Dec. 19, 1922. 1,438,952.

W. F. EVANS.

WRENCH.

FILED OCT. 12, 1921.

Fig. 1.

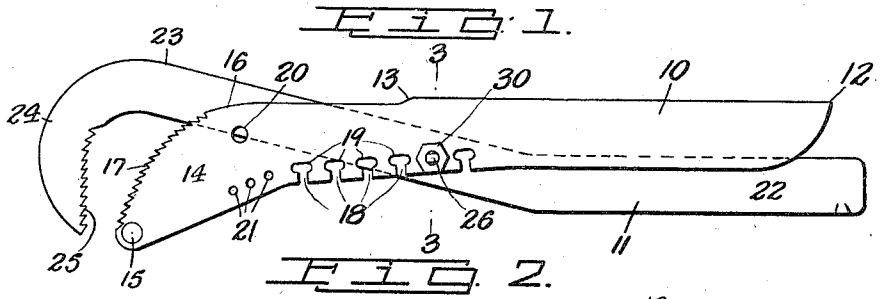


Fig. 2.

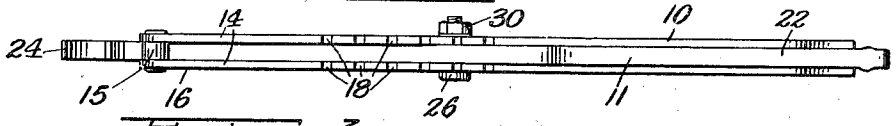


Fig. 3.

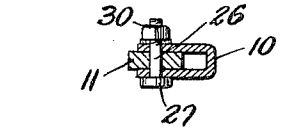


Fig. 4.

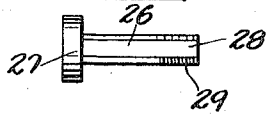


Fig. 5.

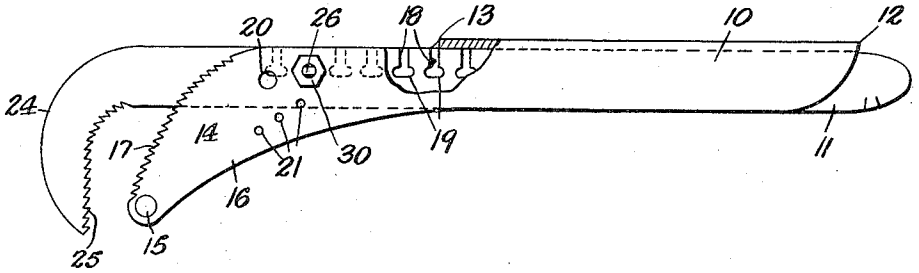


Fig. 6.

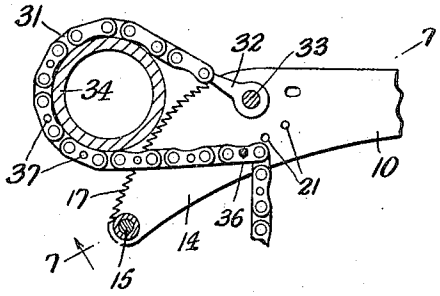
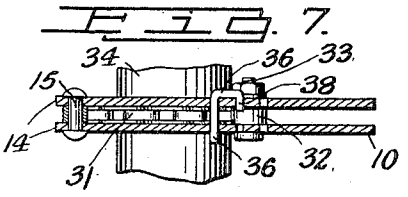


Fig. 7.



Inventor

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By his Attorneys

Edgar Tate & Co.

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UNITED STATES PATENT OFFICE.

WILLIAM F. EVANS, OF ASTORIA, NEW YORK, ASSIGNOR OF FORTY PER CENT TO EMIL N. BAAR, OF NEW YORK, N. Y.

WRENCH.

Application filed October 12, 1921. Serial No. 507,230.

To all whom it may concern:

Be it known that I, WILLIAM F. EVANS, a citizen of the United States, and residing at Astoria, L. I., in the county of Queens and State of New York, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to wrench devices and the object of the invention is to provide a wrench which is adapted for general use and which may also be used as a pipe wrench, said wrench being composed of two parts or units adjustable relatively to each other to vary the capacity of the wrench and provided with means whereby one of the parts or units may be movable relatively to the other to grasp a nut, bar, pipes or the like in the manner of other wrenches of this class, and with this and other objects in view the invention consists in a wrench device of the class and for the purpose specified which is simple in construction and operation and efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a plan view of one form of my improved wrench;

Fig. 2 a side edge view thereof;

Fig. 3 a partial section on the line 3—3 of Fig. 1;

Fig. 4 an enlarged detail view of a bolt which I employ;

Fig. 5 a view similar to Fig. 1 but showing a modified form of construction with part of the construction broken away and in section;

Fig. 6 a detail view of one of the parts of the wrench shown in Fig. 5 and indicating a modified use thereof; and,

Fig. 7 a partial section on the line 7—7 of Fig. 6.

In Figs. 1 to 3 inclusive, I have shown one form of my improved wrench which is composed of two parts 10 and 11. The part 10 is U-shaped in form in cross section from the end portion 12 thereof to the point 13 on the shank and beyond the shank the part 10 is composed of separate jaw members 14 which are riveted or otherwise secured together at the extremity thereof as shown at 15, and said jaw members are arc-shaped in form as shown at 16 and provided with teeth or projections 17, and the other side edge portion of the jaw members 14 are provided with a plurality of spaced recesses having enlargements 19.

