

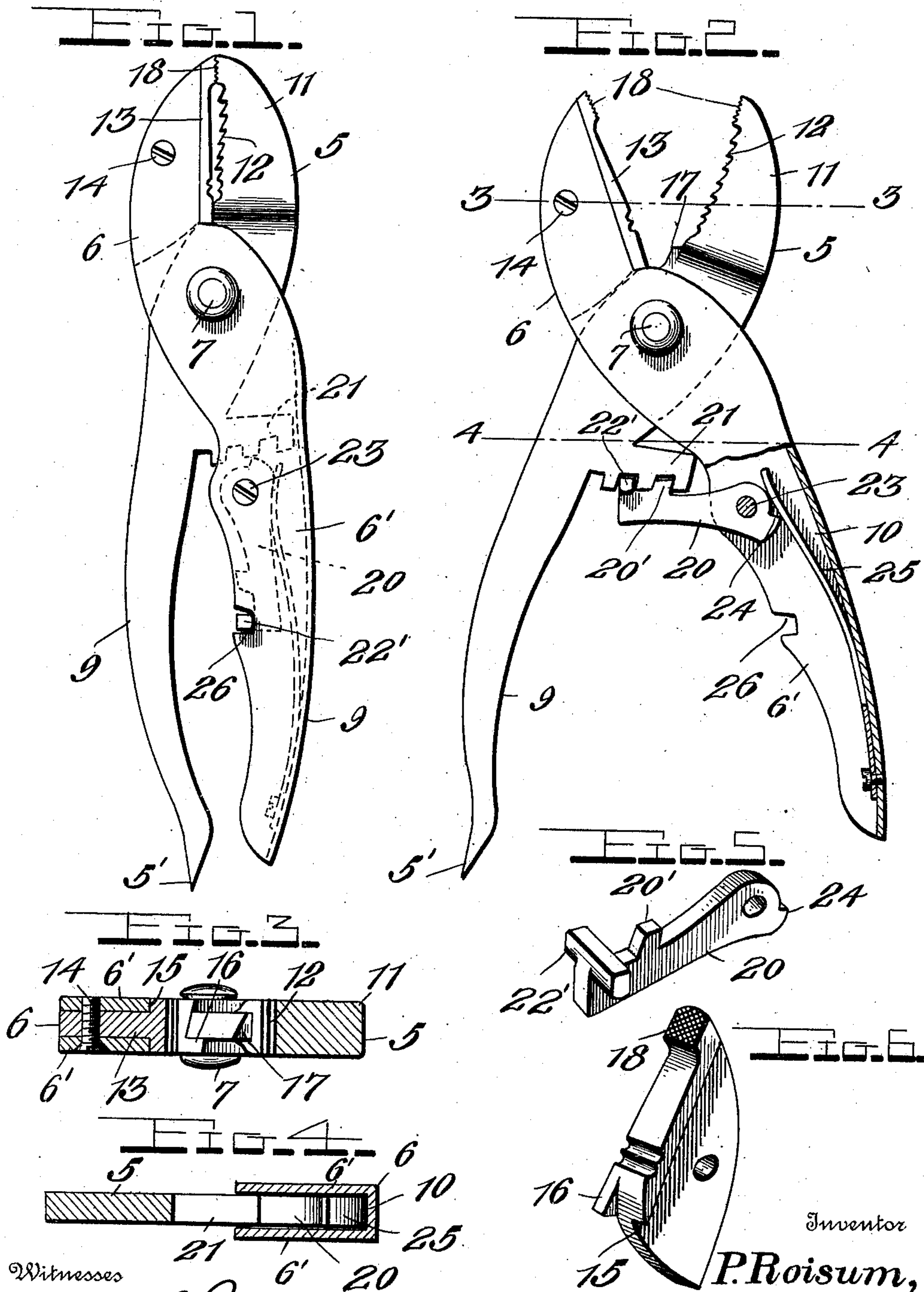
P. ROISUM.

WRENCH.

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986,593.

Patented Mar. 14, 1911.



Witnesses

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WRENCH.

986,593.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, PEDER ROISUM, a citizen of the United States, residing at Edmore, in the county of Ramsey and State of North Dakota, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to combination tools and has for its object to provide a simple and inexpensive device of this character which is so constructed that the same may be readily adjusted and used for various
15 purposes.

Another object of the invention is to provide a tool of this character in the form of a pair of pliers provided with wrench jaws, simple and efficient means being employed
20 for relatively adjusting the jaws and maintaining the same in such adjusted position.

A further object resides in the provision of two crossed pivoted members one of which extends through the other, said latter member being provided with a removable jaw adapted to co-act with a jaw formed upon the other member, said jaws being adapted to receive and grip a nut, pipe or other article.

30 With these and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts fully described and claimed and illustrated in the accompanying drawings,
35 in which—

Figure 1 is a side elevation of a tool constructed in accordance with the present invention; Fig. 2 is a similar view showing the jaw open and one of the pivoted members partly in section; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a section taken on the line 4—4 of Fig. 2; Fig. 5 is a detail perspective view of the locking arm; and Fig. 6 is a similar view of the removable jaw.
45

Referring more particularly to the drawing 5 and 6 indicate the pivoted members which are connected by a transverse pivot pin 7. These members are each formed with a handle portion 9. As will be noted from reference to the accompanying drawing these

members are differently formed, the member 6 being constructed from a sheet metal plate bent upon itself to provide the parallel side plates 6' whereby a longitudinally extending channel 10 is formed between said plates. The other of the pivoted members 5 is of solid construction and extends between the side plates 6' of the members 6. The member 5 has its shorter end thickened or enlarged to form a jaw 11, said jaw being provided in one of its longitudinal edges with teeth or serrations 12. The other end of the member 5 is sharpened as shown at 5' to provide a screw driver.

