

No. 754,740.

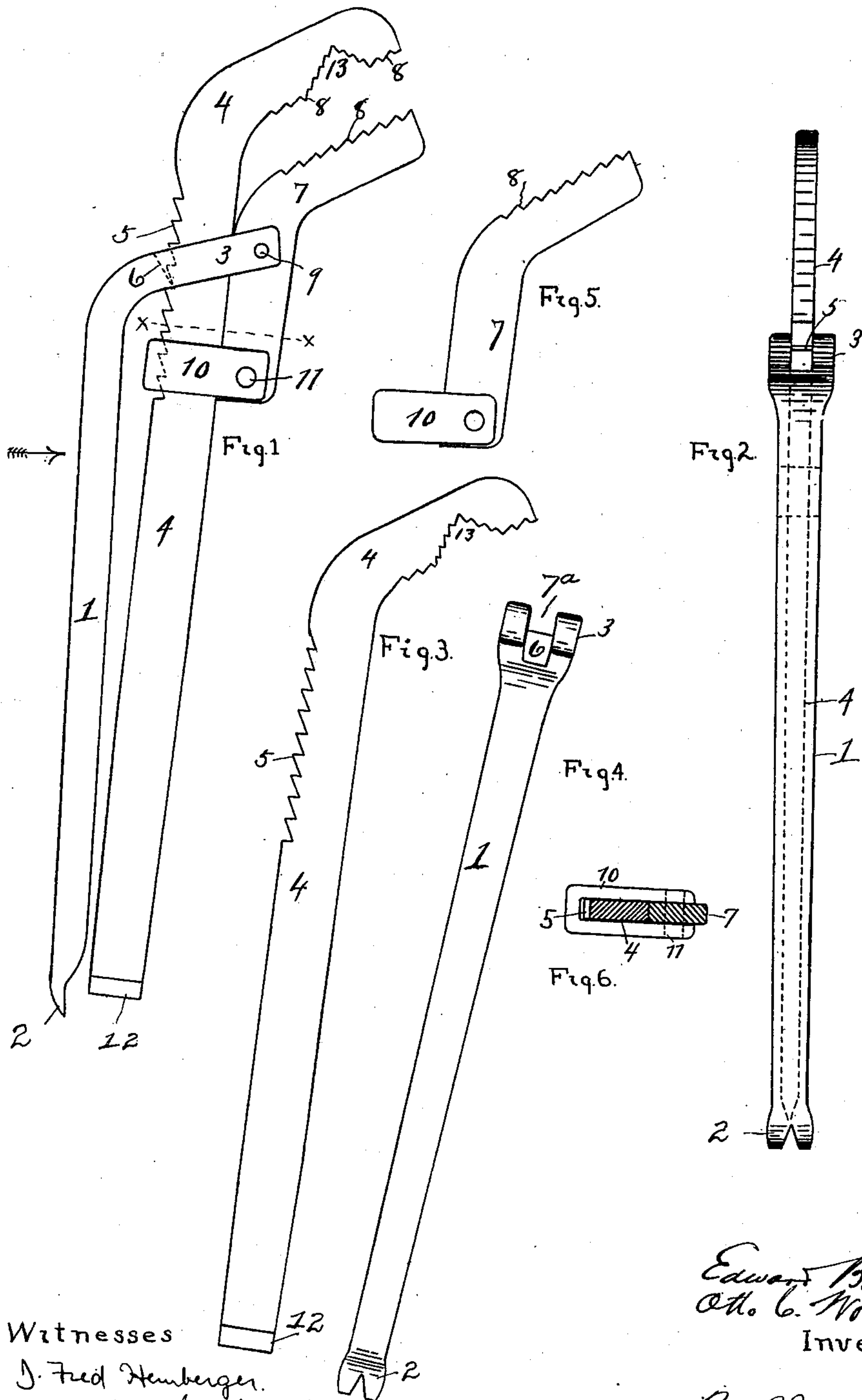
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E. BORDEWISCH & O. C. WOVRIES.

ADJUSTABLE WRENCH.

APPLICATION FILED DEC. 26, 1903.

NO MODEL.



Witnesses

J. Fred Hemberger.

C. M. Theobald.

Edward Bordewisch
Otho C. Wovries,
Inventors.

By R. J. McCarty,
their Attorney.

UNITED STATES PATENT OFFICE.

EDWARD BORDEWISCH AND OTTO C. WOVRIES, OF DAYTON, OHIO, AS-
SIGNORS OF ONE-THIRD TO EDWARD BORDEWISCH, OF DAYTON,
OHIO.

ADJUSTABLE WRENCH.

SPECIFICATION forming part of Letters Patent No. 754,740, dated March 15, 1904.

Application filed December 26, 1903. Serial No. 186,660. (No model.)

