No. 697,877. Patented Apr. 15, 1902.

J. H. PAULLIN.

WRENCH.

(Application filed Aug. 7, 1901.)

(No Model.)

FIG. 1.

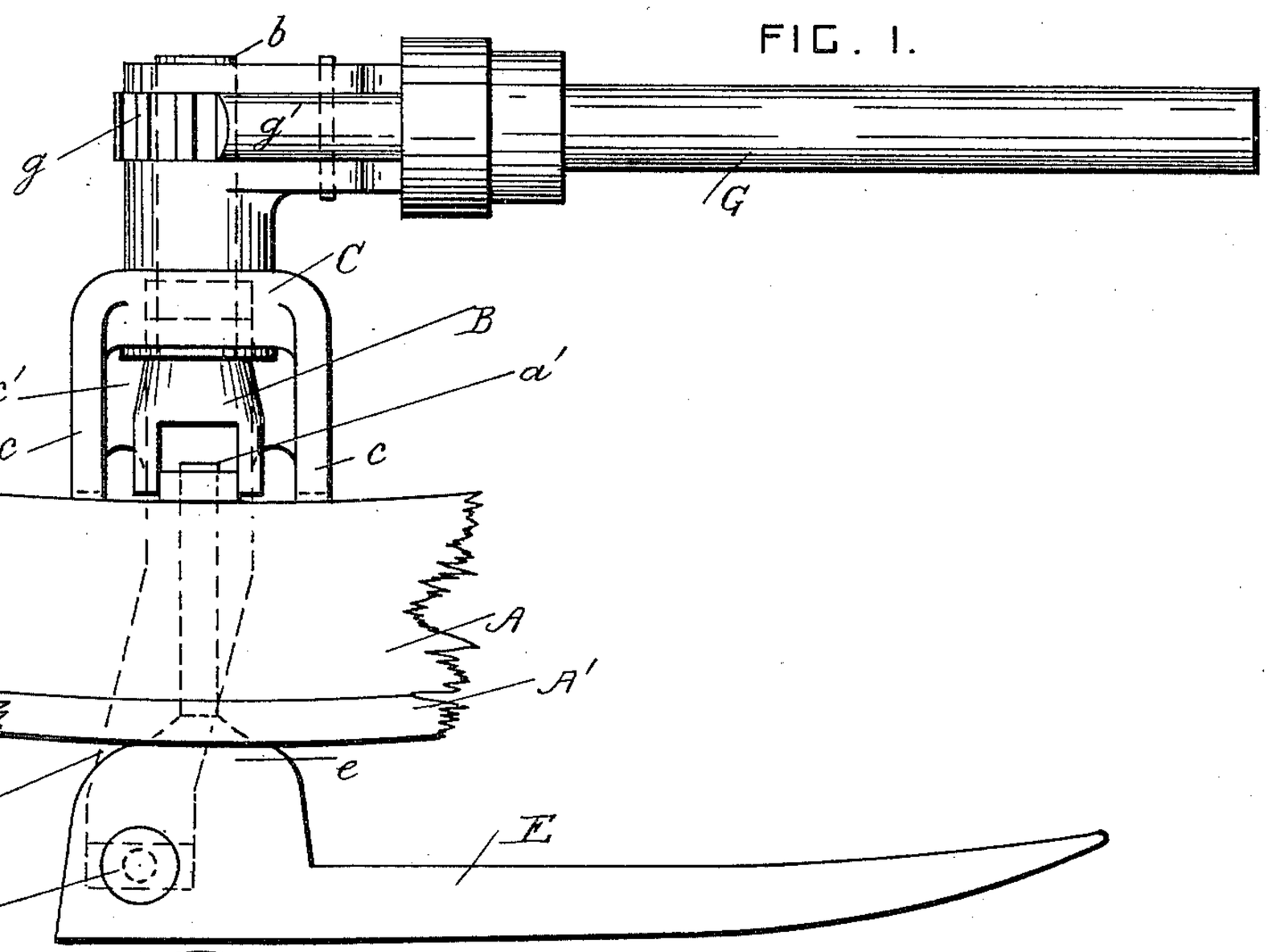


FIG. 2.

