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S. V. REHART.

ADJUSTING MEANS FOR MONKEY WRENCHES.

APPLICATION FILED AUG. 2, 1906.

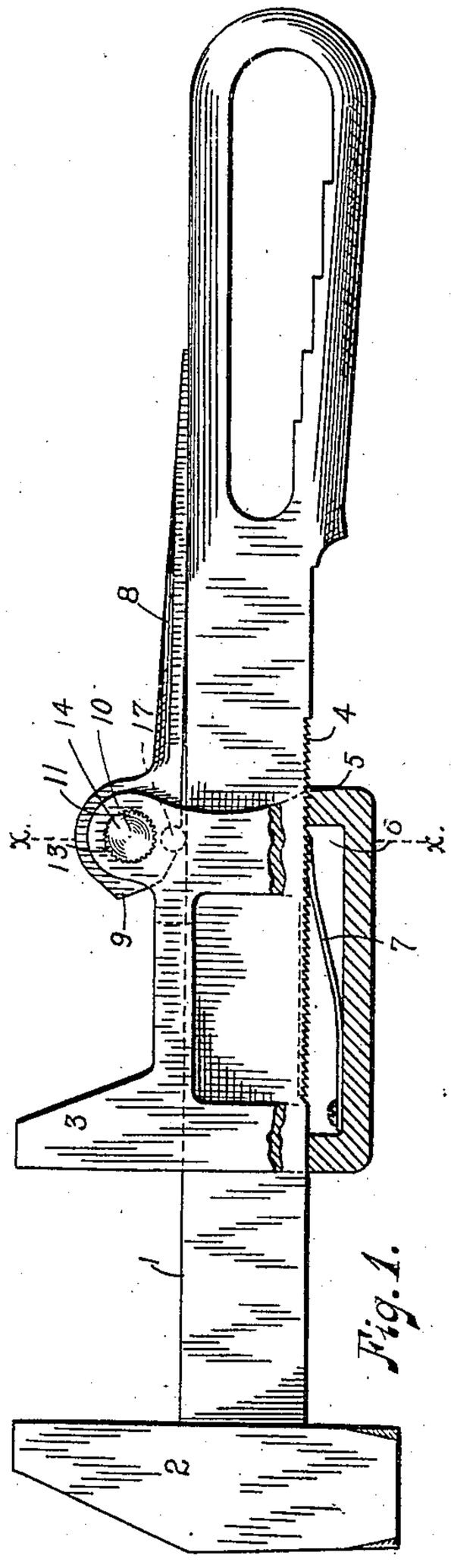

Fig. 1.

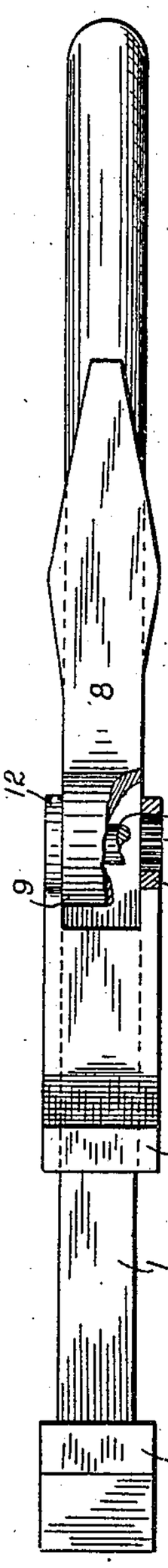

Fig. 2.

Fig. 3.

