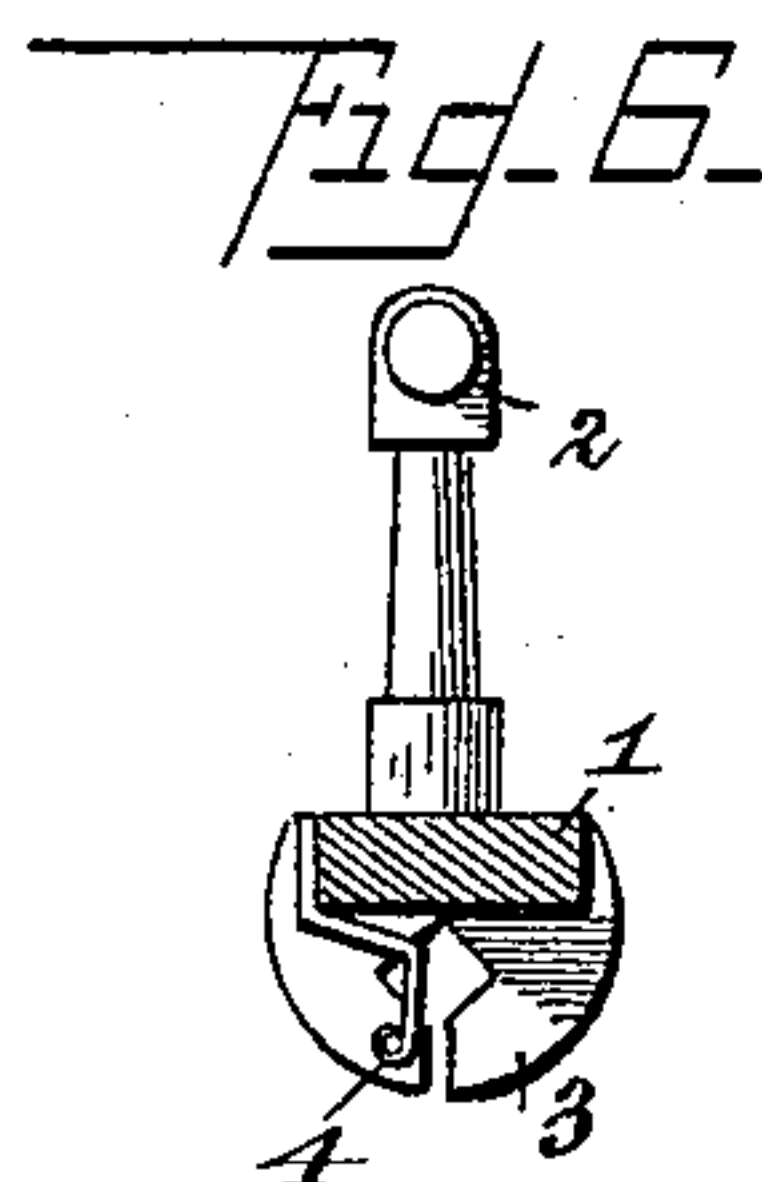
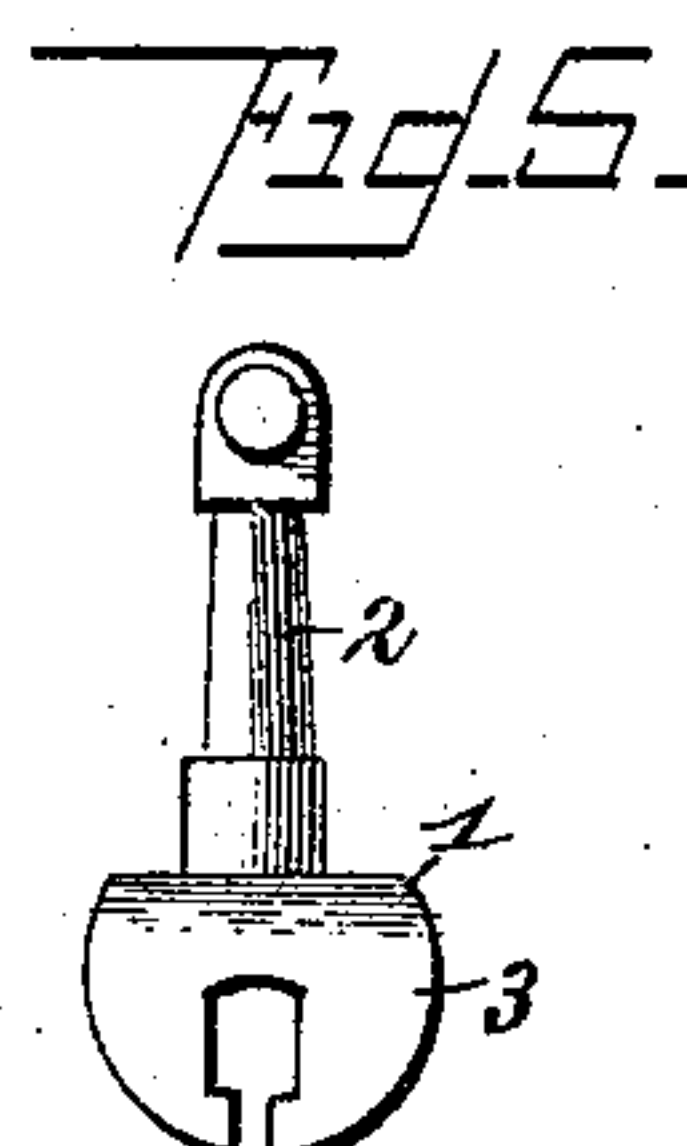