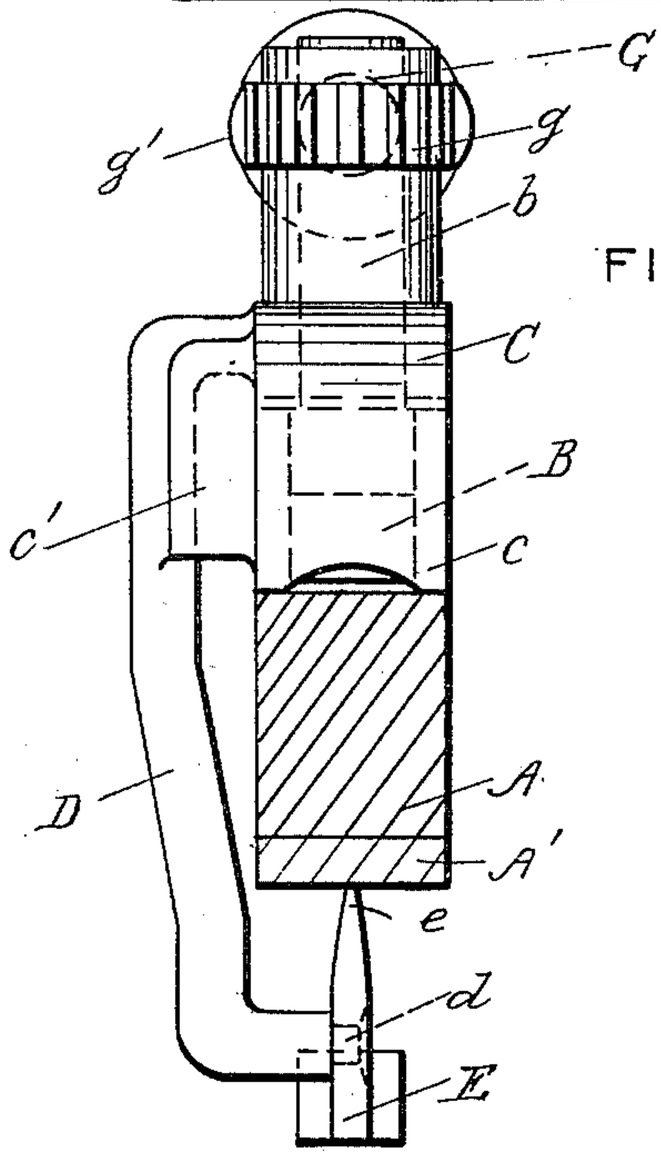
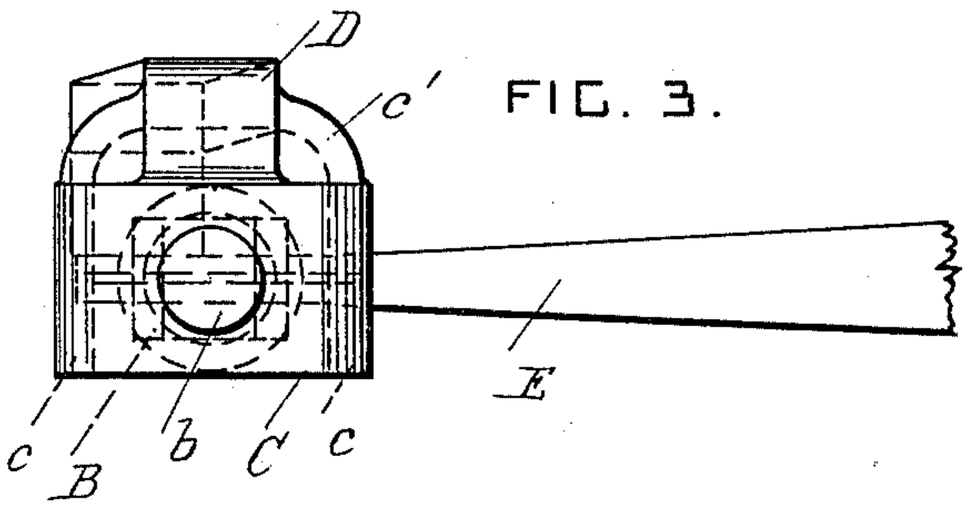


