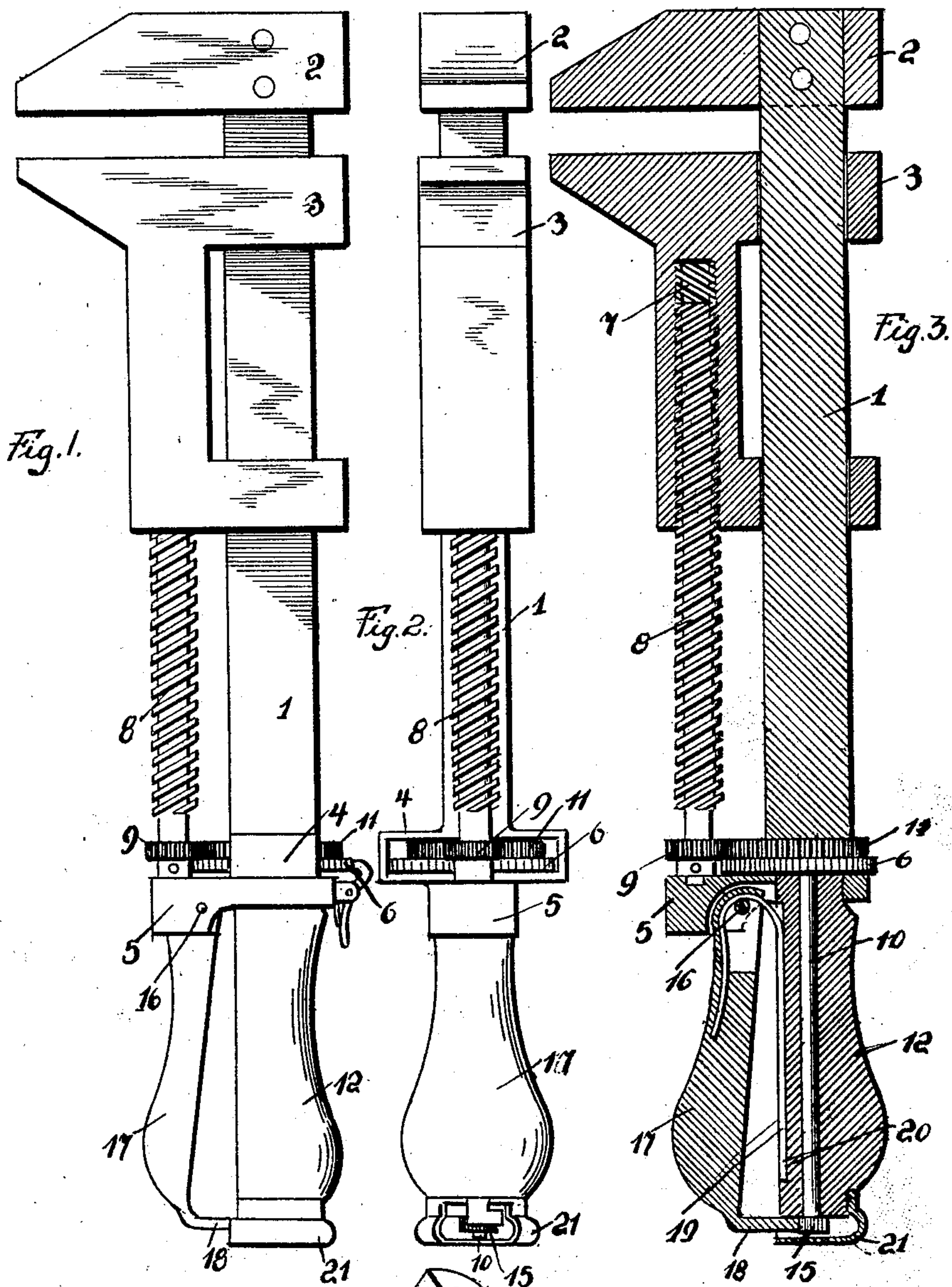


No. 828,277.

PATENTED AUG. 7, 1906.

F. EVANS.  
WRENCH.

APPLICATION FILED APR. 6, 1906.



Witnesses:

C. W. Ostermann.

J. H. Butler.

Fig. 4.

Inventor.  
Frank Evans.

H. C. Evans & Co.  
by Attorneys.



# UNITED STATES PATENT OFFICE.

FRANK EVANS, OF PRICEDALE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF  
TO WILLIAM E. JENKINS, OF MONESSEN, PENNSYLVANIA.

## WRENCH.

No. 828,277.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed April 6, 1906. Serial No. 310,381.

*To all whom it may concern:*

Be it known that I, FRANK EVANS, a citizen of the United States of America, residing at Pricedale, in the county of Westmoreland and State of Pennsylvania, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to certain new and useful improvements in wrenches; and the invention relates more particularly to that type of wrench commonly known as a "monkey-wrench."

