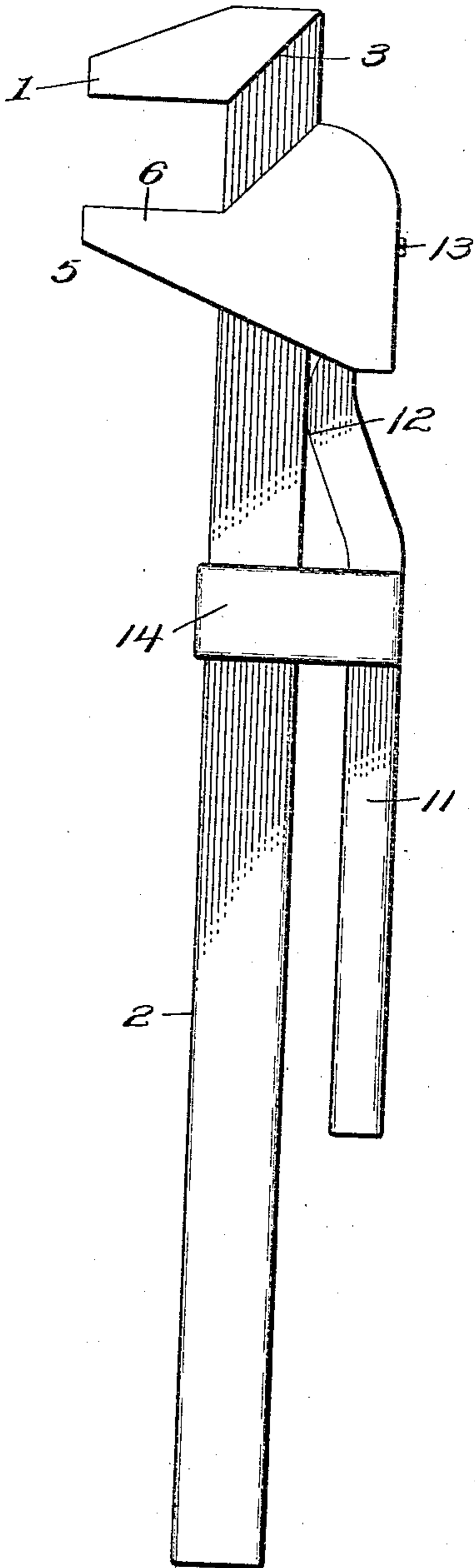
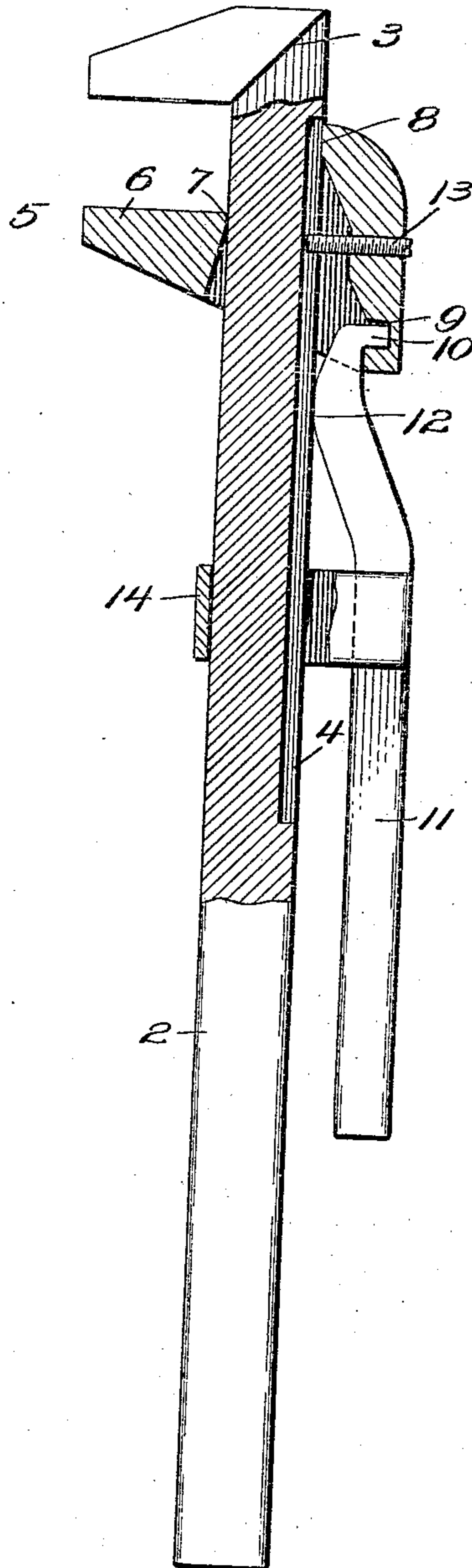


Fig. 2.



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WRENCH.

932,951.

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To all whom it may concern:

Be it known that I, ANGUS R. BELL, a subject of the King of Great Britain, and a citizen of the Dominion of Canada, residing at Unity, in the Province of Saskatchewan and Dominion of Canada, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to quick acting wrenches, of that class comprising a stationary and a movable jaw, and the object of the invention is to provide a simple and comparatively inexpensive wrench of this class wherein the use of springs or analogous devices is dispensed with, one wherein the movable jaw is provided with biting lips arranged at an angle to each other upon opposite sides of the shank, the movable jaw being provided with a lever for tilting the same whereby the biting lips are brought into engagement with the shank of the stationary jaw and sustained in such position by the hand of the operator grasping the lever and the shank, and which is so arranged that when the pressure upon the lever is released, the movable jaw is free to slide upon the shank of the fixed or stationary jaw.

