

F. E. SAYRES.
WRENCH.
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1,350,671.

Patented Aug. 24, 1920.

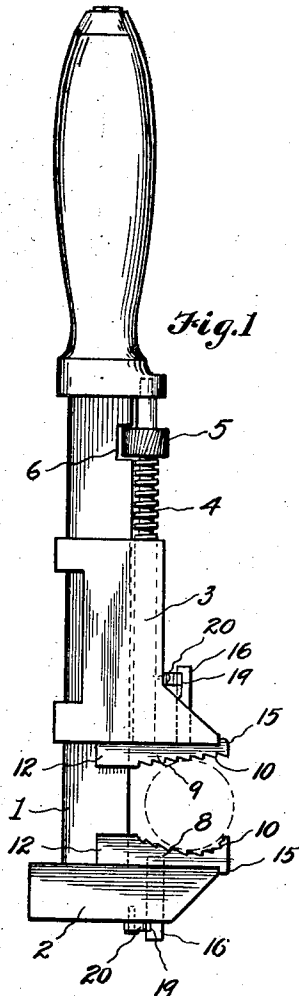


Fig. 2

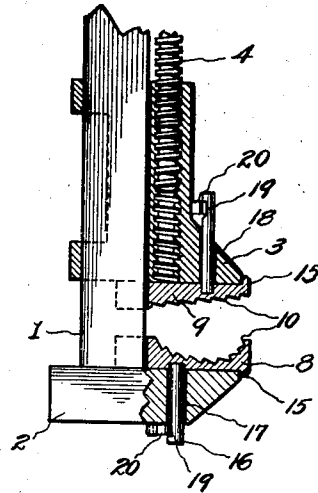


Fig. 3

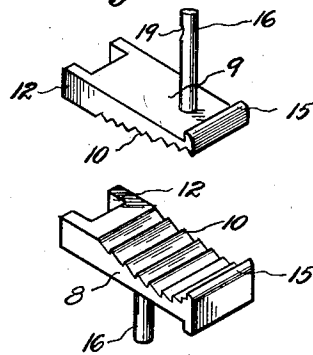
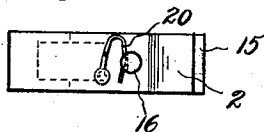


Fig. 4



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WRENCH.

1,350,671.

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To all whom it may concern:

Be it known that I, FRANK E. SAYRES, a citizen of the United States, and resident of Thane, Territory of Alaska, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to wrenches, and more particularly to improvements in wrenches of that class designated as monkey wrenches, and wherein the stock or shank, of the wrench is provided with a jaw that is fixed at one end thereof and has a movable jaw adjustable along the shank toward and from the fixed jaw.

The principal object of the invention is to provide gripping plates applicable to wrenches of this character, which may be applied in such a manner as to adapt the wrench for operating upon pipes, or other round objects, which are not affected by use of the ordinary smooth jaws of a wrench.

It is also an object of the invention to provide gripping plates that may be readily applied or removed from the wrench jaws and to provide yieldable means whereby the plates may be removably held in position while being used.

In accomplishing these objects I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a wrench wherein the jaws are equipped with gripping plates constructed according to the present invention.

Fig. 2 is a detail, sectional view of the wrench jaws with gripping plates embodying the present invention, in functional position thereon.

Fig. 3 is a perspective view of the gripping plates removed from the wrench jaws.

Fig. 4 is an end view of the wrench, illustrating the spring used for locking a plate in position.

Referring more in detail to the drawings, 1 designates the shank, or stock, of a wrench having a jaw 2 fixed, or formed as a part thereof, at one end and having a jaw 3 movable thereon to oppose the fixed jaw. The means, for adjusting the movable jaw may comprise any suitable mechanism, but as herein illustrated, consists of a bolt 4 which is threaded into the jaw at its lower end and near its opposite end is provided with a thumb nut 5 which extends within a recess

6 in the shank to prevent movement of the bolt longitudinally with respect to the shank and which may be turned to effect adjustment of the jaw.

The opposing faces of the two jaws are made smooth and parallel to each other and will operate on nuts of the square or hexagonal type without the gripping plates embodied by the present invention, but in order that pipes, or other round or smooth objects may be operated on, I have provided gripping plates 8 and 9, which may be applied to the opposed faces of the fixed and movable jaws respectively.

The gripping members 8 and 9 each consists of a relatively flat plate adapted to seat upon the flat inner face of the jaw to which it is applied, and are provided on their inner faces with transversely spaced teeth 10; the teeth of the upper jaw being faced outwardly while those of the lower jaw are faced inwardly to effectively grip opposite sides of the pipe or other object, to be operated upon, and the surface of the lower plate is slightly curved so as to better receive the curved surface of the object.

In order that the plates may be held securely in position I have provided each, at their base or inner ends, with extending flanges 12 which are adapted to extend along opposite faces of the shank 1 and I have provided each, at its outer end, with an abutment 15 which seats against the end of the jaws to which it is applied. Also secured to the outer faces of the plates, and extending perpendicularly therefrom, are posts 16 which project outwardly through apertures 17 and 18 in the two wrench jaws.

These posts are each provided, at their outer ends, with notches 19, and secured to the jaws are small leaf springs 20, as shown in Fig. 4, the ends of which are adapted to seat yieldingly in the notches to hold the posts in position and thereby retain the plates properly seated and fixed to the jaws.

It is apparent a wrench of this character, equipped with gripping plates as described, will effectively serve as a pipe wrench and that the plates may be easily and quickly removed to adapt the wrench for ordinary use.

What I claim as new, is:

1. The combination with a wrench of the character described comprising a shank and relatively fixed and movable jaws mounted on said shank provided with apertures therethrough in the direction of the shank,

of gripping plates mounted on the opposed faces of said jaws, posts fixed to said plates and extending therefrom through said jaw apertures and having notches at their outer ends, and springs fixed to said jaws adapted to enter said notches to retain said plates in functional position in said jaws.

2. The combination with a wrench of the character described comprising a shank and relatively fixed and movable jaws mounted on said shank provided with apertures therethrough in the direction of the shank, of gripping plates removably applied to the opposed faces of said jaws, the opposed faces of said plates being transversely

toothed with the teeth of the two plates facing in opposite directions, said plates being recessed at their inner ends to receive the wrench shank and having abutments at their outer ends to engage the ends of the jaws, posts fixed to said plates and extending therefrom through said jaw apertures and having notches at their outer ends, and springs fixed to said jaws adapted to enter said notches to retain said plates in functional position on said jaws.

Signed at Seattle, Washington, this 1st day of December, 1919.

FRANK E. SAYRES.