

D. N. MARLER.
 VEHICLE AXLE.
 APPLICATION FILED JUNE 25, 1908.

937,316.

Patented Oct. 19, 1909.
 2 SHEETS—SHEET 1.

FIG. 1--

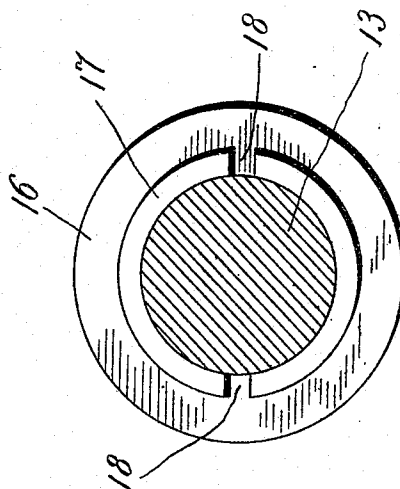
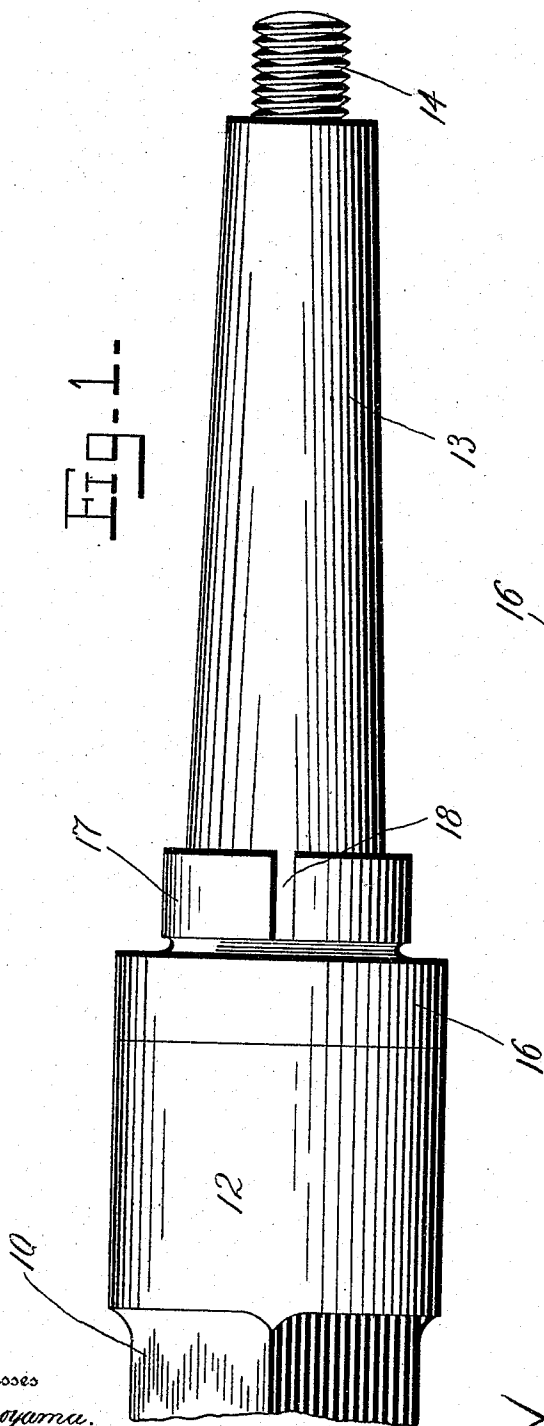


FIG. 2--

Witnesses
T. Sonoyama.
M. J. Miller

By

David N. Marler

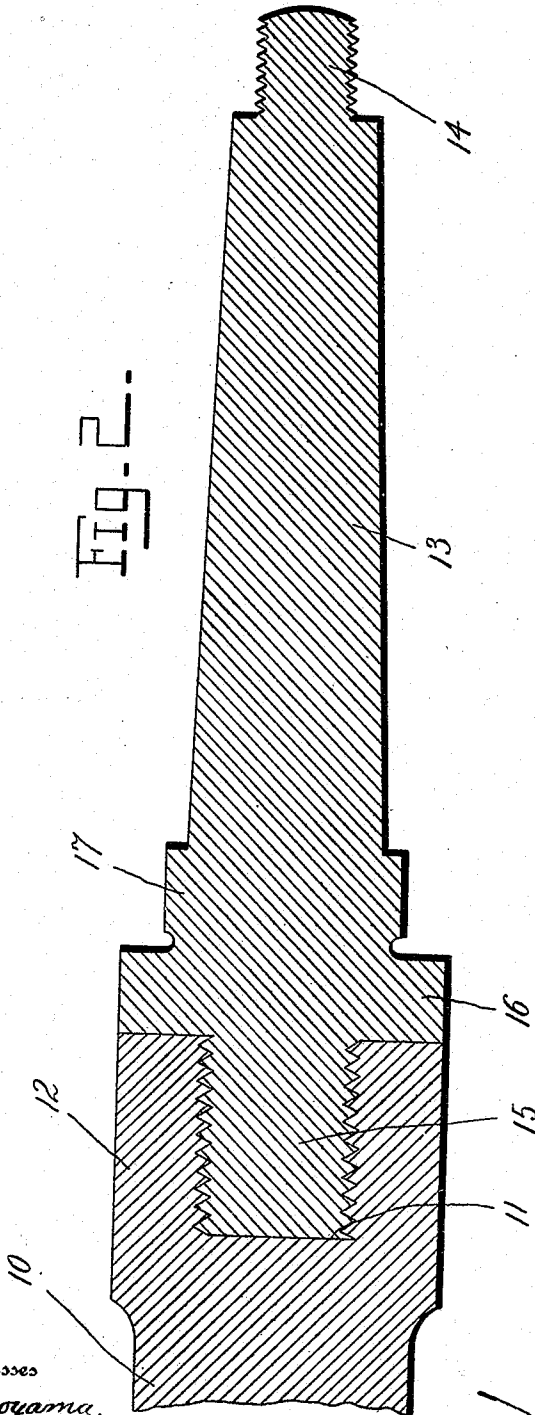
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2 SHEETS—SHEET 2.

