

UNITED STATES PATENT OFFICE.

GEORGE McKERCHER, OF JACKSON, MICHIGAN.

WRENCH.

No. 797,595.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, GEORGE McKERCHER, a citizen of the United States, residing at Jackson, in the county of Jackson and State of Michigan, 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.

My invention relates to certain improvements in wrenches, more particularly of the "pipe" type. It has for its object to provide simplicity of construction, strength, or durability, and cheapness of manufacture in a device of this nature.

The invention consists in the details of construction and combinations of parts hereinafter described, and more particularly pointed out in the claims concluding this specification.

In the accompanying drawings, illustrating the preferred embodiment of my invention, Figure 1 is a side view of a wrench constructed in accordance with my invention. Fig. 2 is an edge view thereof; and Fig. 3 is a vertical sectional view of part of the handle and the sleeve, showing how the parts are connected and the arrangement of the spring-pressed pin or button, the rest of the wrench being broken away.

While the preferred embodiment of my invention is fully shown in the accompanying drawings and its construction and operation are clearly described herein, I reserve the right to make such changes from the construction shown and described herein as the scope of the claims hereto appended will permit.

In carrying out my invention I provide a fixed jaw or handle member, bifurcated to receive the reduced extension of the sleeve in which is mounted the movable jaw adapted to be operated by a nut, as is common. Said bifurcated end of said handle member is also adapted to receive the reduced portion of the serrated or teeth-carrying piece of the fixed jaw. The reduced extension of said serrated piece has an inwardly-projecting portion adapted to engage a similarly-shaped depression or groove in the extension of the sleeve, whereby said sleeve is held in place without the use of a pivot pin or screw, a single screw only being necessary to hold the teeth-carrying piece in place. The lower portion of said extension of said sleeve has a shoulder adapted to engage a shoulder at the base of the bifurcation, whereby the sleeve is effectually con-

nected to said handle member. Extensions at the ends of the sides of the fork provide bearings for the sleeve when it is rocked, whereby all strain on the serrated piece and its securing-screw-bolt is removed. A socket holding a spring-pressed pin or button is arranged near the forward edge of the base of said bifurcation. Said pin is adapted to engage the lower end of the extension of the sleeve to hold the movable jaw normally in contact with the pipe or article acted upon.

Referring more particularly to the drawings, 1 is the handle member, having a bifurcation 2 at its end, the forks 3 having upper rearward extensions 4. The base of said bifurcation has a shoulder 5 near the rear edge and a socket 6 near the front edge of said handle member. Said socket is bored somewhat larger near its outlet, forming a seating-ledge 7 for the coiled spring 8, mounted around the pin 9, the other end of said spring abutting below the head of said pin. The teeth-carrying piece 10, having the intermediate downward projection 11, is secured between the ends of the fork by a screw-bolt 12, passing through suitable apertures provided in said parts.

The sleeve 13 carries the slidable jaw member 14, which is operated by means of the nut 15. Said sleeve is provided with an extension 16, having a depression or groove 17 in its upper edge adapted to fit around the projection 11 of said teeth-carrying piece 10. The lower forward edge projection 18 of said sleeve extension engages the spring-pressed pin 9, whereby the movable jaw is normally held in position to grip the article engaged, and said projection is adapted to abut against the shoulder 5 at the base of the bifurcation of said handle member, whereby the rocking movement of said sleeve and movable jaw is confined within the desired limits.

It will be noted that the rear extensions 4 engage one of the upper corners of the sleeve, thereby removing all the strain on the screw-bolt incident to most rocking jaw-wrenches, the protection from said teeth-carrying piece in my wrench merely serving to hold the parts together. It will also be noted that in my present device the usual pivot for the sleeve is done away with and the whole construction is simplified and rendered more durable thereby.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a wrench, the combination with a bifurcated handle member, of a sleeve carrying a movable jaw and having a reduced extension engaging said bifurcation, said extension having a depression in its upper edge, a fixed jaw-piece secured in the end of the bifurcation and having a projection engaging the depression in said sleeve extension, whereby the upper end of said edge is retained in said bifurcation, and means to confine the lower edge of said sleeve extension in said bifurcation.

2. In a wrench, the combination with a bifurcated handle member, of a sleeve carrying a movable jaw and having a reduced extension engaging said bifurcation, said sleeve extension having a shoulder on its lower edge adapted to engage a shoulder in the base of the bifurcation and a depression in its upper edge, and a serrated jaw-piece secured in the end of said bifurcation and having a projection engaging the depression in the upper edge of said sleeve extension whereby said sleeve extension is retained in said bifurcation.

3. In a wrench, the combination with a bifurcated handle member, of a sleeve carrying a movable jaw and having a reduced extension engaging said bifurcation, said sleeve extension having a shoulder on its lower edge adapted to engage a shoulder in the base of the bifurcation and a depression in its upper edge, and a serrated jaw-piece secured in the end of said bifurcation and having a projection engaging the depression in the upper edge of said sleeve extension whereby said sleeve extension is retained in said bifurcation, a spring-pressed pin mounted in a socket in the base of said bifurcation and engaging the lower edge of said sleeve extension.

4. In a wrench, the combination with a bifurcated handle member, of a sleeve carrying a movable jaw and having a reduced extension engaging said bifurcation, said extension having a depression in its upper edge, a fixed jaw-piece secured in the end of the bifurcation and having a projection engaging the depression in said sleeve extension, whereby the upper edge of said edge is retained in said bifurcation, means to confine the lower edge of said sleeve extension in said bifurcation, and rear extensions on the sides of said bifurcation adapted to engage the sleeve and act as a fulcrum therefor when it is rocked.

5. In a wrench, the combination with a bifurcated handle member, of a sleeve carrying a movable jaw and having a reduced extension engaging said bifurcation, said sleeve extension having a shoulder on its lower edge adapted to engage a shoulder in the base of the bifurcation and a depression in its upper edge, and a serrated jaw-piece secured in the end of said bifurcation and having a projection engaging the depression in the upper edge of said sleeve extension, whereby said sleeve extension is retained in said bifurcation, a spring-pressed pin mounted in a socket in the base of said bifurcation and engaging the lower edge of said sleeve extension, and rear extensions on the sides of said bifurcation adapted to engage the sleeve and act as a fulcrum therefor when it is rocked.

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

GEORGE MCKERCHER.

Witnesses:

PETER E. ULRICKSON,
FRANCIS E. CLAY.