The jaw members 14 are also provided with one large aperture 20 and a plurality of smaller apertures 21 whereby a chain, such as shown in Fig. 6, may be used in connection with the part 10 of the wrench by removing the part 11 thereof.

The part 11 is provided with a handle portion 22 and an angularly arranged shank 23 provided with a hook-shaped end portion 24, the inner face of which is provided with teeth or projections 25 which cooperate with the teeth or projections 17 on the jaw members 14 to grasp a suitable article or device between the jaw members 14 and hook-shaped end portion 24, said last named end portion constituting the other jaw member of the wrench as will be apparent.

Passed through and mounted in connection with the part 11 of the wrench is a bolt 26 having a head 27, and the opposite sides of said bolt are flattened or cutaway as shown at 28 to form an approximate oblong or elliptical shank for said bolt, and the outer end portion of the shank of the bolt is threaded as shown at 29 to receive a nut 30 which holds the bolt in position upon the part 11.

In attaching the part 10 to the part 11 and in adjusting said part 10 thereon, the shank of the bolt 26 is first passed through the recesses 18 of the separate jaw members 14, or one pair of such recesses with the elongated plane of the shank of the bolt at right angles to the longitudinal plane of the part 10 of the wrench, after which said part is rotated into the position shown in Fig. 1, in which operation the shank of the bolt snaps or passes under slight tension into the enlarged portion 19 of the recesses 18 as shown in Fig. 1 of the drawing, and it will be understood that the part 10 will be capable of a lateral movement on the part 11 within certain limits to permit the jaw mem-

bers 14—24 to firmly grasp a suitable article in the use of the wrench.

It will be understood that the bolt 26 may be placed in any pair of the recesses 18, or the enlarged portions 19 in the jaw members 14 depending upon the capacity required by the jaw members to operate upon a given article.

In Fig. 5 of the drawing I have shown a slight modification of the construction shown in Figs. 1 to 3 inclusive, in which the bolt 26 is mounted in the part 10, or in the jaw members 14 of such part, and the part 11 of the wrench, or the outside edge thereof, is provided with the recesses 18 and enlargements 19 of said recesses, but the operation and use of the wrench shown in Fig. 5 will be the same as that shown in Figs. 1 to 3 inclusive, and it will be noted that the apertures 20 and 21 are also employed in the wrench shown in Fig. 5, or in the part 10 thereof.

In Fig. 6 I have indicated another method of using my improved wrench in which the part 11 is detached and removed from the part 10 by removing the bolt 26 and a suitable chain 31 is employed or substituted for the part 11, said chain being provided at one end with a coupling head 32 through which a bolt 33 is passed, said bolt being mounted in the apertures 20 in the jaw members 14 and secured to said jaw members, and in the use of this form of construction the chain 31 after it has been attached to the jaw members 14 is passed around a pipe or the like 34 as shown in Fig. 6, and the free end portion of the chain is passed between the jaw members 14 and a hook-shaped keeper 35, or the shank 36 thereof is passed through apertures 37 in one of the links of the chain and through one of the apertures 21, and the hook-shaped end 38 of the device 35 is passed downwardly through an adjacent aperture 21 in one set of jaw members 14, as clearly shown in Fig. 7, this securely locks or retains the chain 31 in a predetermined position of adjustment, after which the part 10 of the wrench may be operated to firmly grasp the pipe 34 or other article.

It will be understood that the chain 31 may be used with the part 10 of the wrench shown in Figs. 1 to 3 inclusive, and while I have shown certain details of construction for carrying my invention into effect, it will be apparent that I am not necessarily limited to these details, and various changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. A wrench of the class described composed of separate parts one of said parts being provided with spaced jaw members, and a handle portion U-shaped in cross section, means for connecting the free ends of said jaw members, the other part of said wrench being provided with a hook-shaped jaw member adapted to cooperate with the jaw members of said first named part, one side edge portion of one of said parts of the wrench being provided with spaced recesses approximately T-shaped in form and which open outwardly therethrough, and a bolt mounted in the other of said parts and adapted to cooperate with the recesses in the first named part to adjustably secure said parts together and to permit of the movement of said parts one upon the other.

2. A wrench device of the class described composed of separate detachably and movably connected parts, one of said parts being provided with spaced jaw members and a handle portion U-shaped in cross section, the other part of said wrench being provided with a hook-shaped jaw member adapted to cooperate with the jaw members of said first named part, one of said parts being provided in one side edge with a plurality of spaced recesses approximately T shaped in form and which open outwardly therethrough, and a bolt mounted in the other part and provided with an angular shank adapted to be placed in the recesses of the first named part for detachably securing said parts together.

3. A wrench device of the class described composed of separate detachably and movably connected parts, one of said parts being provided with spaced jaw members and a handle portion U-shaped in cross section, the other part of said wrench being provided with a hook-shaped jaw member adapted to cooperate with the jaw members of said first named part, one of said parts being provided in one side edge thereof with a plurality of spaced recesses which are approximately elliptical in form and which open outwardly therethrough, and a pin-like member mounted in the other part and provided with a substantially elliptical shank adapted to be placed in the elliptical recesses of the first named part for detachably securing said parts together.

In testimony that I claim the foregoing as my invention I have signed my name this 8th day of October, 1921.

WILLIAM F. EVANS.