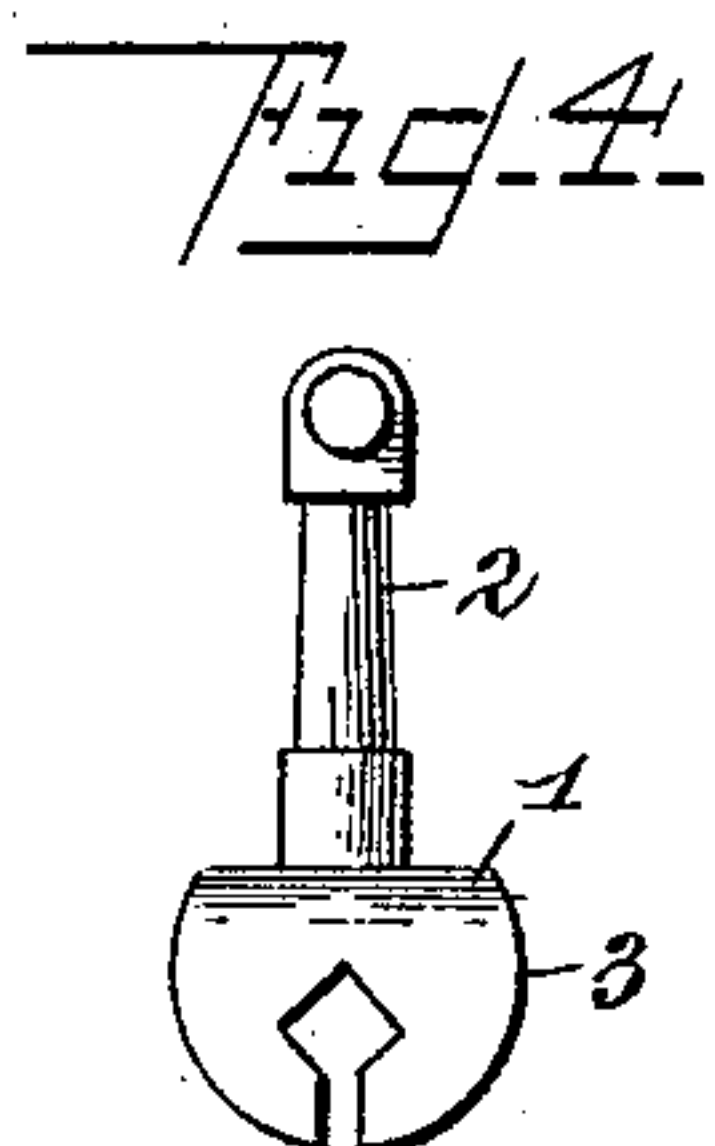
