

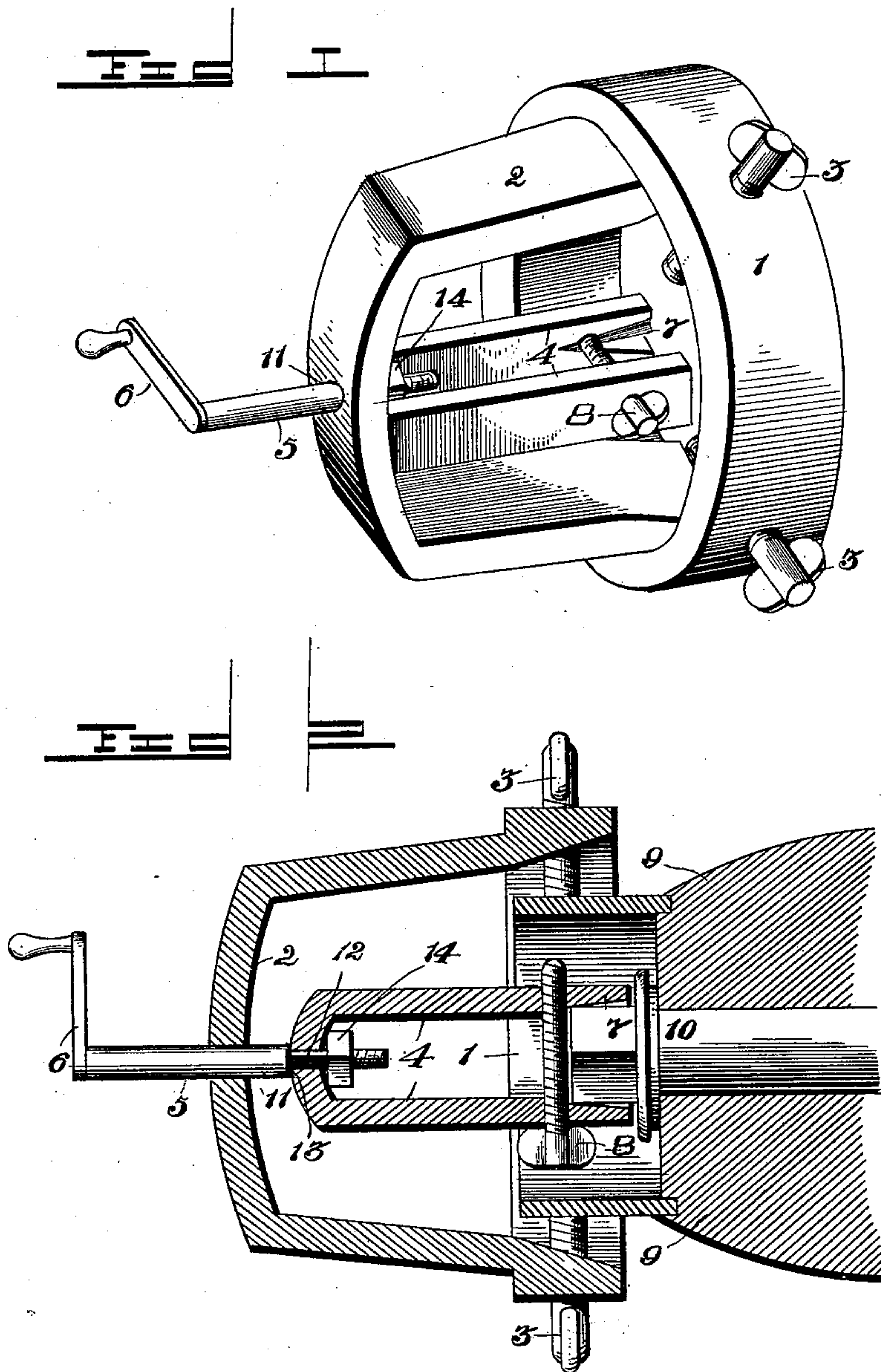
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Patented Nov. 7, 1899.

H. SAULS & G. S. COOK.
HUB WRENCH.

(Application filed July 8, 1899.)

(No Model.)



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY SAULS AND GEORGE S. COOK, OF MINERAL, TEXAS.

HUB-WRENCH.

SPECIFICATION forming part of Letters Patent No. 636,456, dated November 7, 1899.

Application filed July 8, 1899. Serial No. 723,223. (No model.)

To all whom it may concern:

Be it known that we, HENRY SAULS and GEORGES. COOK, citizens of the United States, residing at Mineral, in the county of Bee and State of Texas, have invented a new and useful Hub-Wrench, of which the following is a specification.

This invention relates to hub-wrenches, and has for its object to provide an improved support which is adapted to be fitted to the hub of a wheel and also a wrench proper, which is adapted to be turned axially upon the support, so as to unscrew the hub-attaching nut from the axle-spindle, whereby said hub-attaching nut may be removed without turning or otherwise changing the relatively-fixed position of the wheel upon the axle.

A further object is to provide the wrench proper with a longitudinally-slidable adjustment upon the support, so that after being unscrewed from the axle-spindle the hub-attaching nut may be quickly withdrawn away from the end of the spindle, thereby facilitating the lubricating of the latter.