65 The end of the channeled member 6 which is opposed to the jaw 11 formed upon the member 5 is adapted to receive a jaw piece 13, said jaw being removably held between the parallel sides of the member 6 by means of the screw 14. As shown in detail in Fig. 6, this jaw is formed upon its inner longitudinal edge with the flanges 15 which engage upon the forward ends of the plates 6' of the member 6. The other longitudinal edge of the jaw 13 is curved so that when the same is arranged in position, said edge is flush with the outer edges of the plates 6'. The inner end of the jaw is formed with a shoulder 16, and the jaw 11 is provided with a lug 17 having a sharpened edge adapted to co-act with the shoulder 16 whereby wires may be easily and quickly cut by placing the same between the jaws and compressing the handle portions of the members 5 and 6. The outer ends of the jaws 11 and 13 are roughened as shown at 18 and in use are adapted to grip upon the opposite sides of a nut so that the same may be quickly removed from the bolt.

90 The handle portion of the member 6 has arranged between the side plates thereof a locking bar 20. This locking bar is adapted to engage with the teeth of a transversely extending rack arm 21 formed upon the member 5. In order to effect a secure locking engagement between the bar and the arm, said bar is formed with a lug 20' adapted to be received between adjacent teeth of the arm 21. Upon the extremity of the bar 20 a lug is formed which is also adapted to be received between the rack teeth and extends

beyond the opposite faces of the locking bar to provide suitable finger pieces 22' by means of which said bar may be manipulated. As shown in Fig. 2, the engagement of the locking bar with the teeth of the arm 21 will rigidly maintain the jaws in their adjusted positions, the space between the jaws being increased or decreased as desired by the insertion of the lugs on the locking bar between any of the rack teeth. The bar 20 is mounted between the parallel plates 6' of the member 6 upon the pin or screw 23, said bar being formed with an extension 24 upon its pivoted end which engages with the free end of a leaf spring 25, said spring being secured at its other end to the member 6. When the bar 20 is moved to locking position, this spring engages with the extension and maintains said bar in such position against accidental release. Also when the locking bar is positioned between the side plates 6' the spring 25 engages the same forwardly of its pivotal point and holds the bar in such position. The plates 6' are provided with recesses or notches 26 to receive the finger lugs 22' formed upon the end of the locking lever. These lugs extend slightly beyond the outer faces of the plates so that they may be engaged by the fingers of the operator to readily withdraw the locking bar from the handle of the member 6.

From the above it is believed that the construction and operation of my improved tool will be readily understood without necessitating any further description. The device is extremely simple and by providing the removable jaw 13, the same may be easily and quickly removed and others substituted so that the tool may be applied to a large number of different uses. It is also easily and quickly adjusted and is practically indestructible. It may, moreover, be manufactured at a comparatively low cost and provides a tool which is extremely convenient and will efficiently perform the various functions for which it is devised.

While I have shown and described the preferable embodiment of my invention it will be understood that the same is susceptible of various minor modifications without departing from the essential features or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. A tool of the character described, comprising crossed pivotally connected members, each of said members having a jaw disposed upon one side of the pivot and a handle on the other side thereof, a laterally extending rack carried by one of the handles, a pivoted locking member carried by the other handle engageable with the teeth of the rack, and means for yieldingly hold-

ing said locking member in its operative or inoperative position.

2. A tool of the character described, comprising crossed pivotally connected members, each of said members having a jaw disposed upon one side of the pivot and a handle on the other side thereof, one of said handles having a longitudinal channel therein, a rack formed on the other handle adapted to extend into said channel, a locking bar pivotally mounted at one end in the channel and engageable with the teeth of said rack, finger pieces formed on the locking bar adapted to engage in the edges of the channeled handle, and a spring arranged in the channel engaging said bar at its pivoted end to yieldingly hold the same in its operative or inoperative position.

3. A tool of the character described, comprising crossed pivoted members having opposed jaws, each of said members being provided with a handle, one of said handles being of substantially U-shaped cross-sectional form to provide a longitudinal channel, a laterally extending toothed arm carried by the other handle adapted to extend between the sides of the U-shaped handle, a locking bar movable between the sides of the U-shaped handle having a lug formed thereon to engage between the teeth of said arm, the edges of said U-shaped handle having recesses therein, finger pieces on the locking bar to engage in said recesses when the bar is in its inoperative position, and means arranged in the channeled handle for yieldingly holding said bar in its operative or inoperative position.

4. A tool of the character described, comprising crossed pivotally connected members, each of said members having a jaw disposed upon one side of the pivot and a handle on the other side thereof, one of said handles being provided with a longitudinally extending channel, a toothed arm formed upon the other of the handles and adapted to be received in said channel, a locking bar pivoted at one end in said channel to engage with the teeth of said arm and lock the jaws in their adjusted positions, and a spring secured at one end in the channeled handle engaged with said locking bar and adapted to hold the same in its operative or inoperative position.

5. A tool of the character described, comprising crossed pivoted handles having opposed jaws disposed on one side of the pivot, and handles extending on the other side thereof, one of said handles being formed from sheet metal bent to provide parallel longitudinal side plates forming a channel therebetween, a transversely extending toothed arm formed on the other handle, a locking member pivoted at one end between

the side plates of the first named handle having lugs formed thereon adapted to engage with the teeth of said arm to lock the jaws in their adjusted positions, one of said
5 lugs being extended to form finger engaging portions, the side plates of said handle being notched to receive said portions, and a leaf spring secured at one end in said channel and having its other end engaged with the

locking bar beyond its pivot whereby said 10 bar is yieldingly held in its operative or inoperative position.

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

PEDER ROISUM.

Witnesses:

T. W. MORRISSEY,
E. L. HOWDEN.

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