C. W. BROWN.

ADJUSTABLE WRENCH.

APPLICATION FILED JUNE 1, 1920.

1,367,456. Patented Feb. 1, 1921.

Fig. 1.

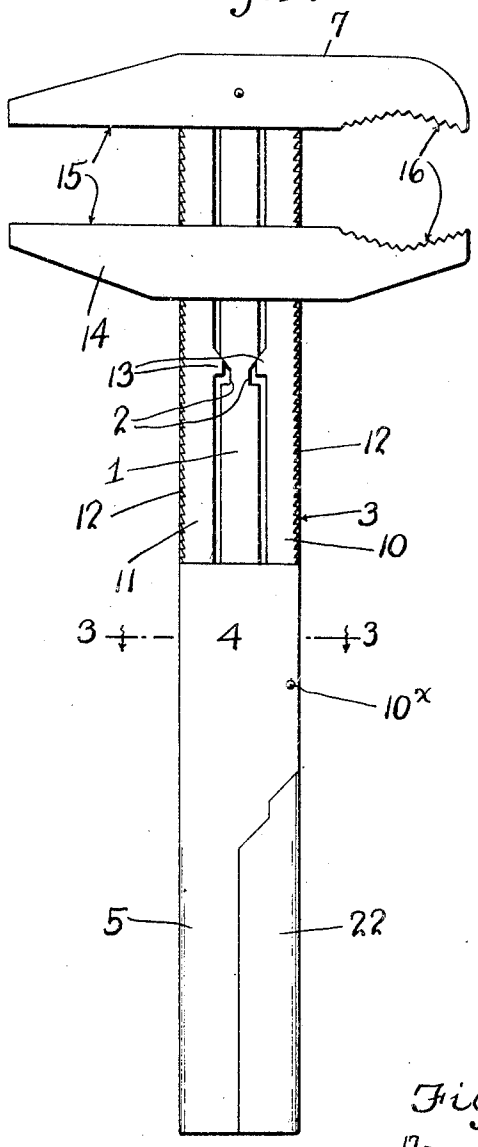


Fig. 2.

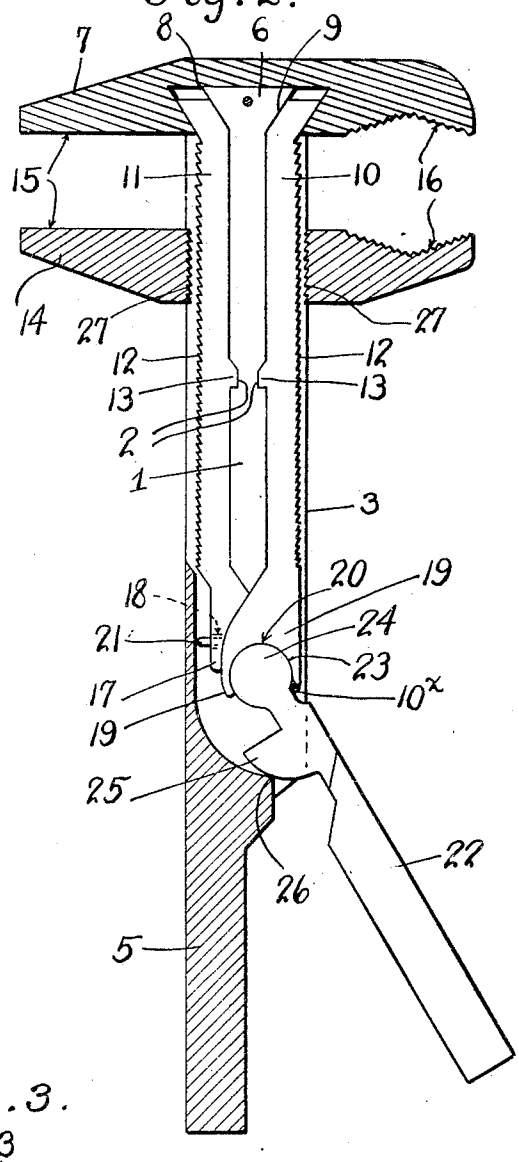
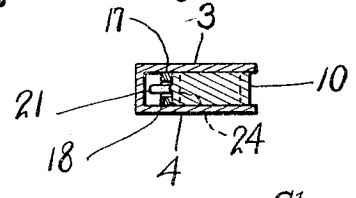


Fig. 3.



L. B. James

Thos. E. Turpin

WITNESS:

Charles W. Brown INVENTOR

BY Victor J. Evans

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES W. BROWN, OF CRESTON, NORTH CAROLINA.

ADJUSTABLE WRENCH.

1,367,456. Specification of Letters Patent. Patented Feb. 1, 1921.

Application filed June 1, 1920. Serial No. 385,814.

To all whom it may concern:

Be it known that I, CHARLES W. BROWN, a citizen of the United States, residing at Creston, in the county of Ashe and State of North Carolina, have invented new and useful Improvements in Adjustable Wrenches, of which the following is a specification.

My present invention has for its object to provide an adjustable wrench, designed more particularly for use as a pipe wrench, and constructed and arranged in such manner that it may be expeditiously and easily fixed to pipes or other articles of various sizes and may be strongly held thereto.

To the attainment of the foregoing the invention consists in the improvement as hereinafter described and definitely claimed.

