(No Model.)

A. ALBRECHT.

WAGON WRENCH.

No. 589,400. Patented Sept. 7, 1897.

Fig. 1.

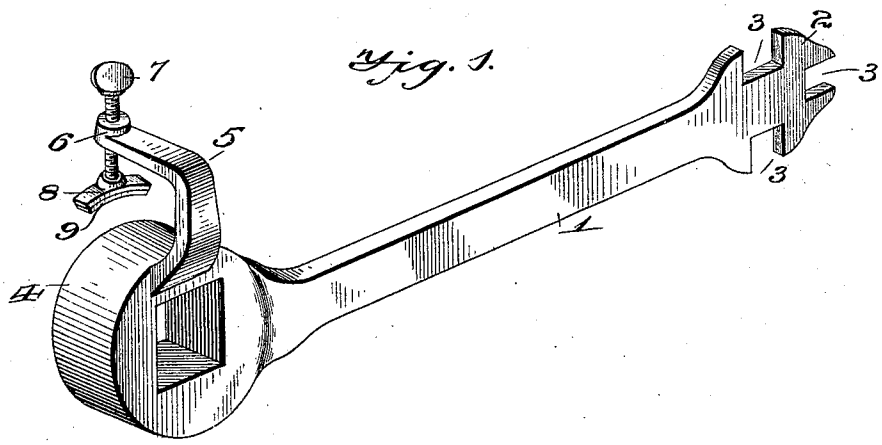
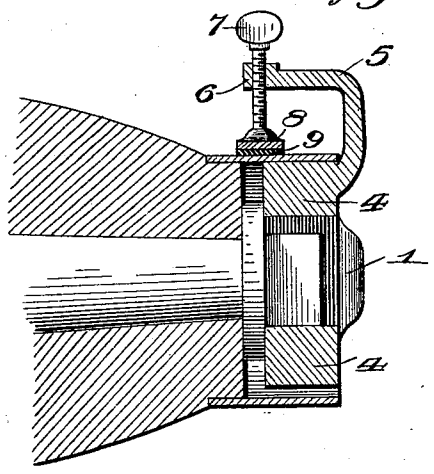


Fig. 2.



WITNESSES

C. E. Hunt.

A. D. Taylor

INVENTOR.

Alfred Albrecht,

By John Heidlersburg

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALFRED ALBRECHT, OF WELLS BRIDGE, NEW YORK.

WAGON-WRENCH.

SPECIFICATION forming part of Letters Patent No. 589,400, dated September 7, 1897.

Application filed February 24, 1897. Serial No. 624,767. (No model.)

To all whom it may concern:

Be it known that I, ALFRED ALBRECHT, of Wells Bridge, in the county of Otsego and State of New York, have invented certain new and useful Improvements in Wagon-Wrenches; 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 wrenches, and especially to the class of wagon-wrenches, the same being designed for use upon axle-nuts of wagons and other vehicles and embodying a construction which adapts it to simultaneously engage the axle-nut and hub of the wheel, whereby both the wheel and nut may be removed at one and the same time from the axle and replaced thereon.

To this end the invention consists in an improved wrench embodying certain novel features and details of construction, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims hereto appended.

In the accompanying drawings, Figure 1 is a perspective view of a wrench constructed in accordance with the present invention. Fig. 2 is a sectional view through a wheel-hub, showing the wrench also in section and in operative engagement with the wheel-hub and and axle-nut.

Similar numerals of reference designate corresponding parts in the figures of the drawings.

Referring to the drawings, 1 designates the handle of the wrench, one end of which is enlarged, as indicated at 2, and provided with a series of slots 3 of varying sizes for engaging different-sized nuts. The opposite end of the shank or stock is also enlarged and extended laterally to form the collar 4, the outer surface of which is round and of a size adapting it to fit snugly within the band or annular flange at the outer end of the vehicle-wheel hub. The bore of the collar 4 is square or hexagonal, according to the shape of the nut to which it is to be applied.

5 designates a substantially L-shaped arm which forms a rigid and integral extension of the wrench, the said arm being connected to the collar 4 at its outer edge and extending over said collar and beyond the plane of the inner edge thereof, where said arm is enlarged, as indicated at 6, and provided with a screw-threaded bore to receive the threaded shank of a thumb-screw 7. Swiveled on the end of the thumb-screw 7 is a clamping-plate 8, the inner surface of which is rounded to conform to the curvature of the band or annular flange on the outer end of the wheel-hub, so that by tightening the screw 7 said clamp may be forced into close frictional contact with the hub, thereby binding the hub firmly between the clamp 8 and the outer surface of the collar.

In operation the wrench is applied to the axle-nut so as to embrace the same and bring the outer surface of the collar into contact with the inner surface of the band or annular flange at the outer end of the hub. The screw 7 is now tightened, so as to force the clamp against the outside of the hub, as clearly shown in Fig. 2. By now turning the handle of the wrench the nut and wheel may be simultaneously removed from the axle-spindle, the nut being held by the wrench and the wrench being held securely on the wheel-hub. After the axle-spindle has been lubricated the wheel and axle-nut may be returned to their respective positions by reversing the operation above described.

The clamp 8 is provided upon its concaved surface with a facing 9, of rubber, leather, or other suitable material, which will not injure the finish on the band of the hub. The bore of the collar 4 is elongated in one direction or in line with the clamp 8, so that while said collar is adapted to engage the axle-nut it is also adapted to slide with relation thereto, so that the outer surface of said collar may be brought into contact with the inner surface of the band on the hub, thus adapting the wrench to hubs of different sizes. This feature is also valuable in case the nut does not come exactly in the center of the hub.

Having thus described the invention, what is claimed as new is—

1. A wrench adapted to fit within the band or flange of a wheel-hub and to contact with the inner surface thereof, said wrench being provided with an overhanging rigid arm adapted to lie outside of the hub, and a binding-screw carried by said arm, substantially as and for the purpose specified.

2. A wrench having a nut-engaging portion adapted to fit within the band or collar at the outer end of a wheel-hub, the said wrench being provided with an overhanging arm adapted to lie outside of said band or collar, a binding-screw carried by said arm, and a clamp connected to the end of said clamping-screw and adapted to engage the outer surface of said band or collar, substantially as described.

3. A wrench provided as to its nut-engaging portion with a rounded outer surface adapted to fit within the band or collar of a wheel-hub, said wrench being provided with an overhanging arm, a thumb-screw carried by said arm, and a clamp having a swivel connection with said screw and provided with a concaved surface conforming substantially to the exterior surface of said band or collar, substantially as described.

4. A wrench adapted to fit within the band or flange of a wheel-hub and to contact with the inner surface thereof, said wrench being provided with an elongated slot or bore for engaging the nut, and a clamp on said wrench adapted to bear against the outside of the hub or the band thereon, substantially as described.

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

ALFRED ALBRECHT.

Witnesses:
L. M. COWLES,
E. C. BELKNAP.