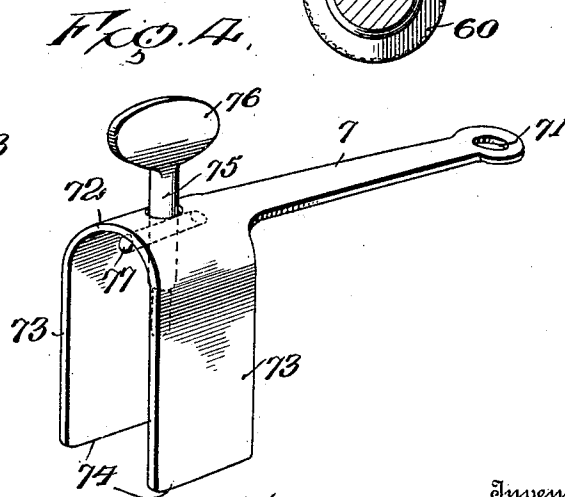
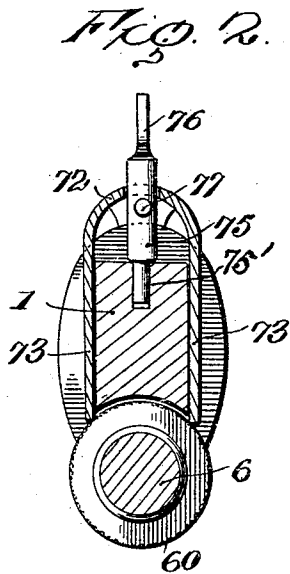
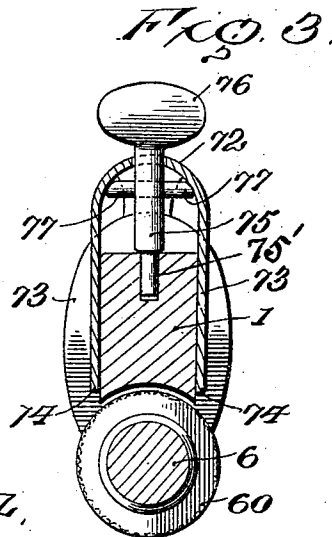
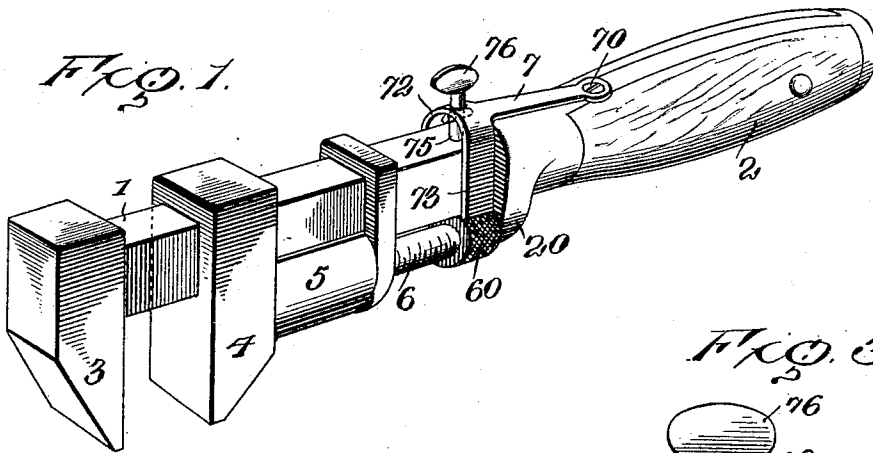


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# UNITED STATES PATENT OFFICE.

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## WRENCH.

979,327.

Specification of Letters Patent.

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*To all whom it may concern:*

Be it known that I, HENRY A. MORRILL, a citizen of the United States, residing at Strafford, Orange county, Vermont, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain improvements in and relating to wrenches; and the objects and nature of the invention will be readily understood by those skilled in the art in the light of the following explanation of the accompanying drawings illustrating what I now consider my preferred embodiment from among other formations and arrangements within the spirit and scope of my invention.

The invention consists in certain novel features in construction, in combinations and arrangements of parts and details as more fully and particularly set forth and specified hereinafter.

Referring to the accompanying drawings;—Figure 1, is a perspective view of a monkey wrench embodying a device of my invention. Fig. 2, is a cross section showing the adjusting screw locked against rotation. Fig. 3, is a cross section taken in the same plane as Fig. 2, but showing the adjusting screw released for rotation. Fig. 4, is a detail perspective view of the lock of my invention on an enlarged scale.

In the drawings, I show a conventional form of monkey wrench consisting of the stock or bar 1, extended to form handle 2; the fixed jaw 3; the movable jaw 4, carried by movable nut or sliding block 5, formed with a longitudinal threaded socket longitudinally receiving the adjusting screw 6, by which the movable jaw is longitudinally shifted on the bar. The screw 6, is at one end mounted to rotate in the lug 20, of the bar 1, and is held against longitudinal movement. The screw is formed or provided with the circumferentially roughened or knurled head or finger wheel 60, adjacent to the lug 20, and by which the screw is rotated to adjust the movable jaw.

Mechanics and others accustomed to handling wrenches, are familiar with the annoyance caused by the frequent shifting of position of the movable jaw and the conse-

quent interruptions caused by the necessity of resetting or readjusting said jaw.

