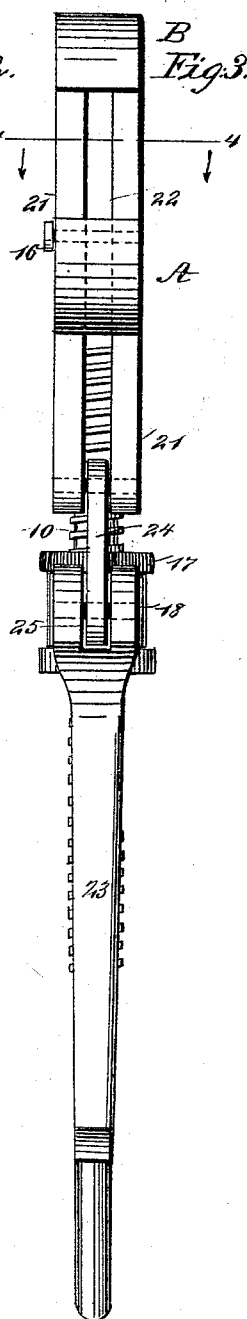
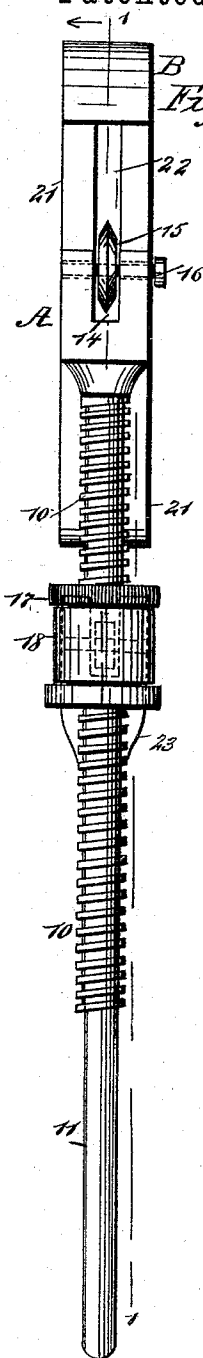
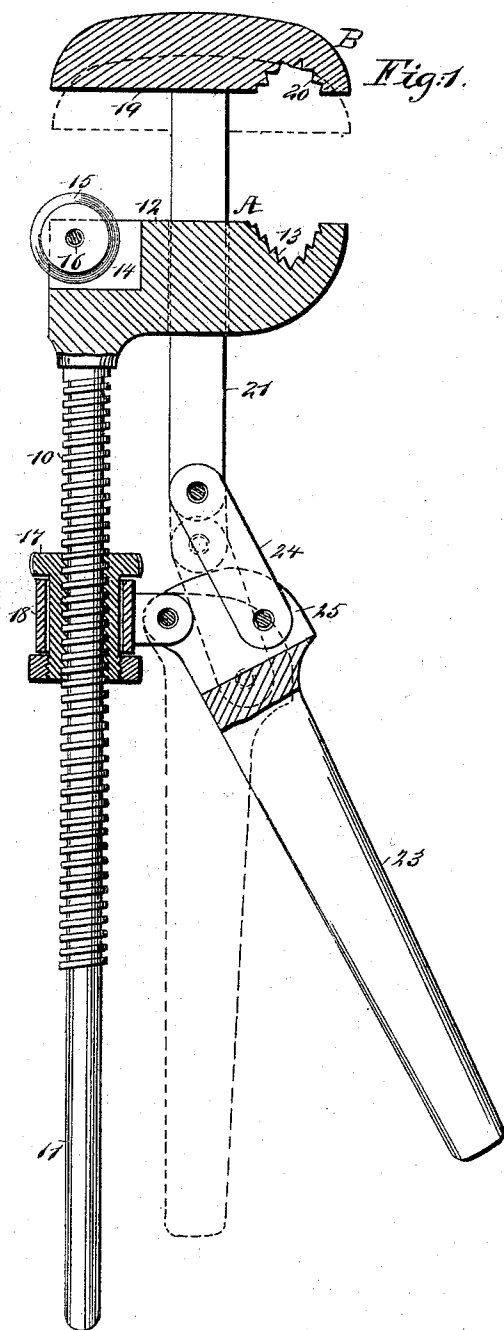


(No Model.)

