No. 770,695. PATENTED SEPT. 20, 1904.

C. D. PAUL & J. L. STUART.

WRENCH.

APPLICATION FILED DEC. 11, 1903.

NO MODEL.

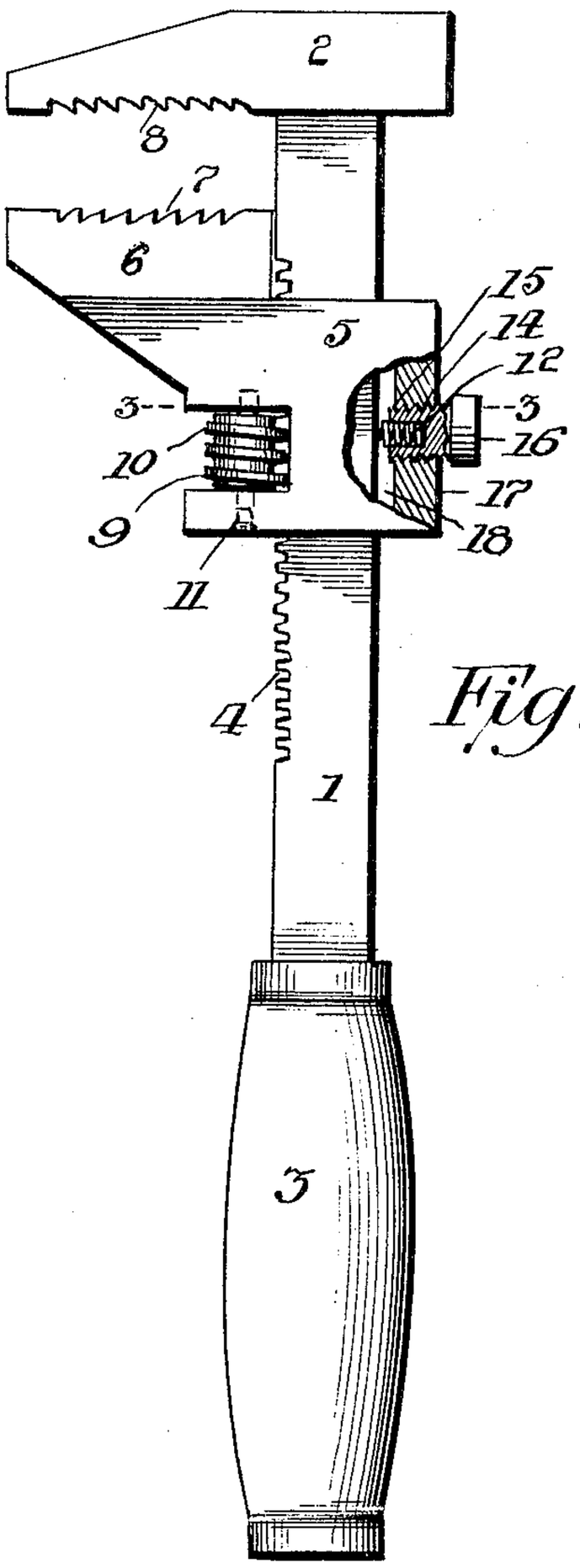

Fig. 1.

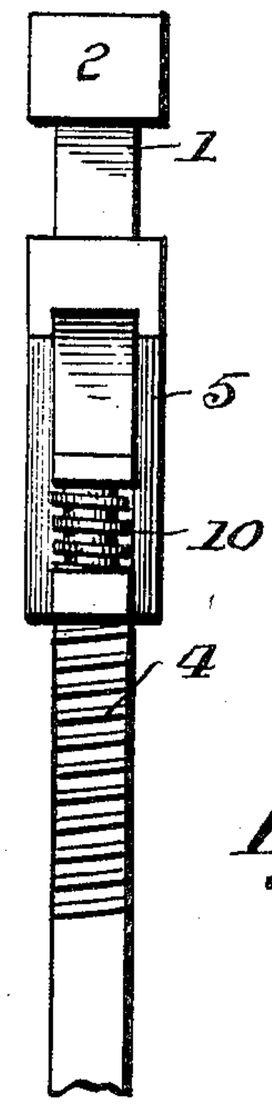

Fig. 2.

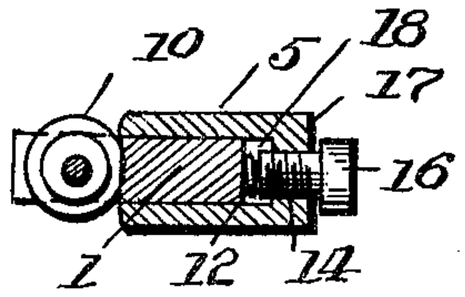

Fig. 3.

Witnesses:
M Hamlin
Robert R. Lowry

Inventors.
Charles D Paul
James L Stuart
By O D Lewis
Attorney.

No. 770,695. Patented September 20, 1904.

UNITED STATES PATENT OFFICE.