FIG. 3.



WITNESSES

Walter e Allen

James M. Shea

INVENTOR

John H. Paullin,

by Herbert W. Jenner.

Attorney

UNITED STATES PATENT OFFICE.

JOHN H. PAULLIN, OF CORNING, IOWA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 697,877, dated April 15, 1902.

Application filed August 7, 1901. Serial No. 71,259. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. PAULLIN, a citizen of the United States, residing at Corning, in the county of Adams and State of Iowa, 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 wrenches which are used for the nuts which come between the spokes at the rim of a wheel; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a front view of the wrench. Fig. 2 is a side view, and Fig. 3 is a plan view, of the wrench with the ratchet-lever removed.

A is a portion of the rim of a wheel, A′ is its tire, and *a′* is one of the bolts for securing the tire to the rim.

B is the wrench socket or jaw, which is slipped over the nut of the bolt *a′*. This jaw B has a spindle *b*, which is journaled in a plate C, which has two arms *c* for bearing against the inside of the wheel-rim. These arms may be connected by a web *c′* when made of cast malleable iron.

D is a bar which projects from one side of the plate C.

E is a lever which is pivoted on a pin *d*, which projects from the free end portion of the bar D. The pivot-pin *d* is arranged crosswise of the axis of the spindle *b* and a little to one side of it, and it projects from the front side of the arm, so that the clamping-lever E works in a plane crosswise of the two arms or bearings *c*, which are pressed against the wheel-rim. The lever E has a bearing edge *e* near its pivot *d*, and when the head of the bolt *a′* has a slot or notch in it this bearing edge engages with the slot and prevents the bolt from turning. When the bolt-head has no slot, the bearing edge *e* is pressed hard against it by means of the lever, so that the bolt cannot readily turn, and the jaw B is held securely in engagement with the nut, as shown in the drawings.

The wrench-jaw is revolved by any approved means.

G is a ratchet-lever of approved construction which engages with the stem of spindle *b* of the wrench-jaw and revolves it step by step. The ratchet-lever is provided with a ratchet-wheel *g* and a pawl *g′* for engaging with the ratchet-wheel.

What I claim is—

1. The combination, with a wrench-jaw provided with an operating-spindle; and a plate in which the said spindle is journaled said plate having two bearings for engaging the wheel-rim arranged one on each side of the said spindle and having also a bar which projects across the wheel-rim between the said bearings; of a clamping-lever pivoted against the front side of the said bar crosswise and to one side of the axis of the said spindle and working in a plane which is crosswise of the two said bearings, said lever having a bearing edge arranged longitudinally of it, substantially as set forth.

2. The combination, with a wrench-jaw provided with an operating-spindle; and a plate in which the said spindle is journaled said plate having two bearings for engaging the wheel-rim arranged one on each side of the said spindle and having also a bar which projects across the wheel-rim between the said bearings and has a pivot-pin projecting from the front side of its free end portion crosswise and to one side of the axis of the said spindle; of a clamping-lever pivoted on the said pivot-pin and working in a plane crosswise of the said bearings, said lever having a bearing edge arranged longitudinally of it, substantially as set forth.

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

JOHN H. PAULLIN.

Witnesses:
JNO. W. BIXBY,
C. M. STANLEY.