J. A. ROBERTS.
ADJUSTABLE WRENCH PLES.
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ADJUSTABLE WRENCH-PIERS.

1,386,365.


To all whom it may concern:

Be it known that I, JOHN A. ROBERTS, of Rolfe, in the county of Pocahontas and State of Iowa, have invented certain new and useful Improvements in Adjustable Wrench-Pliers; 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.

My invention relates to improvements in pliers having novel means for positioning the jaws in parallel relation to each other.

An important object of this invention is to provide a pair of pliers having means whereby the jaws may be positioned parallel to each other for engaging articles of numerous sizes.

A further object of the invention is to provide a pair of pliers of the character described which are simple to adjust, of highly simplified construction and cheap to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same,

Figure 1 is a side elevation of a pair of pliers embodying my invention, parts thereof being shown in section,

Fig. 2 is a plan view of the same,

Fig. 3 is a side elevation of a movable jaw embodied in the invention, and,

Fig. 4 is a side elevation of a slightly modified form of jaw.

In the drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention, the numeral 5 generally designates my improved wrench including a pair of handles 6 and 7. The forward portions of the handles 6 and 7 are widened and are pivotally connected by a pin 8. The handle 7 is provided with a rigid jaw 9 coacting with a second jaw 10 slidably and detachably carried by the handle 6. The upper portion of the handle 6 is provided with an opening 11 extending transversely of the longitudinal axis of the pliers. This opening or channel 11 receives a rack 12 formed integral with the movable jaw 10. The upper portion of the rack bar is connected to the jaw 10 by a reduced web 13 extending through a relatively narrow slot 14 in the upper portion of the handle and which communicates with the channel 11. Shoulders 15 formed on opposite sides of the web 13 abut the upper sides of the channel and serve to limit undue movement of the relatively movable jaw 10.

An adjusting screw 16 is carried by the handle 6 and engages the rack 12 for adjusting the movable jaw 10. The under side of the jaw 10 is flat and is adapted for squarely abutting the forward end portion of the handle 6 for securely positioning the jaw 10 at the desired point with relation to the jaw 9.

The handle 7 is inclined as indicated at 17 at its forward end portion adjacent the jaw 9 to permit of the free pivotal movement of the other handle 6.

In the modified form of my invention illustrated in Fig. 4, a jaw 18 is provided with a plurality of teeth 19 adapted for engaging pipes or other cylindrical articles.

In the use of my invention, the jaws may be positioned parallel to each other at various distances apart by a movement of the adjusting screw 16. In positioning the jaws in parallel relation, they are enabled to more firmly and securely grip various articles and prevent the same from slipping off the jaws.

While I have shown and described the preferred embodiment of my invention, it is understood that such minor changes in arrangement and construction of parts may be made as will remain within the spirit of the invention and what is claimed.

Having thus described my invention, what I claim is:

1. Pliers having handle members, each member having a jaw, said members being pivoted together whereby the jaws may assume usual positions with their gripping faces at an angle to each other, one of said jaws being movable, and means operable independently of movement of the handles to position the movable jaw at different locations with its gripping face substantially parallel with the gripping face of the other jaw.

2. Pliers having handle members, each member having a jaw, said members being pivoted together whereby the jaws may assume usual positions with their gripping faces at an angle to each other, one of said jaws being movable, one of said handle
members having a transverse slot receiving
the movable jaw, said movable jaw having
a rack, means operable independently of
movement of the handles cooperating with
the rack to position the movable jaw at dif-
ferent locations with its gripping face sub-
stantially parallel with the gripping face of
the other jaw, the said "other jaw" extend-
ing across the fixed jaw to brace the same
when the gripping faces are in parallel re-
lation in engagement with an object.
In testimony whereof I affix my signature
in presence of two witnesses.

JOHN A. ROBERTS.

Witnesses:
ZOLA B. STEWART,
RICHARD GIESE.