

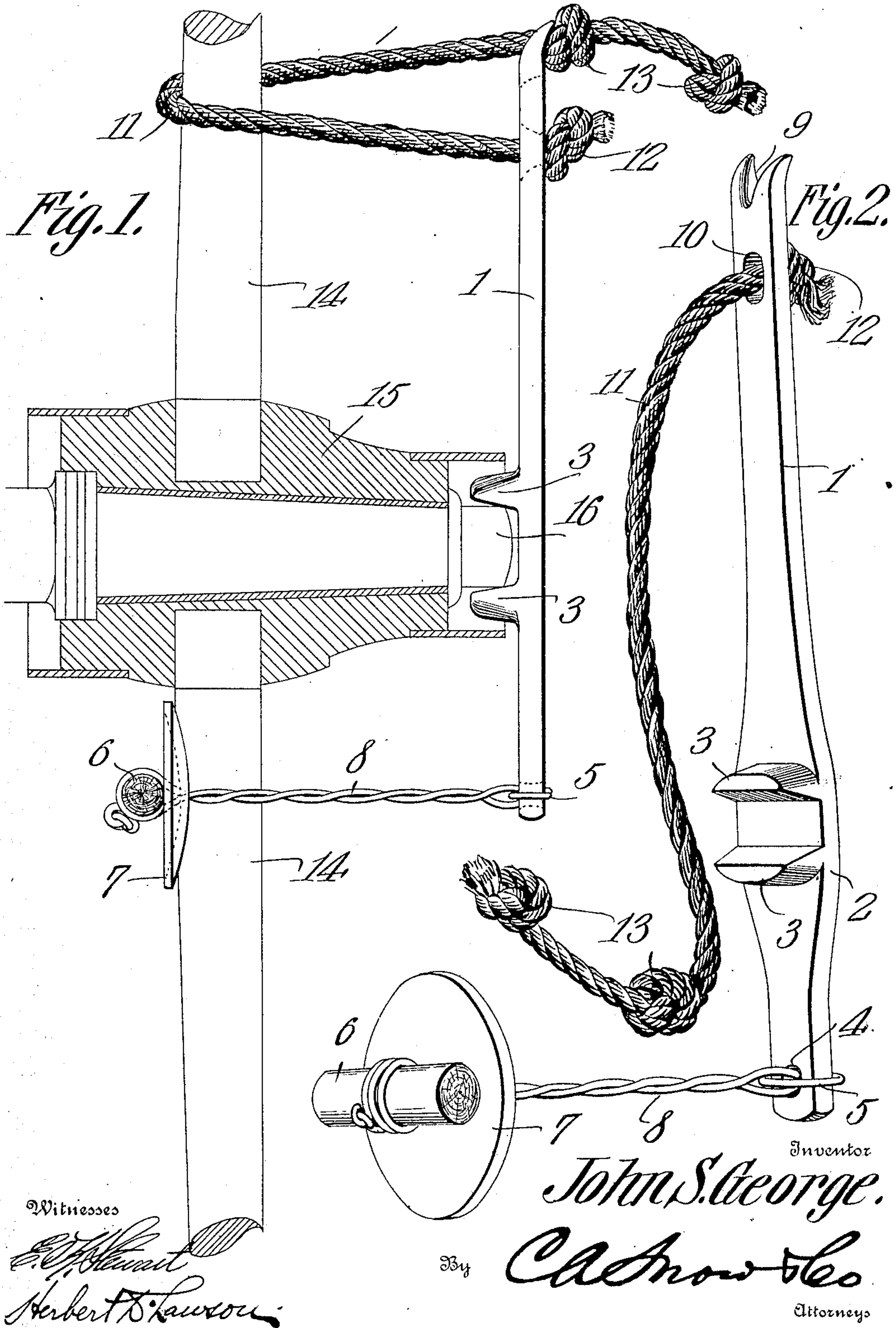
J. S. GEORGE.

WRENCH.

APPLICATION FILED MAY 18, 1908.

913,374.

Patented Feb. 23, 1909.



UNITED STATES PATENT OFFICE.

JOHN S. GEORGE, OF LAURENS, SOUTH CAROLINA.

WRENCH.

No. 913,374.

Specification of Letters Patent.

Patented Feb. 23, 1909.

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To all whom it may concern:

Be it known that I, JOHN S. GEORGE, a citizen of the United States, residing at Laurens, in the county of Laurens and State of South Carolina, have invented a new and useful Wrench, of which the following is a specification.