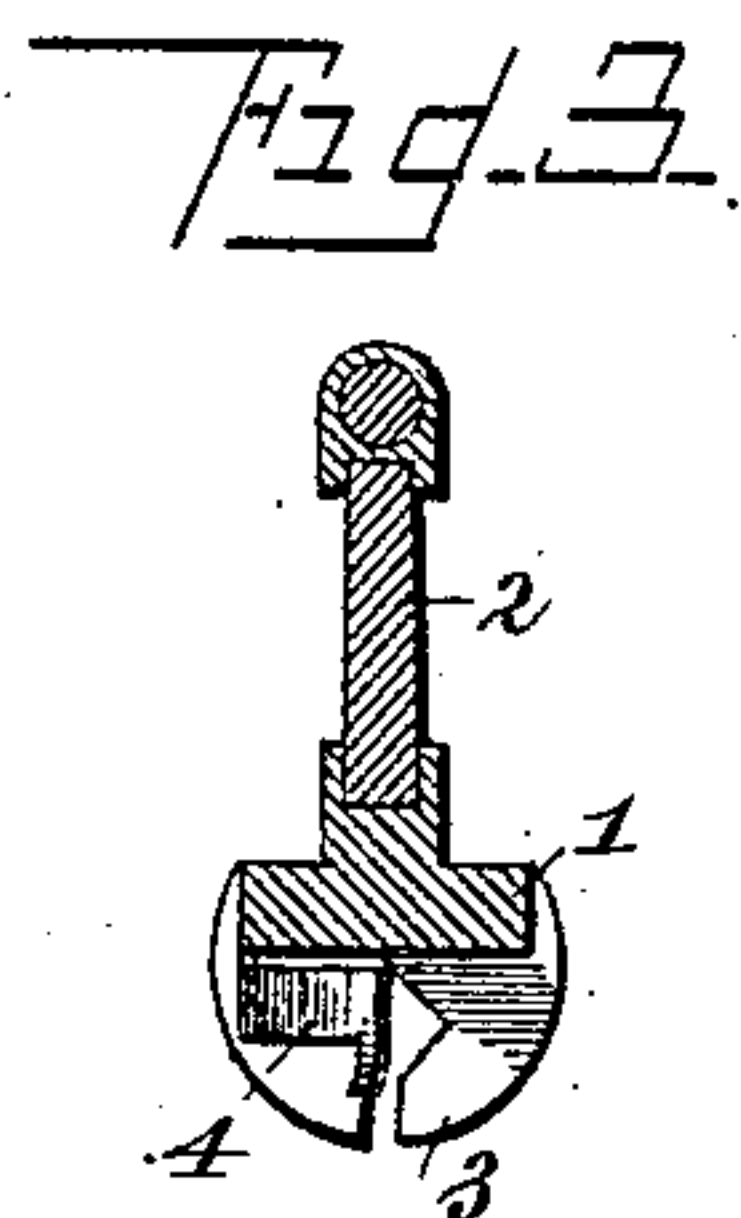
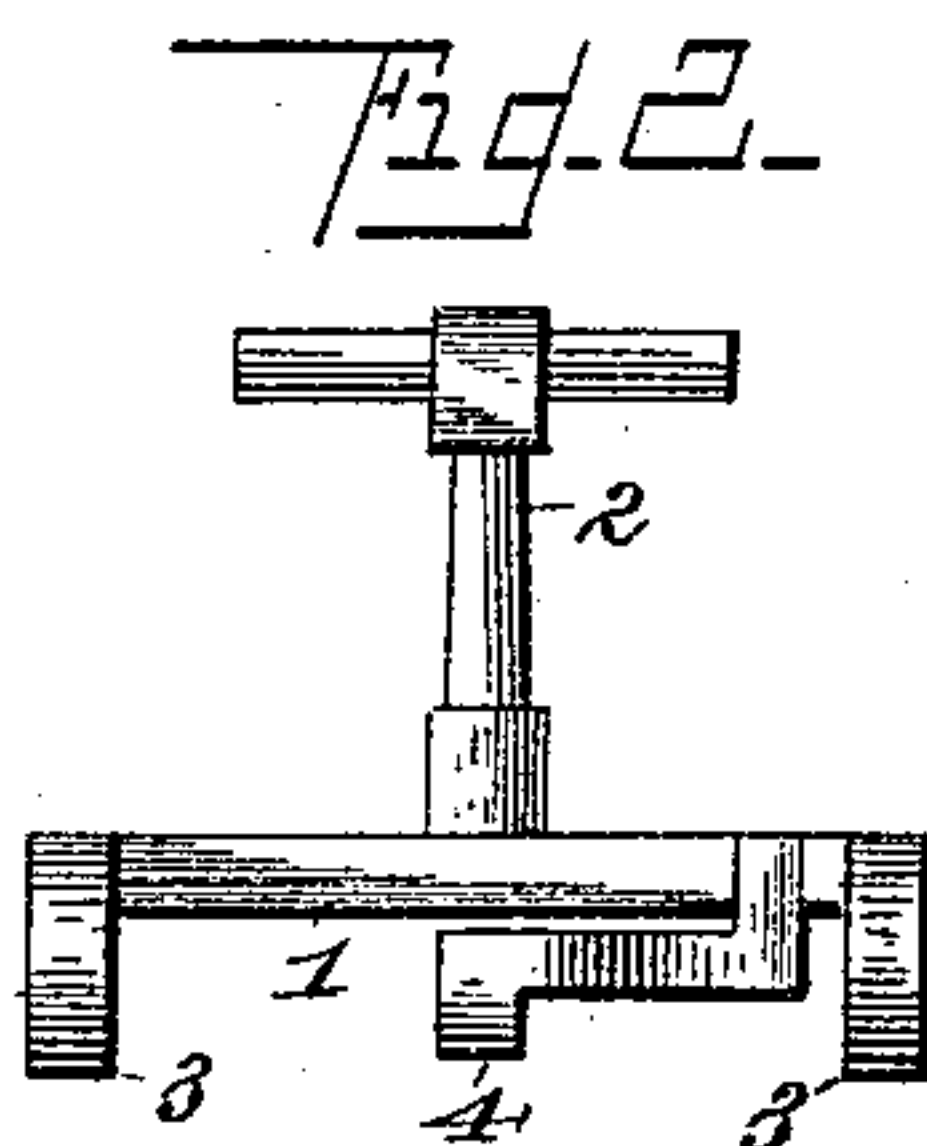
