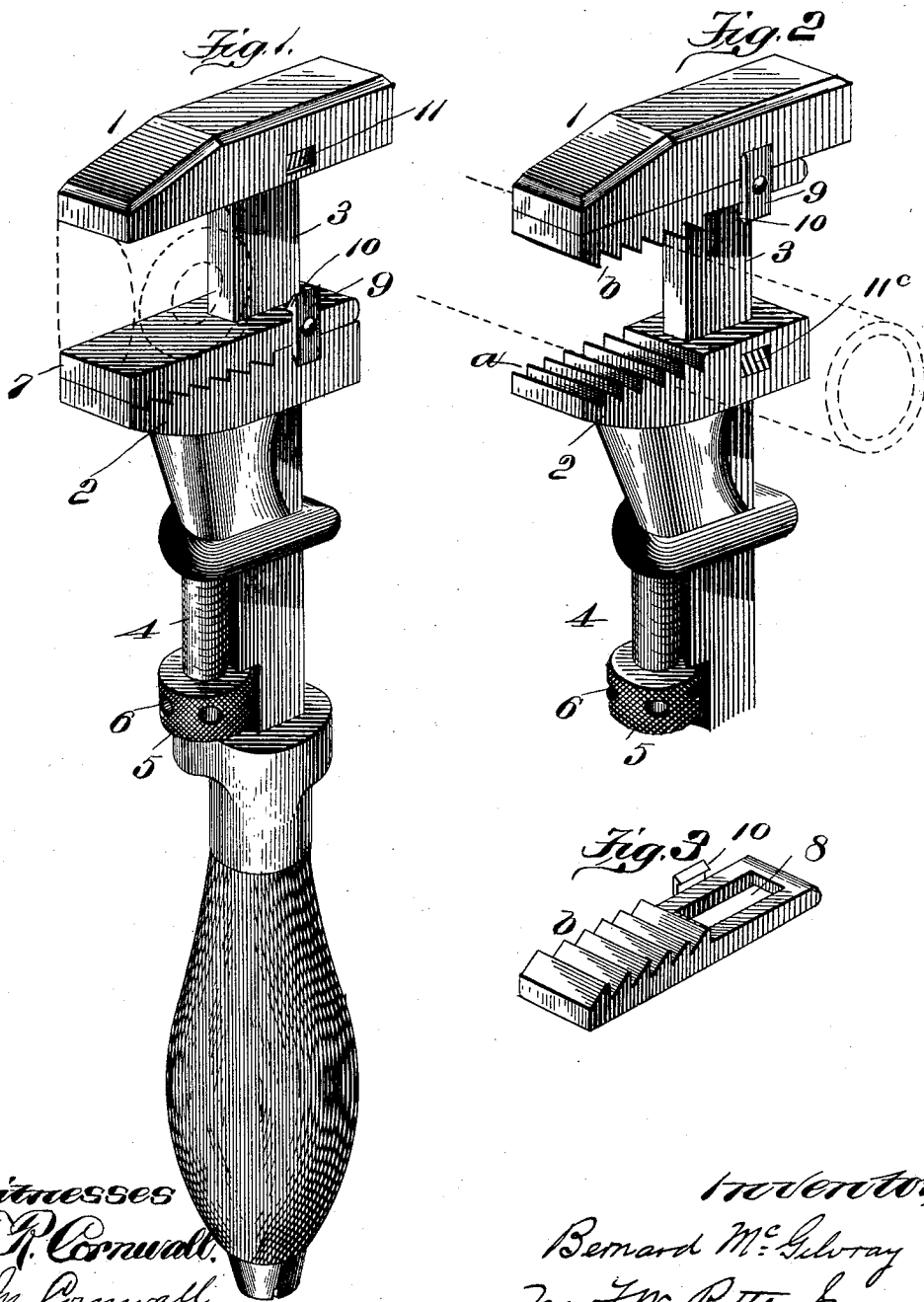


(No Model.)

B. MCGILVRAY.
WRENCH.

No. 481,506.

Patented Aug. 23, 1892.



Witnesses
J. P. Cornwall.
J. M. Cornwall.

Inventor,
Bernard M. Gilvray
by J. W. Rutter
att'y

UNITED STATES PATENT OFFICE.

BERNARD MCGILVRAY, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR
OF ONE-HALF TO FREDERIC W. RITTER, JR., OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 481,506, dated August 23, 1892.

Application filed May 10, 1892. Serial No. 432,496. (No model.)

To all whom it may concern:

Be it known that I, BERNARD MCGILVRAY, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Wrenches; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of a wrench embodying my invention adjusted for use as an ordinary "monkey-wrench." Fig. 2 is a perspective view, partly broken away, of the same wrench adjusted as a "pipe-wrench;" and Fig. 3 is a detached view of the interposed loose gripper-jaw.

Like symbols refer to like parts wherever they occur.

The object of my invention is to produce a strong and efficient convertible wrench which, while being substantially the well-known and favorite monkey-wrench of universal use, can at will be changed into an efficient pipe-wrench.

To this end the main feature of my invention, broadly stated, embraces the combination, with the usual heads of the monkey-wrench having parallel jaws, one of which shall have a serrated face, of an interposed loose or sliding gripper plate or jaw having its faces parallel, one of its faces serrated to coact with the serrated face of the wrench-jaw.

There are other minor features of invention, all as will hereinafter more fully appear.

I will now proceed to describe my invention more fully, so that others skilled in the art to which it appertains may apply the same.

In the drawings, 1 indicates the usual fixed or hammer head of a monkey-wrench, and 2 the movable head, said heads forming parallel jaws, one of which is serrated, as at *a*, or provided with an equivalent gripping-face.

3 is the shank on which the movable head 2 slides, 4 the set or power screw, and 5 the milled wheel by which the screw 4 is operated.

In order to increase the power which may be applied to screw 4 when the devices are used as a pipe-wrench, the milled wheel 5 is provided with a series of holes 6 for the insertion of a nail or equivalent lever.

7 indicates a loose gripper-jaw, having one

of its faces serrated, as at *b*, to coact with the serrated face of the wrench-head, and said serrations are preferably counterparts of those on the head, so that when the loose plate or gripper-jaw is in the position indicated in Fig. 1 the loose gripper-jaw or plate 7 is supported against twisting strains. This loose jaw or plate 7 is slotted, as at 8, for the passage of the shank 3, and if the preferred arrangement of serration above specified is employed it will also serve to prevent undue strain on the slotted or weakest portion of said movable plate or gripper-jaw.

When deemed desirable, spring-piece 9, having teeth 10 10, may be secured to or formed on the loose gripper-jaw 7, and in the heads 1 and 2 indentations 11 11^o may be formed as a means for temporarily securing the loose gripper-jaw 7 in either of the positions shown in Figs. 1 and 2; but for ordinary work no such spring-catch will be required.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with a monkey-wrench having parallel jaws, one of which is plain and the other serrated, of an interposed movable gripper-plate having parallel faces, one of which is plain and the other serrated, to correspond and coact with the respective plain and serrated faces of the parallel jaws of the monkey-wrench, substantially as and for the purposes specified.

2. The combination, with a monkey-wrench having parallel jaws, one of which is plain and the other serrated, said jaws provided with lateral indentations, of a movable gripper-plate having parallel faces, one of which is plain and the other serrated, to coact with the corresponding jaws of the monkey-wrench, and a spring-plate secured to the movable gripper-plate and adapted to engage the indentations in the jaws of said monkey-wrench, substantially as and for the purposes specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 10th day of May, 1892.

BERNARD MCGILVRAY.

Witnesses:

F. R. CORNWALL,
PERCY B. HILLS.