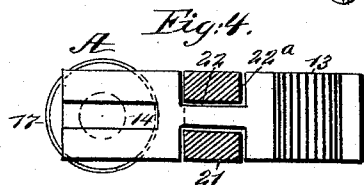
T. FLETCHER.
WRENCH AND CUTTER.

No. 495,793.

Patented Apr. 18, 1893.



WITNESSES.
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THEODORE FLETCHER, OF MACDONA, TEXAS.

WRENCH AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 495,793, dated April 18, 1893.

Application filed December 30, 1892. Serial No. 456,781. (No model.)

To all whom it may concern:

Be it known that I, THEODORE FLETCHER, of Macdonna, in the county of Bexar and State of Texas, have invented a new and Improved Wrench and Cutter, of which the following is a full, clear, and exact description.

My invention relates to an improvement in wrenches, and it has for its object to provide in one tool a wrench for ordinary purposes, such as the turning of nuts, a pipe wrench or a pipe cutter.

A further object of the invention is to so construct the wrench that it will be simple, durable and economic and capable of being expeditiously and conveniently manipulated, turning the nut, or cutting the pipe to which the cutter is applied without removing the wrench from the object upon which it is to work.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical section through the jaws of the wrench and through the adjusting nut, the remaining portion of the wrench being shown in side elevation, and the section is indicated by the line 1—1 in Fig. 2. Fig. 2 is a view of one side edge of the wrench. Fig. 3 is a view of the opposite side edge; and Fig. 4 is a transverse horizontal section taken practically on the line 4—4 of Fig. 3.

In carrying out the invention the lower jaw A of the wrench has made integral with its under side at one end a screw 10, or the screw may be secured to the jaw in any suitable or approved manner. The screw 10, virtually constitutes the shank, as its lower end 11 is plain and is adapted to constitute one of the handles of the wrench. The lower jaw, upon its upper surface at one end, is flat, as shown at 12 in the drawings; and at its opposite end, upon its upper face, the said lower jaw is provided with a concaved surface 13, said surface being preferably toothed. The square

portion 12 of the lower jaw is adapted for engagement with a nut or like device, while the concaved surface 13, is adapted to receive a pipe; and in the flat surface of the under jaw a cavity or recess 14, is produced, in which a cavity or recess a cutter 15 of the rotary type is preferably removably secured by means of a pin 16, the pin being adapted to be entirely removed from the jaw when occasion may require. The cavity 14, extends some distance back, and one or more apertures may be provided to receive the pivot pin 16 of the cutter. A nut 17, is mounted upon the screw 10 of the handle 11 of the wrench, and the nut is preferably made of the spool type, the upper exterior surface being roughened, and the lower projecting surface is preferably made removable, it being screwed upon the body of the sleeve, and a collar 18, is loosely mounted upon the sleeve between its two ends, whereby the sleeve may be rotated and made to travel up or down the screw 10 without affecting the position of the collar. The upper jaw B, is located immediately above the lower jaw A. The upper jaw upon its under face is provided at one end with a flat surface 19, facing the flat surface 12 of the under jaw; and at the opposite end a concaved toothed surface 20, is provided, which faces the corresponding surface 13 of the lower jaw. About centrally of the lower face of the upper jaw, a shank 21, is located, which extends downward at a right angle to the said jaw. This shank is provided with a vertical central slot 22, as shown in Fig. 3, which extends from the top practically to the bottom; and the members of the shank 21, are made to fit and slide in the recesses 22^a made in opposite sides of the central portion of the lower jaw, as is best shown in Fig. 4. The formation of the wrench is completed by pivotally attaching to the collar 18 the upper end of a lever 23, and pivotally connecting the lever with the shank 21 of the upper jaw by means of a link 24, or its equivalent. One end of the link is preferably inserted and pivotally attached to the lever in the outer end of a slot 25, made in its upper end surface, the other end of the link being pivotally connected between the members of the shank of the upper jaw.