With these and other objects in view the invention resides in the novel construction and arrangement of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a wrench constructed in accordance with the present invention. Fig. 2 is a similar view, parts being shown in section to more clearly illustrate the details of the invention.

In the accompanying drawings the numeral 1 designates the stationary jaw. This jaw 1 is of the ordinary formation and is provided with a centrally arranged reduced elongated shank 2. This shank 2 is arranged at substantially a right angle to the head 1, and the surplus material between the lower face of the head 1 and the upper outer edge of the shank 2, where it is connected with the head 1, is cut away to provide angular faces 3 upon the head 1, as clearly illustrated in the figures of the drawings. The outer face of the shank 2 is provided with a centrally arranged longitudinally extending channel 4, the purpose of which will presently be apparent.

The numeral 5 designates the movable jaw of the wrench. This jaw 5 is provided with an upper biting face arranged in a

parallel line with the biting face of the stationary jaw 1. The movable jaw 5 has a rearwardly extending angularly arranged body portion, extending upwardly from the biting face of the jaw 5 at an angle corresponding with that of the cut away portion 3 of the jaw 1. By this arrangement it will be noted that when the jaw 5 is forced upwardly upon the shank 2 it will fit snugly against the jaw 1, so that the wrench can be successfully employed in connection with small bolts or other devices. The slidable jaw 5 is preferably constructed of a single casting having a biting or engaging portion 6 positioned in parallel relation with the biting face of the jaw 1, and the jaw 5 is provided with a cut away portion or channel by which it is positioned upon the shank 2. This channel is arranged at an angle from the point at which the biting jaw 6 engages the shank 2, the said channel being extended outwardly as clearly illustrated in Fig. 2 of the drawings, so as to provide a biting lip 7. The channel upon the opposite side of the shank 2 is cut away so as to arrange a biting face 8 which is arranged at a suitable angle above the biting lip 7 of the face 6. The channel upon this side of the jaw is also extended outwardly and provided with a depression 9 adapted for the reception of a lip 10 provided upon a handle 11. This handle 11 adjacent the lip 10 is provided with an offset inwardly extending portion 12 adapted to serve as a fulcrum, whereby, when pressure is exerted upon the handle 12, the movable jaw 5 will be tilted so as to bring the biting or engaging points 7 and 8 into contact with the shank 2. It being understood that the biting faces or lips 7 and 8 are arranged at an angle one above the other, when such pressure is exerted upon the lever 11, the offset portion 12 of the said lever acting as a fulcrum forces the engaging faces 7 and 8 tightly, and at an angle, against the opposite faces of the shank 2, thereby, as long as pressure is retained upon the handle 11, securely locking the jaw 5 upon the shank 2. The jaw 5 is also provided with a guide pin 13 which is adapted to work within the slot or channel 4 so as to limit the movement of the jaw in one or in both directions.

The handle 11 is provided with a band or collar 14, which is preferably integrally formed thereon, and which is adapted to serve as a means for retaining the handle in its engagement with the jaw 5.

The guide pin 13 may be constructed of a threaded pin, as illustrated in Fig. 2 of the drawings, so that when the parts are to be detached it is simply necessary to remove the pin 13 and to allow the movable jaw 5 together with the handle 11 to slide off the shank 2 of the wrench.

It is to be understood that the biting faces 7 and 8 of the movable jaw 5 as well as the fulcrum point 12 of the lever 11 bear only slightly against the sides of the shank 2, so as to allow the movable jaw and lever to slide freely upon said shank until pressure is exerted upon the lever 11 forcing its handle portion toward the shank 2.

From the above description, taken in connection with the accompanying drawings, it will be noted that I have provided an extremely simple, cheap and effective quick action wrench, one which may be readily and easily adjusted to grasp a nut or the like, which will be effectively retained upon the nut as long as pressure is exerted upon the handle, and which may be easily and quickly removed when the pressure upon the handle is released.

Having thus fully described the invention, what is claimed as new is:

1. In a wrench, the combination with a movable and a stationary jaw, of a shank for the stationary jaw, said movable jaw being provided with a central bore and having the faces provided by said bore provided respectively with oppositely angularly disposed biting edges, and a lever loosely connected with the movable jaw for tilting the same to bring the oppositely disposed angularly arranged biting edges into contact with the sides of the wrench.

2. A wrench provided with a movable and a stationary jaw, a shank upon the stationary jaw, the movable jaw being provided with a biting face and an upwardly and rearwardly extending portion, the movable

jaw being provided with a centrally arranged substantially V-shaped channel adapted to engage the shank of the stationary jaw so as to provide an upper and a lower biting surface upon two sides of the shank, and a handle or lever having an offset portion adapted to contact one of the faces of the shank and to be loosely connected with the movable jaw whereby pressure upon the lever will tilt the movable jaw and bring the biting lips thereof into contact with two of the faces of the shank.

3. A wrench comprising a stationary and a movable jaw, the stationary jaw being provided with a right angularly disposed centrally arranged shank, the jaw having its sides cut away at an angle from its lower to its upper face at its points of connection with the shank, the shank being provided upon one of its faces with a longitudinally extending channel, the movable jaw having its sides arranged at an angle corresponding with the angularly cut away portions of the stationary jaw and being provided with an outwardly extending biting portion, the movable jaw being provided with a substantially V-shaped slot or opening by which it is positioned upon the shank, the jaw having a removable guide pin adapted to engage within the channel of the shank, the interior of the movable jaw being provided with an offset recess, a lever having a lip engaging the recess, said lever being provided with an offset or fulcrum portion adapted to normally engage the shank, and said lever being provided with a ring or bend encircling the shank, substantially as and for the purpose set forth.

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

ANGUS R. BELL.

Witnesses:

G. C. HEARD,
H. A. BRUCE.