

(No Model.)

F. E. HEINIG.  
WRENCH.

No. 422,526.

Patented Mar. 4, 1890.

Fig I.

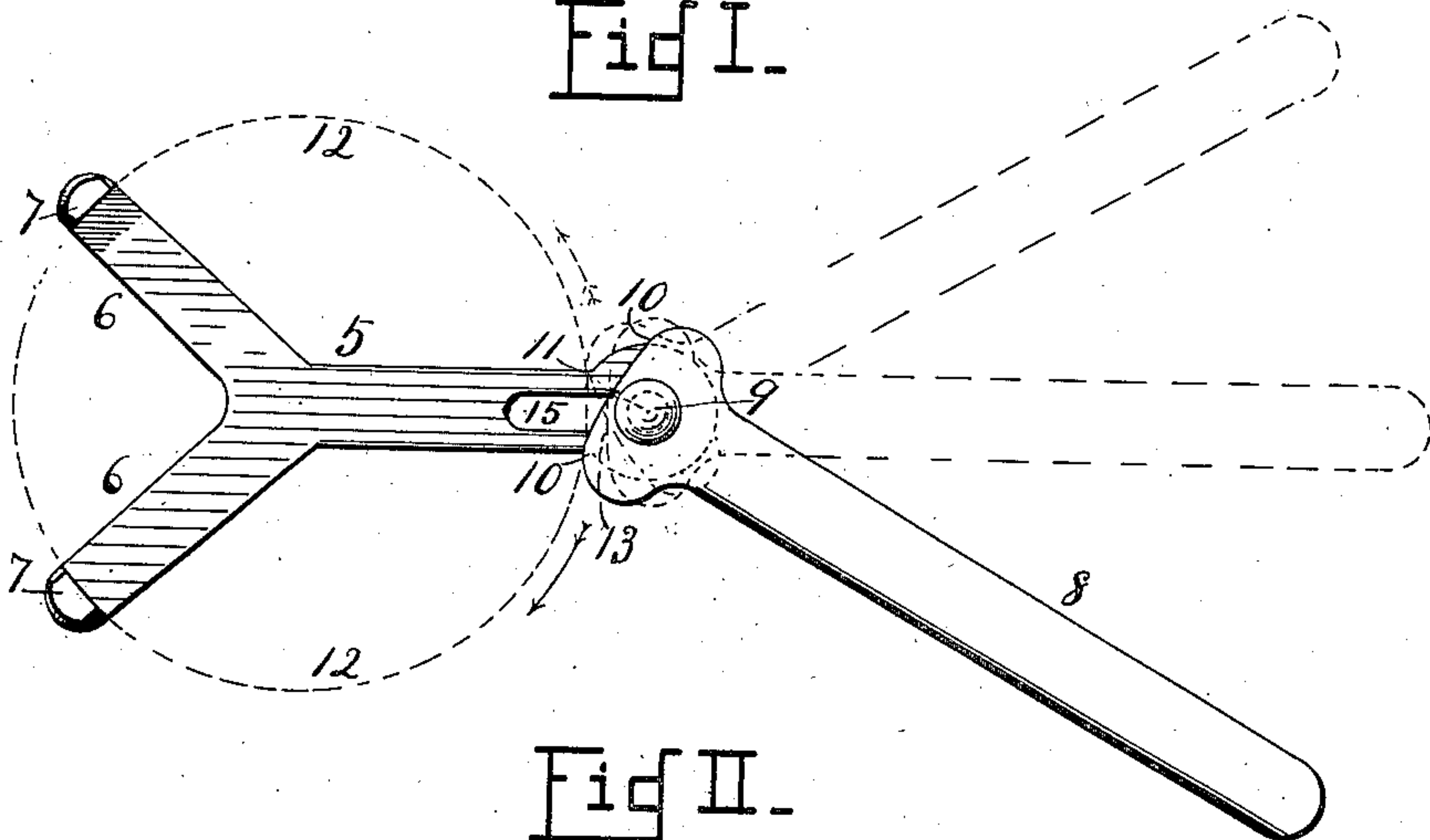


Fig II.