15 The primary object of this invention is the provision of novel means in connection with a wrench for easily and quickly adjusting the movable jaw thereof, said means being actuated by an oscillatory movement instead of the ordinary rotary movement heretofore employed for adjusting the movable jaw of the wrench. To this end I have devised a novel wrench which can be easily and quickly manipulated, not necessitating the operator in removing his hand from the handle of the wrench when it is desired to adjust the movable jaw thereof.

25 The invention further aims to provide a simple and inexpensive wrench which will be strong and durable, comparatively inexpensive to manufacture, and highly efficient for the purposes for which it is used.

30 With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described and claimed, and, referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

45 Figure 1 is a side elevation of my improved wrench. Fig. 2 is an edge view of the same. Fig. 3 is a vertical sectional view, and Fig. 4 is a detail perspective view of an actuating-lever.

50 In constructing my improved wrench I use a shank 1, having a detachable head or jaw 2, said head being normally fixed upon the shank 1 and only removed when it is desired to remove an adjustable jaw 3 from the shank 1 of the wrench. The lower end of the shank 1 is provided with a rectangular hous-

ing 4, carrying an extension 5. The adjustable jaw 3, which is slidably mounted upon the shank 1, is provided with a screw-threaded bore 7, and engaging in said bore is a screw 8, the lower end of which is revolubly mounted in the extension 5 of the shank 1 and provided with a horizontally-disposed pinion 9.

60 In the housing 4 is journaled a vertically-disposed shaft 10, and upon said shaft within the housing 4 is mounted a toothed wheel 6 and a large pinion 11, said pinion meshing with the pinion 9 and being approximately two-thirds larger than said pinion, whereby when the pinion 11 is rotated a third of a revolution the pinion 9 will make a complete revolution. The shaft 10 extends downwardly within a depending handle 12, carried by the housing 4, said shaft having its lower end provided with a pinion 15, the object of which will be presently described.

75 In the extension 5 of the shank 1 is pivotally mounted, as at 16, a curved actuating-lever 17, the lower end of said lever being provided with an outwardly-extending rack 18, adapted to mesh with the pinion 15, carried by the lower end of the shaft 10. The actuating-lever is provided with a spring 19, adapted to engage in a recess 20, formed in the handle 12, and normally hold said actuating-lever in the position shown in Figs. 1 and 3 of the drawings. To protect the rack 18 and the pinion 15, the lower end of the handle 12 is provided with a casing 21, which houses the pinion and the rack and prevents said pinion and rack from being broken when the wrench is roughly handled. The rear side of the housing 4 is provided with a spring-held pawl, said pawl normally engaging the toothed wheel 6 and preventing the same from rotating until it is moved out of engagement with said wheel.

85 To operate my improved wrench, it is only necessary that the actuating-lever 17 be oscillated, which through the medium of the rack 18, shaft 10, pinion 11, and pinion 9, and screw 8 will move the adjustable jaw 3 upon the shank 1, the relation of one pinion to another, together with the pitch of the threads upon the screw 8, determining the amount of adjustment of the jaw 3 accomplished by oscillating the actuating-lever 17.

105 From the foregoing description it will be observed that I have devised a novel and



unique form of wrench which can be easily and quickly adjusted without an operator removing his hand from the handle 12 of the wrench. The entire wrench is preferably  
5 constructed of strong and durable metal; whereby it will withstand the rough usage to which it is subjected.

Such changes as are permissible by the appended claims may be resorted to without  
10 departing from the spirit and scope of the invention.

What I claim, and desire to secure by Letters Patent, is—

1. A wrench of the character described  
15 consisting of a shank, a detachable head carried by said shank, a housing carried by the lower end of said shank, a depending handle carried by said housing, an extension carried by said housing, a jaw slidably mounted  
20 upon said shank and having a screw-threaded bore formed therein, a screw revolubly mounted upon said extension and extending into said bore, an actuating-lever pivotally connected to said extension, means actuated  
25 by the oscillation of said lever to revolve said screw, and means to lock the last-named

means in a fixed position, substantially as described.

2. A wrench of the character described consisting of a shank having a head, a jaw 30 slidably mounted upon said shank, a screw operating in said shank, an actuating-lever pivotally supported by said shank, means actuated by the oscillation of said lever to revolve said screw, said means consisting of a 35 shaft, meshing pinions, a pinion and rack, substantially as described.

3. A wrench of the character described embodying a shank, a head, a jaw slidably mounted upon said shank, an extension car- 40 ried by said shank, a screw mounted upon said extension and engaging in said slidable jaw, and oscillatory means comprising a pivoted lever adapted to rotate said screw to adjust said jaw, substantially as described. 45

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

FRANK EVANS.

Witnesses:

E. E. POTTER,  
M. E. WHITE.