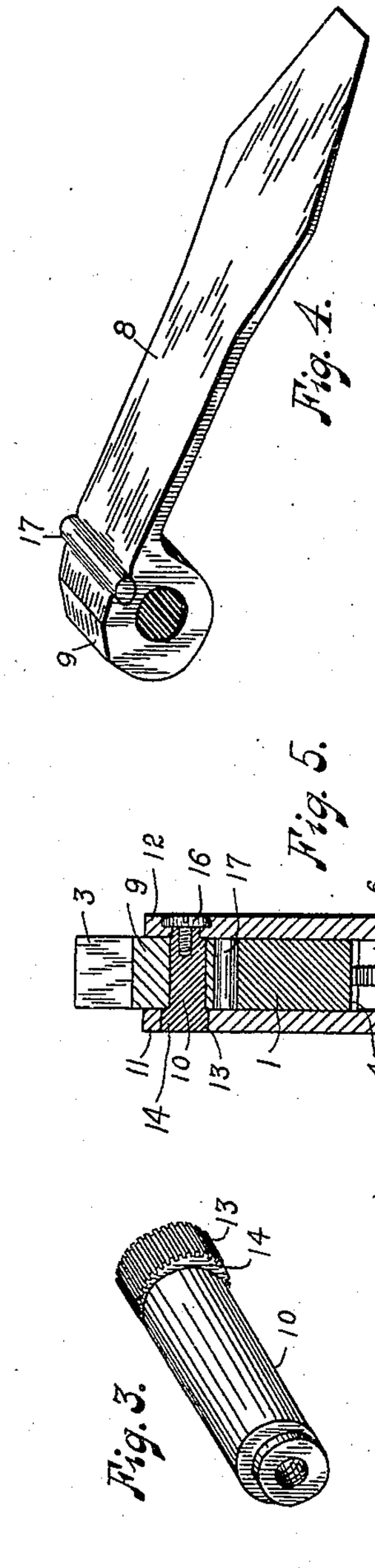

Fig. 4.

Fig. 5.

Witnesses:

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UNITED STATES PATENT OFFICE.

SOLOMON V. REHART, OF PIRU, CALIFORNIA.

ADJUSTING MEANS FOR MONKEY-WRENCHES.

No. 848,204. Specification of Letters Patent. Patented March 26, 1907.

Application filed August 2, 1906. Serial No. 328,925.

To all whom it may concern:

Be it known that I, SOLOMON V. REHART, a citizen of the United States, residing at Piru, in the county of Ventura and State of California, have invented certain new and useful Improvements in Adjusting Means for Monkey-Wrenches, of which the following is a specification.

The present invention relates to certain improvements on the adjusting means for the lock-lever set forth in Letters Patent No. 813,180, granted J. L. Smith on the 20th day of February, 1906, for a quick-acting monkey-wrench. The adjusting means disclosed in said Letters Patent for the lock-lever comprises a screw working in a tapped hole in the head of the lock-lever so as to engage the pivot-pin to actuate the same to vary or adjust the extension or distance of projection of the cam portion of the lock-lever, thereby varying the throw or operative effect of the cam. In practice such adjusting means has proven inefficient, mainly due to the fact that the bearing-surface of the adjusting-screw is too slight to withstand the friction wear to which the same is subjected, resulting in the lock-lever quickly working out of proper adjustment.

The hereinafter-described invention is designed to overcome the before-mentioned difficulty by giving a positive adjustment to the pivotal bearing-pin itself and by such adjustment permitting the throw of the cam portion of the lock-lever to be varied without in any manner reducing the bearing-surface for the said lever. In other words, the pivotal bearing-pin is made eccentric and is adjustable within its seat, the adjustment being such that the throw of the lock-lever may be changed to vary or adjust the extension or distance of projection of the cam portion of the said lever, and thus alter the throw or operative effect of the cam.

Referring to the accompanying sheet of drawings, Figure 1 is a side view of the wrench, partly in section. Fig. 2 is a top plan view of the wrench, the slide-jaw being partly broken away. Fig. 3 is a perspective view of the pivotal pin. Fig. 4 is a similar view of the lock-lever; and Fig. 5 is a sectional view on the line x x, Fig. 1 of the drawings.