In the operation of the wrench, it will be

observed that by screwing the sleeve 17 upward or downward upon the screw 10, the upper jaw may be made to approach more or less closely to the lower jaw, the latter being the fixed one; and further, that by moving the lever 23 outward and upward from the screw the upper jaw may be carried a greater or less distance toward or from the lower jaw after the adjustment has been effected between the two, by the movement of the sleeve 17. Thus it will also be observed that the wrench may be readily employed as a monkey wrench, a pipe wrench, or a pipe cutter. When used as a monkey wrench the cutting disk is removed from the lower jaw; furthermore, it will be distinctly understood that the monkey wrench may be provided with a single clamping surface only, adapted to receive either a nut or a section of pipe, if in practice it is found desirable.

In the operation of the wrench, supposing a nut is to be screwed downward for example, grasp the two handles 11 and 23 in one hand and keep the side of the wrench shown in Fig. 1 uppermost, close the handles as shown by the dotted lines in Fig. 1, and with the other hand adjust the jaws by means of the sleeve nut 17, keeping the handles parallel meanwhile. The nut is then taken hold of, and by gently squeezing the handles together, is firmly held. The pull which is now exerted on the handle or lever 23 causes the grip of the jaws to be very great, and the operator need not fear to exert his strength, because the harder he pulls on 23, the more firmly the nut is held; after the nut has been turned as far as possible at one turn, it is not necessary to disengage the wrench from the nut to effect another turn, but, by slackening the grip between the two handles and shoving on 11, in an opposite direction, the jaws automatically open and the lever 23 opens out, (this happens unless the nut is loose, in which case a wrench is not required.) By this arrangement the jaws slip round the nut to the first position; the handles are again brought together, the nut taken hold of and another turn made. In this respect it acts as a ratchet whereby much time is saved in either putting on or taking off a nut; and, as it always grips the nut tightly, it is not possible to bruise it by frequently taking it on or off, as it is with a common wrench.

The pipe wrench is used in the same manner as the monkey wrench. When the cutter is to be used, after the wheel 15 has been put in place so as to adjust it with the pipe between it and 19 that the lever 23 is close to 11, then work it as an ordinary cutter until the lever 23 comes against 11; then screw down

17 which again gives leverage by means of 23 on the cutter 15.

This wrench is exceedingly simple, it is durable and it is economic, and furthermore it is capable of being used expeditiously and conveniently wherever an ordinary pipe wrench, monkey wrench, or pipe cutter is capable of being brought into operation.

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

1. In a wrench, the combination, with the lower jaw having a threaded handle attached thereto, and a sleeve held to travel upon the threaded portion of the handle, of an upper jaw, the shank attached to the upper jaw having sliding and guided movement in the lower one, a lever connected with the sleeve and a link connection between the lever and the shank of the upper jaw, substantially as shown and described.

2. In a wrench, the combination, with a lower jaw, a threaded handle attached thereto, a sleeve held to travel upon the threaded surface of the handle, and a collar loosely mounted upon the sleeve, of an upper jaw, a shank projected downward from the upper jaw and having sliding and guided movement in the lower jaw, a cutter removably located to the collar upon the handle sleeve, and a link connection between the handle and the shank of the upper jaw, as and for the purpose specified.

3. In a wrench, the combination, with a lower jaw having a slot at one end to receive a cutter and provided with a pipe-receiving surface at its opposite end, a threaded handle secured to the lower jaw beneath the recess receiving the cutter, a sleeve held to travel upon the screw surface of the handle, and a collar loosely mounted upon the sleeve, of an upper jaw extending over the slotted surface of the lower jaw and likewise the pipe-receiving surface of the said lower jaw, the upper jaw having a corresponding pipe-receiving surface, a shank projected downward from the central portion of the upper jaw and having guided movement in the lower jaw, and extending below said jaw, a lever adapted also to serve as a handle pivotally secured to the collar of the said sleeve, and a link connection between the lever and the shank of the upper jaw, as and for the purpose set forth.

THEODORE FLETCHER.

Witnesses:

THEODORE GRANDJEAN,
ULYSSE GRANDJEAN.