

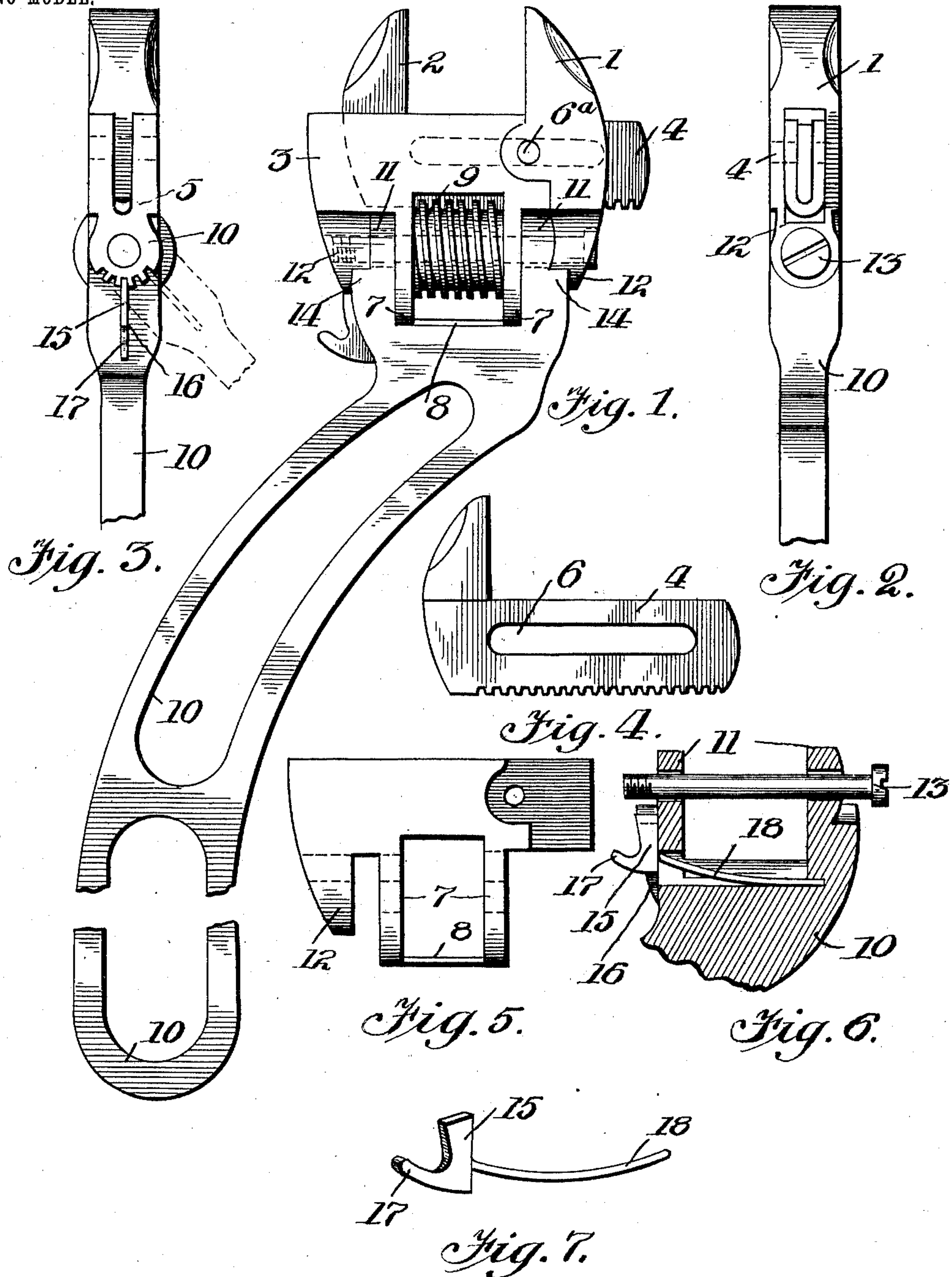
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PATENTED MAY 17, 1904.

D. R. ELLIS.  
WRENCH.

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NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

DAVID R. ELLIS, OF CHICAGO, ILLINOIS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 759,869, dated May 17, 1904.

Application filed March 6, 1903. Serial No. 146,447. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID R. ELLIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented a certain new and useful Improvement in Wrenches, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

10 My invention relates to improvements in wrenches.

There are places in which the use of a wrench might be made possible or its manipulation facilitated if its handle could be shifted sidewise  
15 to the movement thereof in turning the wrench without withdrawing the jaws from the nut, &c., in order that the handle might clear some obstacle in the path of its movement.

It is the object of the present invention to  
20 make a wrench the handle of which may be shifted transversely to the line of its movement in turning the wrench without interfering with the position of the jaws of the wrench upon the nut, &c.

25 The accompanying drawings show one embodiment of my invention, and therein the several views are as follows:

Figure 1 is a side elevation of my improved wrench. Fig. 2 is a view of the edge having  
30 the outer or pivoted jaw. Fig. 3 is a view of the edge having the movable or inner jaw. Fig. 4 is a detached view of the movable jaw. Fig. 5 is a view of the bar for supporting the jaws. Fig. 6 is a sectional view taken through  
35 the upper end of the handle, and Fig. 7 is a detached view of the pawl.