This invention relates to wrenches for use in removing nuts from axle spindles and its object is to provide a simple, durable and compact device of this character which can be readily attached to a vehicle wheel of any size and clamped upon the axle nut in the hub thereof so that, by rotating the wheel, the nut can be readily unscrewed.

Another object is to provide a wrench designed to hold the detached nut centered within the wheel hub after the wheel has been removed from the axle so that by placing the wheel on the axle and turning it the nut will be properly centered upon the end of the axle and screwed thereon, the entire operation of removing and applying the nut being thus accomplished without requiring the operator to touch the hub or axle with the hands.

A still further object is to provide a wrench which can be readily adjusted for use upon hubs of different lengths.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a side elevation of the wrench applied to a wheel, said wheel being shown in section. Fig. 2 is a perspective view of the wrench.

Referring to the figures by characters of reference, 1 designates the body of the wrench, the same being preferably formed of a metal strip broadened adjacent one end as indicated at 2, there being integral transversely extending jaws 3 upon one face of this broadened portion. The inner or adjoining faces of the jaws are preferably inclined and converge toward the body 1.

Formed within that end of the body nearest the jaws 3 is an opening 4 and a folded wire 5 is looped about this end and the end portions thereof are extended through the opening 4 and fastened to a grip 6. A disk 7 of any suitable material such as leather is arranged upon the wire close to the grip 6 and

those portions of the wire between the grip and the body constitute a stem 8. The length of this stem can be diminished by turning the grip 6 and thus causing the wire to twist, thereby bringing the disk 7 closer to the body 1. That end of the body farthest removed from the jaws is forked as indicated at 9 and an opening 10 is formed in the body adjacent the fork and has a rope 11 or other suitable flexible device therein. One end of the rope is knotted as at 12 so as to prevent its withdrawal from the opening and one or more additional knots 13 may be formed adjacent the other end of the rope.

When it is desired to use the wrench for the purpose of releasing a wheel from its axle the stem 8 is inserted between two of the spokes and drawn toward the hub so that the disk 7 will lap the adjoining spokes and the jaws 3 will embrace the nut. In the drawings the spokes have been indicated at 14, the hub at 15, and the nut at 16. After the wrench has been applied in this manner the rope 11 is looped about one of the spokes of the wheel and the knotted end thereof placed in engagement with the fork 9. Obviously by pulling on the rope until it is sufficiently taut and then securing the rope as described the wrench will be tightly clamped in engagement with the nut. By then turning the wheel the nut will necessarily rotate therewith and thus unscrew from the axle. When the wheel is removed the wrench will maintain the nut properly centered within the hub so that when the wheel is again positioned upon the axle the nut will be so supported as to promptly engage the axle and screw thereon when the wheel is rotated. It thus becomes unnecessary for the operator to touch the axle or the hub during the operation of removing a nut or placing it in position. Obviously the wrench can be quickly removed from the wheel simply by disengaging the rope from the fork 9 and sliding the stem 8 and disk 7 out of engagement with the spokes. Not only does the grip 6 constitute means for facilitating the twisting of the stem but it also is designed to lap the spokes while the wrench is in use, the disk 7 merely constituting means to prevent the grip from scratching or otherwise marring the spokes.

A device such as herein described enables a nut to be quickly removed from or placed in position upon an axle and also prevents the nut from dropping onto the ground.

The parts of the device are very durable and inexpensive, the only portions thereof likely to break or become worn, being readily renewable at very slight cost.

5 What is claimed is:

1. A wrench comprising a body, nut-engaging means extending therefrom between its end, a combined grip and spoke engaging device, a twisted connection between said
10 grip and one end of the body, and a flexible spoke-engaging device adjacent the other end of the body, said body having means for engaging said device.

2. A wrench comprising a body, nut engaging means extending therefrom between
15 its ends, one end of the body being forked, a flexible spoke engaging device connected to the body for engagement with the fork, and a second spoke engaging device extending
20 from the other end of the body.

3. A wrench comprising a body having a

forked end, a flexible spoke engaging device extending from the body, said device having a knotted portion for engagement with the
fork, nut engaging means upon the body, 25 and spoke engaging means adjacent the other end of the body.

4. A wrench comprising a body having a forked end, nut engaging means upon the
body, a flexible spoke engaging device ex- 30 tending from the body and having a knotted portion for engagement with the fork, a combined grip and spoke engaging device, and an adjustable connection between said grip and the other end of the body.

In testimony that I claim the foregoing as
my own, I have hereto affixed my signature
in the presence of two witnesses.

JOHN S. GEORGE.

Witnesses:

W. M. CAIN,
S. R. CAIN.