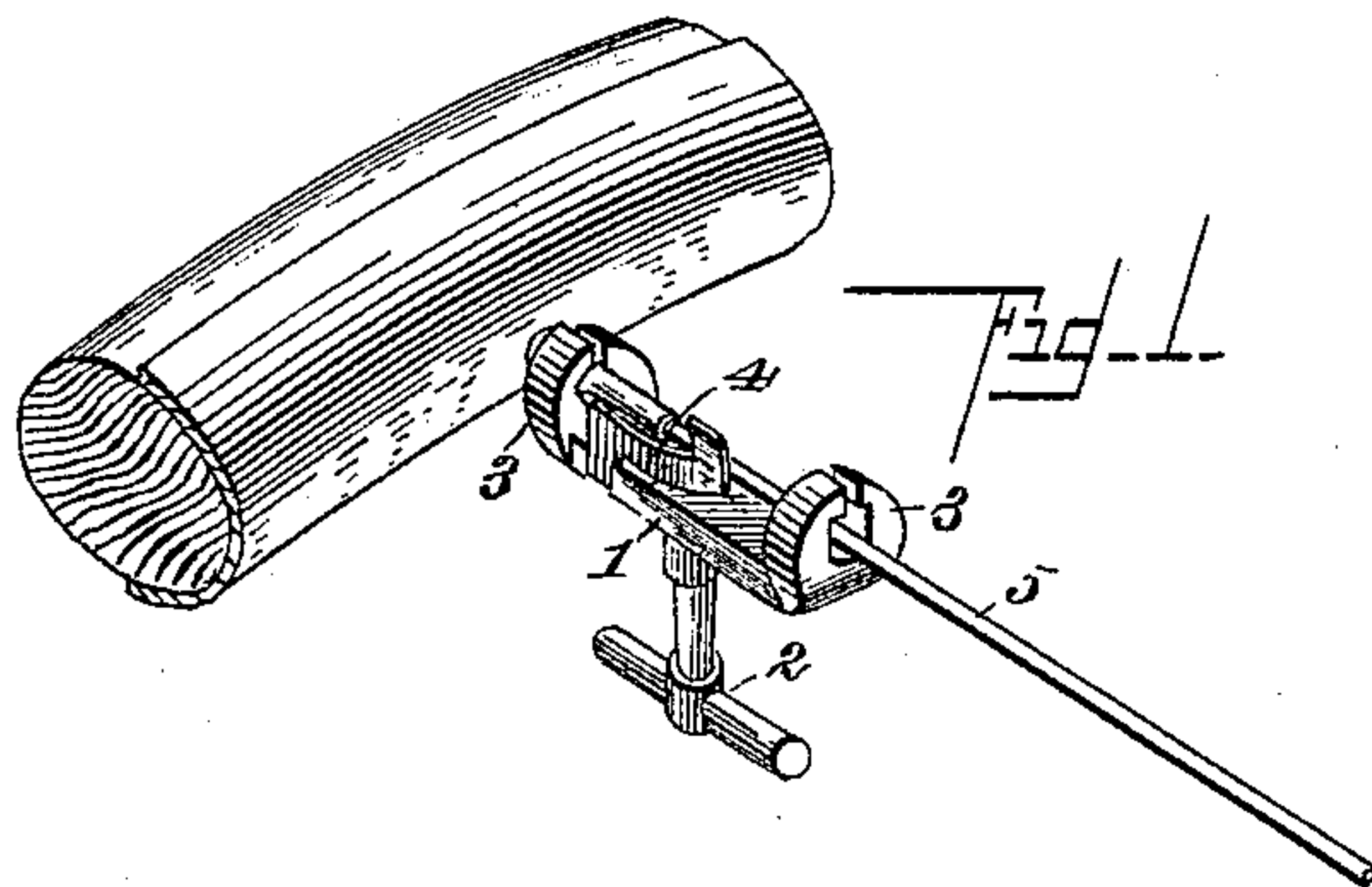