To these ends the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and the minor details of construction may be made within the scope of the appended claims without departing from the spirit or sacrificing any of the advantages of the present invention.

In the drawings, Figure 1 is a perspective view of the device. Fig. 2 is a longitudinal sectional view thereof applied to the hub of a wheel.

Corresponding parts in both figures of the drawings are designated by like characters of reference.

Referring to the accompanying drawings, 1 designates a flat circular band having a yoke-shaped brace 2 extending entirely at one side of the plane of the band and connected thereto at diametrically opposite points, and the band is further provided with a plurality of radially-disposed set-screws 3, passing through threaded openings provided in the band and having their heads located ex-

teriorly thereof in convenient position for operation.

Located centrally within the band and extending at right angles to the plane thereof are the clamping-jaws 4, which are carried by an adjusting-stem 5, supported by the yoke-shaped brace 2. The adjusting-stem is provided at its outer end with an operating-crank 6, and said stem is adapted to slide loosely through a circular opening 11, formed in the yoke 2, and is circular in cross-section, so as to turn axially, for a purpose as will be hereinafter more fully explained. The jaws 4 are formed from a single length of spring metal bent intermediate its ends into substantially U shape and are fixedly connected to the inner end of the adjusting-stem at the bend of the jaws. The inner sides of the jaws, at the free ends thereof, are provided with notches 7, adapted to embrace the corners of the nut, and a thumb-screw 8 connects the jaws, whereby the latter may be clamped upon the nut. As best shown in Fig. 2, it will be seen that the stem 5 is reduced, as at 12, near its inner end, whereby an annular shoulder 13 is formed. The base of the jaws 4 is provided with an opening adapted to receive the reduced portion 12 of the stem 5 and is clamped against the annular shoulder 13 by means of a suitable nut 14, fitted to the threaded inner extremity of the stem. The reduced portion 12 of the stem 5 and the opening in the base of the jaws 4 are both angular in shape, so as to prevent axial movement of the jaws upon the stem.

In the application of the device as shown in Fig. 2 of the drawings the circular band 1 is adapted to embrace the outer hub-band, and the set-screws 3 are set against the hub-band, so as to connect the device firmly therewith, after which the jaws 4 are adjusted longitudinally by means of the stem 5, so as to engage the hub-attaching nut 10, and then the thumb-screw 8 is operated to clamp the jaws firmly to said nut. When the device has thus been firmly connected to the hub and engaged with the hub-attaching nut, the crank 6 is operated to turn the stem and likewise the jaws 4, whereby the latter are adapted to unscrew the nut from the end of the spindle. As the stem 5 is slidably mounted through the opening in the yoke-shaped brace

2, the jaws of the wrench and also the nut may be quickly withdrawn from the end of the spindle, so as to expose the latter for convenient lubrication.

5 From the foregoing description it will be understood that the wheel remains in its relatively-fixed position upon the axle-spindle and is not turned thereon. After the axle has been lubricated the slidable stem and the
10 wrench-jaws may be pushed longitudinally inward, so as to quickly engage the hub-attaching nut with the end of the spindle, after which the crank is turned to screw the nut in position. Thus it will be seen that the wrench
15 is carried by the support and the nut remains within the jaws of the wrench, so that it is not necessary to soil the hands in the operation of the present device.

Heretofore hub-wrenches have been pro-
20 vided with a support which is adapted to be fitted to the hub, and also wrench-jaws; but the latter have had a screw-threaded shank fitted in a screw-threaded opening in the support, so that after the nut has been disengaged
25 from the axle it is still necessary to turn the stem in order to draw the nut away from the end of the spindle. This operation is exceedingly slow and awkward, and in view of this difficulty we have provided improved means
30 whereby the nut may be quickly drawn away from the end of the spindle after having been detached from the threads thereof.

What we claim is—

1. A hub-wrench, comprising a support
35 adapted to be fitted to the hub of a wheel, a brace carried by the support and projecting at one side thereof, and a wrench proper located between the support and the brace, and having an operating-stem slidable longitudi-
40 nally upon the brace, and also having an

axial movement thereon, substantially as and for the purpose set forth.

2. A hub-wrench, comprising a band adapted to be fitted to the hub of a wheel, an arched or yoke-shaped brace carried by the band and
45 projecting at one side only thereof, clamping-jaws located within the band, and a cross-sectionally round stem carrying the jaws at the inner end thereof, slidable longitudinally
50 through the arched or yoke-shaped brace, having an axial movement thereon, and provided at its outer end with an operating-handle, substantially as and for the purpose set forth.

3. In a hub-wrench, the combination with
55 a band having radial set-screws adapted to connect the band to the hub of a wheel, and an arched or yoke-shaped brace connected at diametrically opposite sides of the band and
60 projecting entirely at one side of the plane thereof, of clamping-jaws formed from a single length of spring metal bent intermediate of its ends to provide jaws, a thumb-screw adjustably connecting the free ends of the jaws,
65 and an adjusting-stem fixedly connected at its inner end to the bend between the clamping-jaws, slidable longitudinally through the arched or yoke-shaped brace, having an axial
70 movement thereon, and provided at its outer end with an operating-handle, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

HENRY SAULS.
GEORGE S. COOK.

Witnesses:

L. H. AMOON,
R. L. SMITH.