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W. CRONK.
WRENCH.

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1,041,967.

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Fig. 1

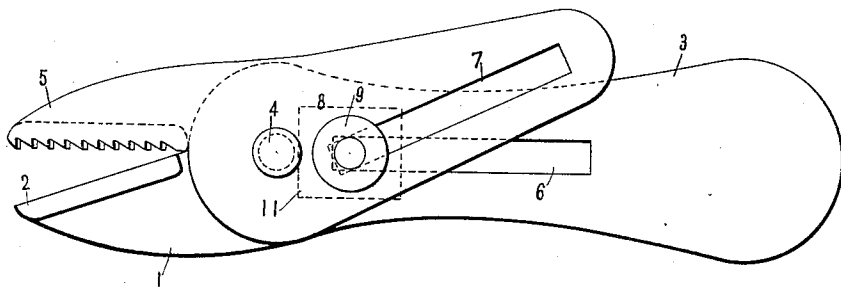


Fig. 2

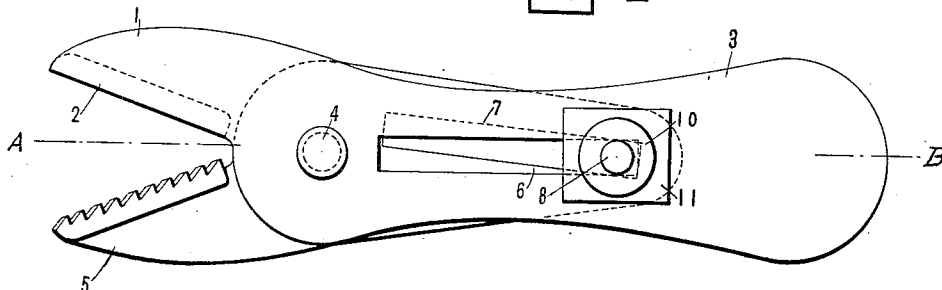
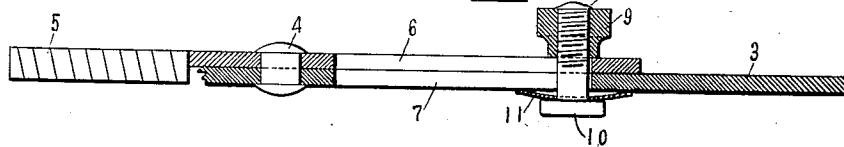


Fig. 3



WITNESSES

Aug. P. Jorgensen
T. A. Blair

INVENTOR

Wm Cronk
BY
Dues. Warfield & Dues
ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM CRONK, OF MONTOUR FALLS, NEW YORK.

WRENCH.

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To all whom it may concern:

Be it known that I, WILLIAM CRONK, a citizen of the United States, residing at Montour Falls, in the county of Schuyler and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to wrenches, and particularly hand wrenches adapted to turn either round or angular objects such as pipes or nuts.

One of the objects of the present invention is to provide a simple and practical device of the above character adapted to be used on different sizes of pipes or nuts without changing the adjustment.

Another object is to provide an improved adjusting means for maintaining the wrench in adjusted position.

Another object is to provide a quick acting wrench.

Other objects will be in part obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth, and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein is illustrated one of many possible embodiments of my invention, Figure 1 is a plan view of the wrench in its minimum adjusted position; Fig. 2 is a similar view showing the opposite side of the wrench in its maximum adjusted position; and Fig. 3 is a sectional view taken on the line A—B, Fig. 2.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring to the drawings in detail, 1 represents one of the jaws of the wrench having a smooth engaging surface 2 and a handle 3 integral with the jaw 1. Pivotaly mounted on this handle at the point 4 is a coacting jaw member 5 having a roughened engaging surface which preferably consists of teeth inclined toward the pivot point 4, and also inclined at an angle to the sides of the jaw, as shown in Fig. 3, in order that the jaw will better bite into the article to be turned. The jaws themselves are pro-

vided with widened or offset parts, as shown, in order to provide larger gripping surfaces, which will also be opposite each other. These jaw members are provided with slots 6 and 7, respectively, disposed at an angle to each other, and passing through these slots and adapted to slide therein is a bolt 8 provided at one side with a threaded nut or thumb screw 9 and at the opposite side with a head 10. Between this head 10 and the side of the member 3 is placed a slightly concave square spring plate 11. The construction and arrangement of these parts is such that the thumb screw 9 is tightened sufficiently to clamp the spring member 11 against the side of the member 3 with sufficient force to hold these parts in adjusted position, yet permit the bolt to be moved bodily along the slots from one end to the other with slight exertion and without loosening the thumb screw. The end of the bolt is swaged, as at 12, to prevent the thumb screw 9 from becoming loosened. It is, of course, to be understood that as the parts wear down the thumb screw 9 may be tightened and the end of the bolt 8 further swaged as may be necessary.