To all whom it may concern:

Be it known that we, EDWARD BORDEWISCH and OTTO C. WOVRIES, citizens of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Adjustable Wrenches; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to a combination-tool, and comprises an adjustable wrench with other incidental features hereinafter more particularly described.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is a side elevation of the implement. Fig. 2 is an elevation looking in the direction of the arrow in Fig. 1. Figs. 3, 4, and 5 are views of the members detached. Fig. 6 is a view on the line *xx* of Fig. 1.

In a detail description of the invention similar reference characters indicate corresponding parts.

1 designates the handle, the lower end of which is conveniently provided with a claw or nail-puller 2 and the upper end 3 of which is curved and provided with a fork or bifurcation which receives the adjustable gripping member, the said gripping member having its handle portion parallel with the handle 1. The said gripping member 4 is provided with ratchet-teeth 5, which engage with a tooth 6 on the handle 1 at the inner limit of the bifurcation 7^a, and thereby said member is furnished with a point of fulcrum in said handle.

7 designates a pivotal gripping-jaw cooperating with the adjustable gripping member 4 and having on its inner surface serrations or teeth 8, which engage the teeth 8 on the gripping member 4. The gripping ends of both members 4 and 7 project on an angle and lie parallel to each other. The gripping-jaw 7 is

pivoted at 9 to the curved end 3 of the handle and within the slot 7^a. By reason of this pivotal connection of said jaw it has free movement in its support, whereby a parallel relation with the adjustable member 4 is always maintained, as shown in Fig. 1, irrespective of the position of the gripping ends. In other words, from Fig. 1 it will be seen that the adjustable member 4 occupies a position which brings the teeth 8 thereon in comparatively close proximity to the teeth on the pivotal jaw 7. Should said adjustable member 4 be moved to a position which increases the space between said teeth, the position of the jaw 7 with relation to member 4 would be the same. A further function of the pivotal connection 9 of the jaw 7 is to permit the teeth on the member 4 to be disengaged from the tooth 6 on the handle 1 in order to adjust the member 4, which is accomplished by moving said member 4 outwardly from the handle 1. This operation moves the jaw 7 on its pivot to throw the toothed end of said jaw inwardly toward the toothed end of the member 4 and the lower end of said jaw 7 outwardly. The movable member 4 is then permitted to be disengaged from the tooth 6 and to be slid lengthwise.

10 designates a loop pivoted to the lower end of the jaw 7 at 11 and encompassing the body of member 4 below the curved end 3 of the handle 1. The function of this loop is to maintain the member 4 in a suitable position relative to the jaw 7 for convenience in manipulating the implement. The lower end of the adjustable member 4 terminates in a screw-driver 12. The toothed end of the adjustable member 4 is provided with a substantially V-shaped notch 13, into which the ratchet-teeth 8 extend and which is designed to receive the corner of a nut to be turned.

The implement is adapted to perform the usual functions of a nut-wrench, a pipe-wrench, and a wrench for various other purposes—such, for example, as the uses of a pipe-wrench.

Having described our invention, we claim—
1. The tool herein described, comprising a

wrench having a handle 1 with a curved end, a movable gripping member projected through said curved end and having its gripping end deflected, ratchet-teeth on one side thereof to
5 engage with a tooth or projection on said curved end of the handle, a gripping-jaw pivoted to said curved end of the handle and having its gripping end deflected parallel with the gripping end of the adjustable member,
10 a loop pivoted to said gripping-jaw and encompassing the adjustable member, as herein shown and described.

2. An adjustable wrench comprising a handle with a bifurcated curved end, said bifurcated end having a projection or tooth, an
15 adjustable member projected through said bifurcated end and having teeth adapted to interlock with the tooth or projection on said bifurcated end, and whereby a fulcrum is
20 provided in said handle for said member, the said member having its gripping end deflected on an incline, a gripping-jaw pivoted to said bifurcated end of said handle and having its gripping end extending parallel with the gripping end of said adjustable member, and a
25 loop pivoted to said gripping-jaw and encom-

passing the body of the adjustable member, as herein shown and described.

3. An adjustable wrench comprising a handle with an end thereof terminating in a
30 curved fork, a tooth or projection on said end, an adjustable member projected through said curved fork and having teeth thereon adapted to engage with the tooth on the fork, the gripping end of said member having a V-
35 shaped notch and the said end being provided with gripping serrations, a gripping-jaw pivoted to the forked end of said handle and having its gripping end provided with serrations and lying parallel with the gripping end of
40 the gripping member, and a loop pivoted to the lower end of said gripping-jaw and encompassing the body of the adjustable member, as herein shown and described.

In testimony whereof we affix our signatures
45 in presence of two witnesses.

EDWARD BORDEWISCH.
OTTO C. WOVRIES.

Witnesses:

R. J. McCARTY,
JOHN W. KALBFUS.