In the accompanying drawings, hereby made a part hereof:—

Figure 1 is a side elevation of my novel wrench with the locking lever in parallel relation to the shank.

Fig. 2 is a longitudinal section taken in a plane parallel with Fig. 1 and showing the locking lever as swung outwardly to contract or move inwardly the locking bars.

Fig. 3 is a transverse section taken in the plane indicated by the line 3—3 of Fig. 1.

Similar numerals of reference designate corresponding parts in all of the views of the drawings.

Among other elements my novel wrench comprises a shank 1, having recesses 2 with beveled walls in its opposite sides at an intermediate point of its length. The said shank 1 is fixed with respect to and is preferably formed integral with a side plate 3, and the shank 1 and side plate 3 are preferably integral with a casing portion 4 which merges into a handle 5. The outer end of the shank 1 is preferably headed as indicated by 6 and is arranged in and riveted or otherwise fixed to a fixed jaw 7. The jaw 7 is chambered as indicated by 8, in which chamber at the opposite sides of the shank 2 are the upper beveled end portions 9 of the locking bars 10 and 11; said bars being movable toward and from each other for a purpose hereinafter set forth. The outer sides of the locking bars 10 and 11 are toothed or serrated as indicated by 12 and on the said locking bars are inwardly extending beveled projections 13, arranged to enter the shank recesses 2.

Receiving and movable on the shank 1, side plate 3 and locking bars 10 and 11 is the adjustable jaw 14 of the wrench. It will be noticed at this point that I prefer to provide the jaws 7 and 14 at one side of the wrench body with square faces 15 while at the opposite side of the wrench body the jaws are provided with concave toothed or roughened faces 16. This provision permits of the wrench being used as a nut wrench or as a pipe wrench or for the same purpose as a pair of pincers or pliers.

By particular reference to Fig. 2 it will be observed that the inner end of the locking bar 11 is reduced at 17 and is provided in the reduced portion 17 with a transverse aperture 18; also, that the inner end of the locking bar 10 is provided with an enlargement 19 and a socket 20 therein. The inner side of the portion 17 is concave and the inner side of the portion 19 is convex and opposed to the said concave inner side of portion 17. The said portion 19 is also provided with a pin 21 which is loosely disposed in the aperture 18. At 22 is the locking lever of the wrench. The said locking lever 22 is fulcrumed at 23 in the enlargement 19, being provided with a rounded head 24, disposed in the socket 20 of the locking bar 10 and retained in working position by a pin 10^{x}. By virtue of the said construction it will be observed that movement of the locking lever 22 to the position shown in Fig. 2 will be attended by contraction or inward movement of the locking bars 10 and 11, whereupon the jaw 14 may be slipped toward or from the jaw 15 and accurately positioned to fit the wrench to the size of the article to be turned. When, however, the locking lever 22 is swung inwardly until it rests against and in parallel relation to the handle 5, the head 24, by reason of cam 25 coöperating with abutment 26, will thrust the locking bars 10 and 11 endwise outwardly. Manifestly the endwise outward thrusting of the bars 10 and 11 will be attended by lateral outward movement of the bars which will positively engage the serrated or toothed sides of the same with the teeth 27 in the jaw 14, and so long as the locking lever is in its inner position accidental movement of the jaw 14 will be effectively prevented, and this without the locking lever being subjected to the pressure of the hand.

Having described my invention, what I

claim and desire to secure by Letters-Patent, is:—

1. An adjustable wrench comprising a stationary jaw, a shank fixed to said jaw and having recesses with beveled walls in its opposite sides at an intermediate point of its length and also having beveled ends, a side plate fixed with respect to the jaw and shank, a casing portion fixed with respect to the shank and the side plate, a handle fixed to and extending from said casing portion, locking bars at opposite sides of the shank and having serrated outer sides and beveled inner and outer end portions; one of the said locking bars also having an inner reduced portion and an aperture therein, and the other locking bar having at its inner end an enlargement in which is a rounded socket and on which is a pin disposed in said aperture, a locking lever fulcrumed in the casing portion and having a rounded head disposed in said socket and also having a cam projection to coöperate with the adjacent casing portion, and a movable jaw receiving the shank, side plate and locking bars and having serrations opposed to the serrated sides of the locking bars.

2. The combination in a wrench, of a stationary jaw, a shank connected thereto, a casing fixed with respect to the shank, locking bars at opposite sides of the shank and having serrated outer sides, a movable jaw receiving the shank and the locking bars and having serrations opposed to the serrated sides of the locking bars, and a locking lever fulcrumed in the casing and arranged to cooperate therewith in thrusting the locking bars endwise; the said shank and the locking bars having coöperating cam faces whereby endwise movement of the locking bars will be attended by lateral movements thereof.

3. The combination in a wrench, of a shank, a jaw fixed thereto, a casing fixed with respect to the shank, locking bars at opposite sides of the shank, one of said bars having a reduced and apertured inner end portion, and the other bar having a rounded socket in its inner end portion, a locking lever retained in the shank and having a head in the socket and also having a cam to coöperate with the casing, and a jaw receiving the shank and locking bars and adjustable on the same when the locking lever is swung outwardly, and engaged with the locking bars when the locking lever is swung inwardly.

In testimony whereof I affix my signature.

CHARLES W. BROWN.