The operation of this device is substantially as follows: If the wrench, when in the adjusted position shown in Fig. 1, is not sufficiently large to accommodate the pipe or nut to be turned, the bolt is moved toward the position shown in Fig. 2 until the inclined jaws have spread sufficiently to accommodate the article to be turned. The inclined teeth on the member 5 will then engage the article, and as the wrench is moved in one direction will turn the same, but when moved in the opposite direction will release their engagement in somewhat the manner of operation of a Stilson pipe wrench. It will thus be seen that by having the jaws inclined and the adjusting mechanism frictionally held in adjusted position in contact with the sides of the wrench, that it will be unnecessary to adjust the wrench for slight differences in size of the articles to be turned, and also when once placed in adjusted position will not materially vary therefrom in use, as is common in many forms of wrenches.

It is thus seen that this invention provides for and attains, among others, the objects and advantages above set forth in a practical, simple and efficient manner.

As many changes could be made in the

above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

15 Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an article of the character described, in combination, a pair of pivotally connected members, a pivot therefor and resilient means independent of said pivotal connection for urging said members together to hold the same in adjusted position.

2. In an article of the character described, in combination, a pair of pivotally connected members, a pivot therefor, adjusting mechanism independent of the pivotal connection, and spring means associated with said adjusting mechanism for frictionally holding said members in adjusted position.

3. In an article of the character described, in combination, a pair of members pivotally connected intermediate their ends adapted to form jaws at one end and a handle at the opposite end, a pivot about which said members are adapted to turn and spring adjusting means independent of the pivotal connection engaging said members for holding the same in relatively fixed position.

4. In an article of the character described, in combination, a pair of pivotally connected members providing jaws at one end thereof, a pivot for said members and movable spring means independent of the pivotal connection adapted frictionally to hold said members in adjusted position.

5. In an article of the character described, in combination, a pair of pivotally connected members providing jaws at one end thereof, a pivot for said members, said members having slots therein, and spring held means engaging said slots at a point relatively remote from the pivotal connection for holding the members together in adjusted position.

6. In an article of the character described, in combination, a pair of pivotally connected members providing jaws at one end thereof, a pivot about which said members are adapted to turn, said members having slots therein inclined at an angle to each other, a bolt passing through said slots, and spring means independent of the pivotal connection for holding said bolt in adjusted position.

7. In an article of the character described, in combination, a pair of members pivotally connected intermediate their ends, diverging coacting jaws on said members, said members having slots therein inclined at an angle to each other, and spring held means passing through said slots for holding said members together in adjusted position.

8. In an article of the character described, in combination, a pair of members pivotally connected intermediate their ends, a pivotal connection therefor, diverging coacting jaws on said members, said members having slots therein inclined at an angle to each other, and a bolt passing through said slots having a resilient friction plate thereon for holding the same in adjusted position.

9. In an article of the character described, in combination, a pair of members pivotally connected intermediate their ends, a pivotal connection therefor, diverging coacting jaws on said members, said members having slots therein inclined at an angle to each other, a bolt passing through said slots provided with a head at one end and a thumb screw at its opposite end, and a spring plate intermediate one of said parts and the adjacent member for holding said bolt in adjusted position.

10. In an article of the character described, in combination, a pair of members pivotally connected intermediate their ends, a pivotal connection therefor, diverging coacting jaws on said members, said members having slots therein inclined at an angle to each other, a bolt passing through said slots provided with a head at one end and threaded means at its opposite end, a spring plate intermediate one of said parts and the adjacent member for holding said bolt in adjusted position, and means associated with said bolt to prevent said threaded means from becoming loosened.

11. In an article of the character described, in combination, a pair of members pivotally mounted intermediate their ends, a pivotal connection therefor, and diverging jaws on said members, one of said jaws having teeth inclined toward the pivotal connection and at an angle to the side of the members, said members having spring held adjusting means independent of the pivotal connection associated therewith whereby said jaws are held together in adjusted position.

12. In an article of the character described, in combination, a pair of members pivotally mounted intermediate their ends, a pivotal connection therefor, diverging jaws on said members, one of said jaws having teeth inclined toward the pivotal connection and at an angle to the side of the members, said members having slots therein inclined at an angle to each other, and

spring held frictional means independent of the pivotal connection passing through said slots adapted to hold said jaws in adjusted position.

5 13. In an article of the character described, in combination, a pair of members pivotally mounted intermediate their ends, a pivotal connection therefor, diverging
10 jaws on said members, one of said jaws having teeth inclined toward the pivotal connection and at an angle to the side of the members, said members having slots therein, a bolt passing through said slots, a head at one end of said bolt and a threaded member at the opposite end, and resilient
15 means between one of said parts and the adjacent member for holding said bolt in adjusted position.

20 14. In an article of the character described, in combination, a pair of members

pivotally mounted intermediate their ends, a pivotal connection therefor, diverging jaws on said members, one of said jaws having teeth inclined toward the pivotal connection and at an angle to the side of the member, said members having slots therein, a bolt passing through said slots, a head at one end of said bolt and a threaded member at the opposite end, and a substantially flat friction member interposed between the head of said bolt and the adjacent member for holding said adjusting mechanism in adjusted position. 25 30

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

WILLIAM CRONK.

Witnesses:

E. G. CRONK,
G. H. CARRIER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."