In the preferred embodiment of my invention there is provided an outer jaw 1 and a movable jaw 2. The jaws are supported by  
40 a bar 3, which is arranged transverse thereto and extends between the inner ends thereof. The outer jaw is preferably pivoted upon one end of said bar, so that its outer end may be thrown inwardly. The movable jaw has a  
45 shank 4, which preferably extends at right angles thereto from its inner end. The bar 3 has therein a longitudinal slot 5, in which said shank slides. The shank is provided with a slot 6, through which passes a pin 6<sup>a</sup>, on  
50 which the outer jaw is pivoted to limit the

movement of the movable jaw. To the rear of the bar which supports the jaws project lugs 7, which are connected at their outer ends by a strip 8 to strengthen the same. Between  
55 these lugs is journaled a thumb-screw 9, which has a threaded cylindrical outer surface. The back of the bar 3 is open to the slot therein to expose the rear edge of the shank, which is correspondingly threaded to the thumb-screw,  
60 and the threads of each engage one another. By turning the thumb-screw the movable jaw may be adjusted to any desired position with relation to the outer jaw.

The handle 10 is preferably curved, as shown, and is provided with lugs or ears 11,  
65 which receive between them the lugs 7. Overlying the outside of lugs 11 are lugs 12, one of which is formed on the bar 3 and the other on the inner end of the pivoted jaw. A bolt or pin 13, having its head countersunk in  
70 one of the lugs 12 and threaded in the other of said lugs, passes through lugs 7 and 11 and the thumb-screw to journal said thumb-screw in position and pivot the handle to the  
75 jaws. The lugs 11 are preferably provided with shoulders 14, which embrace a portion of the edges of each of the lugs 12. The hole for the pivoting-pin in each of the lugs  
80 12 is preferably slightly larger than the pin to permit the handle to fulcrum on the lug 12, fixed to the bar 3, when the wrench is manipulated in turning a nut. The adjacent  
85 faces of the lug 12 on the outer jaw and the lug 11 next thereto are preferably rounded and conform to each other. When the lug 11, having the rounded face, moves as the handle oscillates about its fulcrum on the lug 12,  
90 fixed to the bar 3, the outer jaw turns on its pivot and its outer end is thrown inwardly. This makes it possible to grip surfaces to  
95 which the wrench would not take hold if the outer jaw were not fulcrumed.

It is manifest how my improved wrench may be used in many places where another form of wrench could not be used. If the  
100 movement of the handle is interfered with when in one position, it may be shifted transversely to move it out of the way of the obstruction without changing the position of the jaws on the nut. So that the handle may



be secured at any desired position to the movement of the handle in using the wrench the edge of the lug on the pivoted jaw is preferably provided with a series of notches  
 5 which are adapted to be engaged by a pawl 15, moving in a slot 16 in the handle. The pawl has a finger-piece 17 thereon and is normally held in engagement with said  
 10 notches by a spring 18, which has its end fastened in one of the lugs on the handle and passes through a slot in the other.

Herein is shown and described only the most obvious manner of carrying out my invention, and of course it will be understood  
 15 that I do not limit myself to the detail of construction, arrangement, and combination of parts as herein set forth, but that I reserve the right to make such modifications as fairly fall within the scope of my invention.  
 20 Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a wrench, the combination with a suitable support for the jaws, of an outer jaw pivoted to said support, a movable jaw adjustable upon said support, a handle associated with said support and having a fulcrum thereon, a lug extending rearwardly from said fixed  
 25 jaw adapted to be engaged by said handle to throw the outer end of said outer jaw toward the movable jaw, substantially as described.

2. In a wrench, the combination with a suitable support, of an outer and a movable jaw, of lugs extending from said support and connected at their outer end by a bar, a thumb-screw arranged between said lugs for adjusting said movable jaw, and a handle pivoted to said lugs and adapted to be shifted transversely to its movement in turning the wrench,  
 35 substantially as described.

3. In a wrench, the combination with a suitable support for the jaws, of an outer jaw pivoted thereto and a movable jaw slidable thereon, lugs extending from said support, a handle pivoted to said lug, and adapted to be shifted transversely to the movement thereof  
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in turning the wrench, said handle also being fulcrumed upon said support and adapted to engage a rearwardly-extending portion of said pivoted jaw whereby when said handle is  
 50 moved about its fulcrum it will cause the outer end of said pivoted jaw to move inwardly, substantially as described.

4. In a wrench, the combination with a suitable support for the jaws, having a longitudinal slot, of a jaw pivoted thereto, a movable jaw having a shank at right angles thereto which is slidably arranged within the slot of said support, a thumb-screw arranged in the rear of said support and adapted to engage threads on said shank to adjust said  
 55 movable jaw, a handle pivoted to said support and movable transversely to its movement in turning the wrench, whereby said handle may be shifted to clear obstructions  
 60 in its path, and means for locking said handle at any desired angle in its transverse movement.

5. In a wrench, the combination with a support for the jaws having a plurality of lugs projecting therefrom, of a handle having lugs arranged between the lugs on said support and movable transversely to its movement in turning the wrench, a pin passing through said  
 65 lugs to pivot said handle to said support, and a thumb-screw arranged between the lugs on said support to adjust the jaws of the wrench.

6. In a wrench, the combination with a support for the jaws, of a handle pivoted to said support and movable transversely to its movement in turning the wrench, a spring-operated pawl movable in a slot in said handle and engaging notches in said support whereby the handle is held in any desired position.

In witness whereof I have hereunto subscribed my name in the presence of two witnesses.

DAVID R. ELLIS.

Witnesses:

EDWIN B. H. TOWN, Jr.,  
 C. B. CAMP.