CHARLES D. PAUL AND JAMES L. STUART, OF PITTSBURG, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 770,695, dated September 20, 1904.

Application filed December 11, 1903. Serial No. 184,723. (No model.)

To all whom it may concern:

Be it known that we, CHARLES D. PAUL and JAMES L. STUART, citizens of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Wrenches, of which improvement the following is a specification.

This invention relates to certain new and useful improvements in wrenches, and relates more particularly to that type of wrenches generally known in the trade as "monkey-wrenches," the primary object of the invention being to provide means for the rapid adjustment of the movable jaw and the secure locking of said jaw in its adjusted position.

A still further object of the invention is to provide a wrench in which the movable jaw may be actuated rapidly to shift the same any considerable distance and a portion of the locking means then employed for obtaining a finer adjustment of the jaw should it be required.

The invention resides in the novel construction, combination, and arrangement of parts, as will be hereinafter more specifically described and then particularly claimed, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this application, and wherein like numerals of reference will be employed for indicating like parts throughout the different views of the drawings, in which—

Figure 1 is a side elevation of a wrench constructed in accordance with our invention, partially in section to better show one feature thereof. Fig. 2 is a front elevation with the handle and part of the shank broken away. Fig. 3 is a transverse vertical sectional view taken on the line 3 3 of Fig. 1.

Although we herein show and will describe our improvements in connection with a wrench of the monkey-wrench type, yet we do not wish to be understood as confining our improvements to this type of wrench, as the same are alike applicable to pipe-wrenches or other types of wrenches employing a movable and a rigid jaw.

To construct a monkey-wrench in accordance with our invention, we provide a wrench-shank 1, provided at its outer end with a rigid jaw 2 and at its other end with a suitable handle 3. On the front face of the wrench-shank we provide the same with teeth 4, which teeth are placed at an obtuse angle to form threads for a purpose as will more presently appear. Mounted to slide on the wrench-shank 1 is a keeper or casing 5, the opening in which is of greater dimensions than the shank 1, whereby the keeper or casing will have lateral movement on the shank in order to permit the disengagement of the locking device and the shifting of the keeper on the shank. This keeper or casing carries the movable jaw 6, which may or may not be provided with teeth 7, as shown, and the rigid jaw 2 may or may not be provided with the teeth 8. The major portion of the movable jaw lies in a transverse plane beyond the front edge or end of the keeper or casing, and in the forward edge of the latter is a cut-away portion 9, in which is mounted a screw or worm 10, revolubly mounted on a pin or shaft 11 and which screw or worm is adapted to normally engage with the screw-threads of the wrench-shank 1. Mounted in the back of the keeper or casing is a removable screw 12, provided in its inner end with a seat 14, in which is seated a stiff coil-spring 15, that bears against the back of the wrench-shank 1. The head 16 of this screw forms a button on which the ball of the thumb may be placed for shifting the keeper and jaw laterally of the shank in order to unmesh the worm or screw 10 and threads 4, whereby the said jaw and keeper may be shifted along the wrench-shank to the desired position. The clearance 18 between the back strap 17 of the keeper and the back of the wrench-shank permits of the lateral movement being imparted to the keeper in order to shift the keeper and jaw longitudinally of the shank. When pressure on the back of the keeper is relieved, the spring 15 draws screw or worm 10 into engagement with the threads on the wrench-shank and holds the jaw 7 in its adjusted position. If desired, it will be evident

that the screw 10 may be turned to effect a finer adjustment of the jaw 7.

While we have described in detail a practical embodiment of our invention, yet it will be evident that in the practice of the same various slight changes may be made in the details of construction without departing from the spirit of the invention.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a wrench, a wrench-shank provided on one end with a rigid jaw and having teeth on its front face extending at an obtuse angle to said face, a keeper slidably mounted on said shank, a jaw carried by said keeper and movable therewith, said keeper and jaw being movable transversely of the wrench-shank, a worm or screw carried by said keeper to engage the teeth of the wrench-shank, a screw mounted in the back of said keeper, and resilient means carried by said screw and engaging the back of the wrench-shank for normally holding the worm in engagement with the teeth of the wrench-shank, said screw forming a means for engagement with the thumb of the operator's hand to shift the movable jaw transversely.

2. In a wrench, a wrench-shank provided on one end with a rigid jaw, and having teeth on its front face extending at an obtuse angle to said face, a keeper slidably mounted on said shank, a jaw carried by said keeper, said keeper and jaw movable transversely of the wrench-shank, a worm carried by the keeper to engage the teeth of the wrench-shank, a spring located in the back of the keeper and bearing against the back of the wrench-shank to normally hold the worm in engagement with the teeth of said shank and adjustable means for carrying the spring and for forming engagement with the thumb of the operator's hand to shift the movable jaw transversely, substantially as described.

In testimony whereof we have hereunto signed our names in the presence of two subscribing witnesses.

CHARLES D. PAUL.
JAMES L. STUART.

In presence of—
THOS. M. BOYD, Jr.,
ROBERT R. LOWRY.