(No Model.)

A. K. SCHAAP.
BICYCLE SPOKE NIPPLE WRENCH.

No. 449,000.

Patented Mar. 24, 1891.



Witnesses:

F. A. Cornwall

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Inventor:

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Attorney.

UNITED STATES PATENT OFFICE.

ALEXANDER K. SCHAAP, OF RICHMOND, VIRGINIA.

BICYCLE-SPOKE-NIPPLE WRENCH.

SPECIFICATION forming part of Letters Patent No. 449,000, dated March 24, 1891.

Application filed January 15, 1891. Serial No. 377,877. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER K. SCHAAP, a citizen of the United States, and a resident of Richmond, in the county of Henrico and State of Virginia, have invented a certain new and useful Improvement in Bicycle-Spoke-Nipple Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of the invention is to produce an extremely simple and practical spoke-nipple wrench for use on bicycles, tricycles, &c.; and it consists in certain novel features of construction that will be fully hereinafter set forth, and particularly pointed out in the claims hereunto appended.

In the drawings filed herewith, Figure 1 represents a perspective view of my improved spoke-nipple wrench as applied to an ordinary bicycle-spoke nipple. Fig. 2 represents a side elevation thereof. Fig. 3 represents a transverse sectional view thereof, and Figs. 4 and 5 end views of the device; Fig. 6, a sectional view of my device provided with a different style of spring.

In the drawings annexed, the numeral 1 designates a bar of suitable size and material provided about midway of its length with a handle 2 formed integral therewith. At each end of the bar, projecting upwardly at right angles therefrom, are two integral ears or projections 3, each of which is slotted from its outer end inward toward the main bar, the inner portions of these slots being enlarged, so as to fit the squared portions or nipples of the spokes 5 when in operation. One of these slots may be formed with parallel sides, as shown in Fig. 3, and the other may be formed as shown in Fig. 4, or they may both be the same shape, the object being to so shape the slots that they will properly fit the nipples of the spokes. Secured to the bar, and projecting from its face about midway between the said ears 3 3, is a flat metallic spring 4, which is adapted to normally press against the side of the spokes 5 when the device is applied thereto, and thus prevent the same sliding

down or leaving the spokes when the operator's hand is removed.

In using this wrench it is first placed on the narrow portion of the spoke, so that the same may pass into the slot in the ears 3 3, as shown in Fig. 1, and it is then moved along the spoke until the enlarged portions of one of the slots engages and fits the squared or enlarged portions of the spoke-nipple near the rim. It may then be turned to either tighten or loosen the spoke, the slotted ears acting as wrenches to grip the nipple in the act of turning. The spring 4 constantly presses against the spoke with a pressure sufficient to hold the device by friction against any movement on the spoke when the wrench is released temporarily by the operator for any purpose.

While it is preferable to employ two of the slotted ears, as shown, yet, as is obvious, one may be used in combination with the spring without departing from the spirit of my invention in the least.

Having thus fully described my invention, what I claim herein as new, and desire to secure by Letters Patent of the United States, is—

1. A spoke-nipple wrench for bicycles, consisting of a bar provided with means for turning it, and a pair of slotted lugs projecting from its face at right angles to its horizontal axis and adapted to engage the spoke-nipple, all substantially as set forth.

2. A spoke-nipple wrench for bicycles, provided with a pair of separated ears adapted to engage the spoke, and a spring between the ears adapted to normally press against the spoke and hold the wrench thereon, all substantially as set forth.

3. A spoke-nipple wrench for bicycles, provided with means for engaging and turning the spoke, and a spring adapted to bear upon the surface of the spoke and hold the wrench at any point thereon, all as set forth.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

ALEX. K. SCHAAP.

Witnesses:

O. H. FUNSTEN,
C. E. RICHARDSON.