It is the object of my invention to provide simple and efficient means whereby the movable jaw can be locked in the desired adjustment by a very simple operation, and whereby the lock can be as readily released to permit adjustment of said jaw, and furthermore to provide such means capable of easy attachment to a wrench without weakening any part thereof and without necessitating reconstruction of the wrench or an expensive operation. To this end I have provided a lock consisting of an approximately U-shaped head or double locking jaw adapted to straddle the wrench bar 1, with its end edges biting the knurled surface of the finger wheel 60 to hold said wheel against rotation in either direction, and yieldingly held thereto by a spring arm extending laterally from the arch of said U-shaped member and fixed to the handle portion of the bar 1. Said U-shaped head or member and its spring arm can if so desired, be struck up from a single piece of suitable spring steel or equivalent metal. In the specific example illustrated, the spring 7, is in the form of a flat arm arranged longitudinally along the rear edge of the bar 1, and at its rear end secured thereto by a machine screw 70 passed through a perforation or eye 71 at the rear end of the spring 7, into a suitable tapped hole or socket in the handle portion of the bar 1.

The locking member consists of the curved arch 72 arranged transversely of and spaced from the rear edge of the bar 1, and terminating in the two flat approximately parallel ends 73, traversing the opposite flat sides of the wrench bar 1, and formed with the transverse end biting or gripping edges 74, adapted for biting or locking engagement with knurled surface of the wheel 60 opposite the side faces of the bar 1, that is, along two parallel lines. The spring 7, constantly exerts its tension to throw the U-shaped locking head into locking engagement with the wheel 60, and hence I provide means whereby the locking head can be held from locking engagement with said wheel. In the present instance, I show a turn-plug or pin 75 for this purpose. This pin is freely turnable in and passes loosely through the arch 72 and its inner end abuts against the rear edge of the bar 1. The outer end of this pin is pro-

vided with a winged or enlarged finger piece or head 76, whereby the pin can be turned to raise or release the locking device. The pin beneath the arch 72 is provided with a diametrical cross pin 77 forming radial oppositely projecting lifting pins or cams so arranged that when the plug is turned with pin 77 lying between the depending ends 73 and parallel with the length of the bar 1, said pin will be out of operative lifting position and the parts will be in a position as shown by Figs. 1 and 2, with the lock gripping the wheel 60 and holding the same against rotation. To release the lock from the wheel, the plug 75 is given a quarter turn and the usually beveled end extremities of the pin 77 will ride on the curved under surface of the arch 72 and thereby lift the arch and its ends 73 against the tension of spring 7 and thereby move the ends 73 from locking engagement with the wheel 60, as shown in Fig. 3. When the turn-plug is given another quarter turn, said pin moves from lifting engagement with the arch, and the spring throws the device again into locking engagement with the finger wheel of the wrench adjusting screw.

It will be noted that the locking device is formed with two distinct gripping edges thereby providing a double lock effectually holding the adjusting screw against rotation in either direction. It will also be observed that the locking device can be made and sold complete as an article of manufacture, and can be readily applied to any wrench for which it is adapted by simply tapping a hole to receive the screw 70.

If so desired, the turn plug 75, can be formed with a reduced end 75' loosely fitting a socket formed transversely in and opening through the rear face of the wrench bar. The reduced end forms the plug with an intermediate shoulder abutting the rear edge of the wrench bar, while the reduced end acts as a guide for the plug and braces the lock against lateral play.

It is evident that various changes and modifications might be resorted to without departing from the spirit and scope of my invention, and hence I do not wish to limit myself to the exact structure shown.

What I claim is;

1. A device for the purpose substantially as described comprising a spring arm provided with a U-shaped head having depending ends terminating in gripping edges, and means whereby said head can be held raised against the tension of said arm in combina-

tion with a monkey wrench, substantially as described.

2. A device for the purpose substantially as described consisting of a pair of approximately parallel members terminating in gripping edges and connected by an arch provided with a spring arm extending laterally from said arch, and a turn plug carried by said arch and provided with a lifting cam in combination with a monkey wrench, substantially as described.

3. A monkey wrench provided with an adjusting screw lock comprising connected members movable to and from gripping engagement with the adjusting screw and arranged at the opposite side faces of the wrench bar and provided with means yieldingly holding the same in locking position, and with manually controlled means for lifting and holding the same from locking position.

4. A monkey wrench provided with an adjusting screw lock comprising a U-shaped locking head straddling the wrench bar and provided with transverse locking edges movable to and from locking position with respect to said screw, a spring device yieldingly holding said head in locking position, and means carried by said head for holding the same from locking position.

5. A monkey wrench comprising an adjusting screw lock embodying a spring arm arranged exteriorly and longitudinally of the wrench bar and at one end secured thereto and at its free end provided with a locking head having a member traversing a side face of the wrench bar and terminating in a transverse gripping edge adapted for gripping engagement with the adjusting screw finger wheel, said head provided with a turn plug having a lifting cam to cooperate with said head in locking and releasing the adjusting screw.

6. A sliding jaw wrench having a rotary jaw-adjusting member, and a lock therefor comprising an exterior adjusting-member holding element and a spring yieldingly holding the same in locking position, and a turn plug for lifting said member from locking position and having a reduced end, the wrench bar having a socket to receive said end.

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

HENRY A. MORRILL.

Witnesses:

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C. B. ARWOOD.