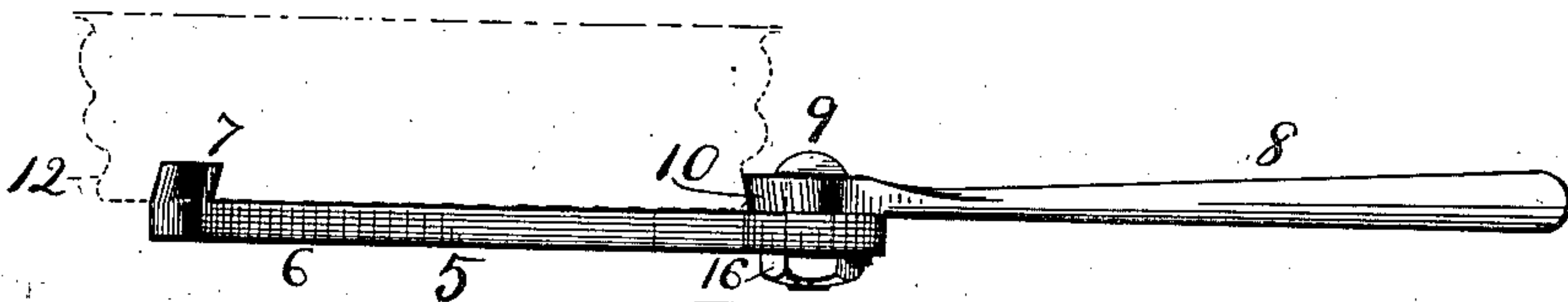
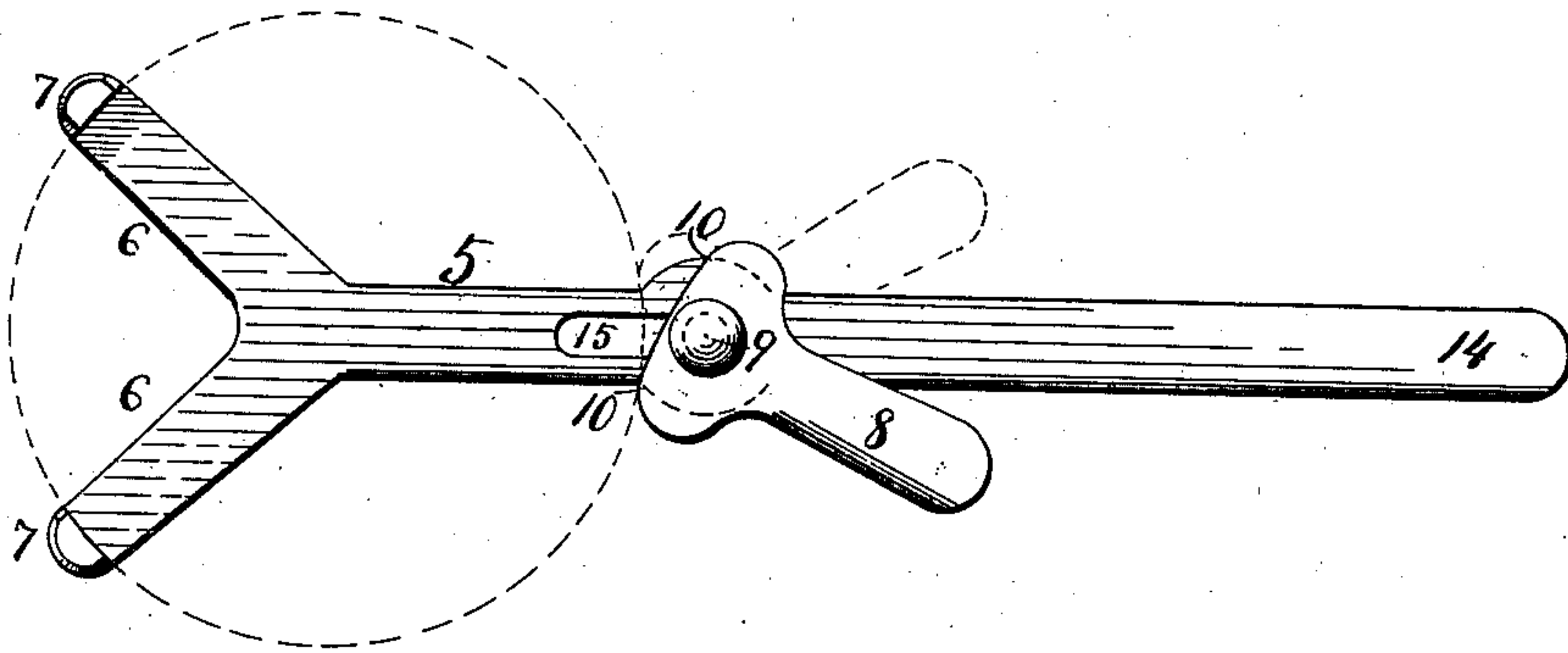


Fig III.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

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## WRENCH.