FIG. 2.



Witnesses
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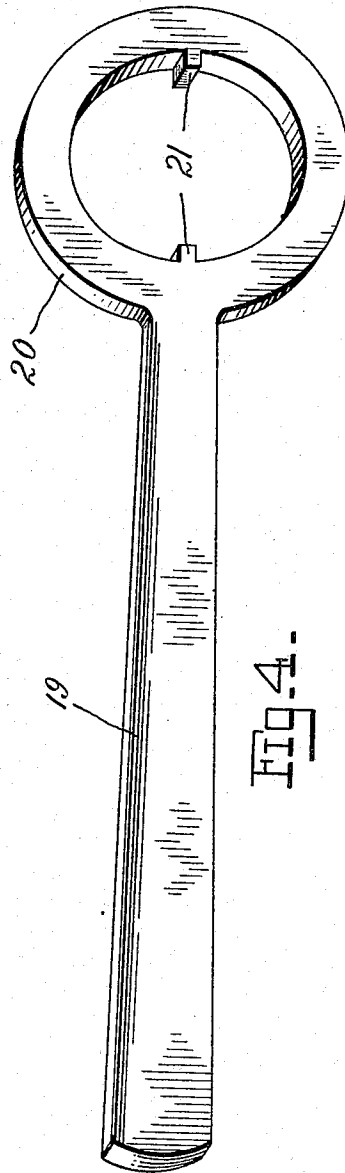


FIG. 4.

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UNITED STATES PATENT OFFICE.

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VEHICLE-AXLE.

937,316.

Specification of Letters Patent.

Patented Oct. 19, 1909.

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To all whom it may concern:

Be it known that I, DAVID N. MARLER, a citizen of the United States, residing at McKinley, in the county of Lawrence and State of Missouri, have invented certain new and useful Improvements in Vehicle-Axles; 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.

This invention relates to vehicle axles and more particularly to that class in which the spindles of the axle are replaceable and the primary object of the invention is to simplify the construction of such devices and to so construct them that the spindles may be more readily removed. I have also aimed to provide for the removal of the spindles without injury to the wearing surface thereof such devices having been heretofore constructed with grooves in the wear surface of the spindles for the reception of the lug or lugs of a spanner wrench.

A further object of the invention is to provide a device of this class in connection with which any of the ordinary types of spanner wrenches may be used.

In the accompanying drawings, Figure 1 is a side elevation of an axle constructed in accordance with my invention, Fig. 2 is a vertical longitudinal sectional view there-through, Fig. 3 is a vertical transverse sectional view through the spindle taken directly outwardly of the enlargement thereon, and, Fig. 4 is a detail perspective view of one form of spanner wrench which may be employed in fixing the spindles in place.

In the drawings, the axle proper is indicated by the numeral 10 and is formed at each end with a threaded socket 11 the purpose of which will be presently fully explained, the axle being preferably enlarged in diameter at its ends as indicated by the numeral 12.

The spindle is indicated, in general, by the numeral 13, it being formed at its outer end with the usual reduced threaded portion 14 for the engagement thereon of the nut which holds the wheel hub upon the spindle and being formed at its inner end with a threaded stud 15 which is screwed into the

threaded socket in the end of the axle. At its said inner end, the axle spindle is formed with an integral collar 16 and directly outwardly of the said collar with an enlargement 17 which is formed with notches 18 for the engagement therein of the lugs of a suitable spanner wrench, it being understood, of course that the wrench is to be engaged with the enlarged portion of the spindle to fix in place or remove the spindle. These grooves or notches 18 not only form a means for the application of a spanner, but also permit lubricant to pass therethrough and oil the spindle.

In Fig. 4 of the drawings there is illustrated one form of wrench which may be used in connection with the spindle embodying my invention and in the said figure, the numeral 19 denotes the handle of the wrench and the numeral 20 the body or annulus thereof, the said body being formed with the usual pair of lugs 21 which are to be engaged in the grooves formed in the enlarged portions of the spindle, it being understood of course that the annular head of the spanner wrench is to be slipped over the spindle to permit of such engagement.

It will be apparent from the drawings and from the foregoing description that the notches or other elements with which the spanner wrench is to be engaged are not formed upon the wear surface of the spindle and that consequently the spindle may be removed without injuring the said surface.

What is claimed is:

The combination with an axle provided with a threaded socket, of a spindle having a threaded stud on the inner end thereof engaging said socket, a collar bearing against the end of said axle, and a second cylindrical collar outside of and in spaced relation to the first collar, said second collar being provided with a pair of oppositely disposed grooves forming lubricant channels and adapted to receive the lugs of a spanner.

In testimony whereof, I affix my signature, in presence of two witnesses.

DAVID N. MARLER.

Witnesses:

J. T. R. LADD,
J. F. WISECUP.