In the drawings the numeral 1 designates the body or shank of the wrench, 2 the fixed jaw thereof, and 3 the movable jaw, slidably mounted on the body or shank 1. The movable jaw interlocks with the said body or shank, for which purpose the shank portion of the wrench has teeth 4, which are engaged by the projections 5 on the movable jaw 3. This movable jaw has a longitudinal bore 6 loosely fitting the shank portion of the wrench in order to allow for a certain amount of lateral play in the direction of its height of the teeth 4 and 5, a spring 7 being provided for normally pressing the movable-jaw member 3 in a direction to separate and clear the teeth 5 from the teeth 4. Each of these features and the working thereof fully appear in the before-mentioned Letters Patent No. 813,180, also the lock-lever 8 for operating the movable jaw 3 to place its teeth 5 into engagement with the teeth 4 of the shank portion of the wrench.

The lock-lever 8 is formed with an enlarged cam-head portion 9, which cam-head works on the eccentric pivotal pin 10, held between the ears 11 12 of the movable jaw 3. The surface of the pivotal pin 10 being eccentric, the action or movement of the lock-lever 8 may be readily changed to vary the throw or operative effect of the cam portion of the said lever's head 9.

The eccentric pivotal pin 10 is held in any adjusted position within the ears 11 12 by means of a series of transverse projections 13 on its enlarged end 14, fitting within corresponding depressions 15 in the ears 11 of the movable jaw 3, the said pivotal pin being held against lateral displacement by means of the securing-screw 16, the threaded portion of which extends through the ear 12 and into a screw-threaded bore in the opposite end of the bearing or pivot pin 10.

To relieve the locking-lever's cam-surface of frictional wear, there is fitted within a transverse seat thereof a bearing-roller 17 which roller works against the upper face of the shank or body portion 1 during the locking movement of the lock-lever 8 or as the said lever is thrown down against the said shank or body.

The throw of the lock-lever 8 may be readily changed to vary or adjust the extension or distance of projection of its cam-surfaced portion by simply removing the pivotal pin 10 and turning the same so as to change the registry of the projections 13 with the depressions 15 of the ear 11. By such a changed adjustment the engaging or cam-surface portion of the lock-lever's head 8 is moved toward or from the axis of the

pivotal pin, thereby varying the throw or operative effect of the cam-surface of the head 8 as desired. It will be noted that the bearing-surface for the head of the lock-lever is in no manner diminished by such changed adjustment.

As the eccentric pivotal pin is adjustable to any desired position, the throw of the lock-lever may be quickly varied to meet all requirements.

Having thus described the invention, what is claimed as new, and desired to be protected by Letters Patent, is—

1. In a monkey-wrench of the described character, the combination with the body or shank thereof, of a movable jaw slidably mounted thereon, of a lock-lever provided with a cam-head, of an eccentric bearing-pin for securing the head of the lock-lever to the movable jaw, and means for adjusting the eccentric bearing-pin to vary the throw of the cam portion of the lock-lever.

2. In a monkey-wrench of the described character, the combination with the body or shank thereof, of a movable jaw slidably mounted thereon, of a lock-lever provided with a cam-head, of a bearing-roller held within a seat in the cam-head of the lock-lever, of an eccentric bearing or pivot pin for securing the lock-lever to the movable jaw and on which pin the cam-head of the said lever turns, and of means for adjusting the position of the eccentric pin to vary the throw of the cam portion of the lock-lever.

3. In a monkey-wrench of the described character, the combination with the shank or body thereof, of a movable jaw slidably mounted thereon, of a lock-lever provided with a cam-head, of an eccentric bearing or pivot pin for securing the said lever to the movable jaw and on which the cam-head of the lever turns, of ears projecting from the movable jaw within which the eccentric pin is held, a series of projections on an enlarged end of the said pin, of a series of depressions in one ear of the movable jaw with which the projections of the eccentric pin register, and a device for holding the said eccentric pin within the ears against lateral displacement.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SOLOMON V. REHART.

Witnesses:

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R. H. BENNETT.