SPECIFICATION forming part of Letters Patent No. 422,526, dated March 4, 1890.

Application filed August 8, 1889. Serial No. 320,071. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK E. HEINIG, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to that class of wrenches which are adapted to screw the caps on and off from fruit-jars, and for other similar service; and its object is to provide means whereby a wrench is adapted to engage and hold firmly to a circular cap or cover, so as to revolve the same either to the right or to the left for the purpose of screwing the cover on or off from the jar, without turning the wrench the other side up between the operations of revolving to the right and to the left.

To this end my invention consists in the construction and combination of parts forming a wrench, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure I is an under side view of my wrench. Fig. II is an edge view of the same, and Fig. III is an under side view of a modification thereof.

5 represents the body of the wrench, having two arms 6 and a lug 7 projecting from the face of each arm near its end.

8 is a hand-lever, pivoted at 9 onto the face of the body, from which the said lugs 7 project. The lever 8 is provided with a cam-shaped end 10, whose shortest radius from the pivot 9 is at 11, directly opposite to the handle of the lever 8.

The dotted circle 12 represents a cap in position to be operated upon by the wrench.

When the handle stands straight out, as shown at dotted lines 13, the wrench will drop freely upon the cap. Then if the handle of the lever be turned to the right or left one of the projecting cheeks of its cam end will be brought into engagement with the side of the cap, and the harder the pressure the closer becomes the engagement, the cap being hinged

between the cam and lugs, so that the cap must yield and turn with the wrench.

There are many one-sided cam-shaped wrenches for revolving screw-threaded pipes, &c., but it requires intelligence and a moment's consideration to decide which side up to apply such a wrench to make it turn the screw the desired way; but it does not require such intelligence and consideration to use my wrench, because it can only be applied one side up, and when applied it is ready to turn the screw either way by merely proceeding to turn the handle that way.

In the modification shown in Fig. III the body has been extended to serve as a handle or lever 14, while the lever 8 is made very short and pivoted thereto in the same relation to the lugs 7, as before shown. In this case it is necessary to press upon both the levers 8 and 14 to engage the cap and to carry it in either direction on the principle before described; but as soon as the cam engages the side of the cap further pressure on the cam-lever 8 is unnecessary, because the continued movement of the lever 14 will hold the cam engaged. Teeth upon the edge of the cam and the lugs are a common expedient for gripping purposes, and they may or may not be used on this wrench, according as the purpose to which it is to be applied may require.

The main characteristic of this invention is the two lugs 7, serving as jaws of a wrench, opposed by a cam 10, adapted to serve as a gripping-jaw, the jaws and cam being so located as to form an acute-angled triangle, and the cam being double, so that it will engage a circular object when turned either way around it. As soon as service is done the wrench will be disengaged from the cap by turning it a little backward.

While the main object of this invention is to operate upon the caps of fruit-jars and other similar screw-caps, yet it is evidently adapted as a wrench for other forms of screw-nuts which it is not necessary to enumerate herein.

To adapt this wrench for caps of various sizes, I may provide a slot 15 in the body part and make the pivot 9 a stud with a screw-nut



16, whereby the pivot may be fixed at any point along the slot.

Having thus fully described my invention, what I believe to be new, and desire to secure by Letters Patent, is the following:

1. The combination, in a wrench for jar-covers, of a body portion 5, having two fixed arms 6 in the same plane adapted to rest directly upon the top of a cover and provided with lugs 7, projecting from the lower face of the arms, and a cam provided with a handle and pivoted to the lower face of the body, the said cam being double, whereby it will engage a jar-cover when turned in either direction, substantially as shown and described.

2. The combination, in a wrench for jar-covers, of a body portion having two rigid

arms in the same plane adapted to rest directly upon a cover and provided with lugs to extend down beside the cover, and a lever having a double-cam-shaped end pivoted directly to the lower side of the said body portion, whereby the said cam and lugs are located at the angles of an acute-angled triangle, and the double cam is adapted to engage its work by being turned either to the right or left.

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

FREDERICK E. HEINIG.

Witnesses:

HARRY CLAPHAM,  
JOE H. EICHLER.