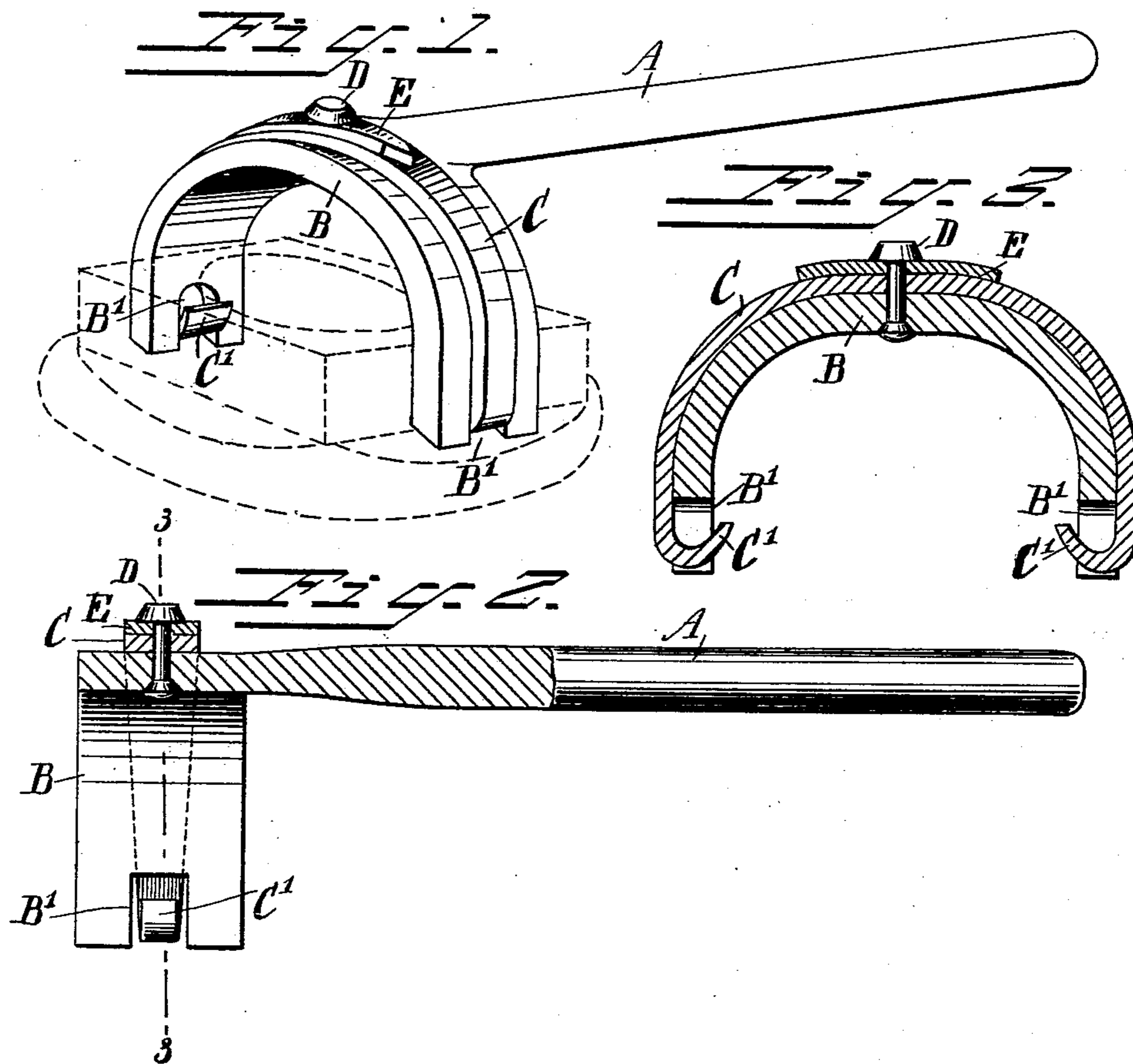


(No Model.)

W. J. LEACH.  
WRENCH.

No. 563,193.

Patented June 30, 1896.



WITNESSES:

Henry T. Hirsch.  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

WILLIAM JOHN LEACH, OF BRIGHTON, WISCONSIN.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 563,193, dated June 30, 1896.

Application filed March 17, 1896. Serial No. 583,509. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM JOHN LEACH, of Brighton, in the county of Kenosha and State of Wisconsin, have invented a new and Improved Wrench, of which the following is a full, clear, and exact description.

The invention relates to wrenches used for applying and removing vehicle-axle nuts, and its object is to provide a new and improved wrench which is simple and durable in construction, and arranged to securely hold the nut in place after removal from the axle, to prevent the greasy nut from soiling the hands of the operator, and from falling upon the ground and becoming soiled itself.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved wrench. Fig. 2 is a longitudinal section of the same. Fig. 3 is a transverse section of the same on the line 3 3 of Fig. 2.

The improved wrench illustrated in the drawings is provided with a straight handle A, on one end of which is formed or secured an open jaw B, made arched or U shape to loosely engage with its free ends opposite sides of the nut, as indicated in dotted lines in Fig. 1. Over this open jaw B extends a spring C, fastened in place at or near its middle on the top of the jaw B by means of a bolt or rivet D, with a washer E under the head of the rivet, as is plainly indicated in the drawings. The free ends of the spring C extend through transverse slots B' to the under side of the jaw B, the ends C' of the spring C being curved upwardly and inwardly, as plainly indicated in Fig. 3, so that the extreme ends project slightly within the inner faces of the jaw, to firmly engage the sides of the nut and to securely hold the latter in place.

Now it will be seen that by the peculiar arrangement described, the wrench can be readily applied on the wagon-nut, as the curved ends C' of the spring C readily slip upon the opposite sides of the nut, and the sharp, inner edges of the said ends grip the sides of the nut sufficiently to securely hold the nut in place in the jaw. When the nut has been unscrewed from the wagon-axle, it is securely held in the jaw by the spring ends C', to prevent the nut from falling upon the ground and becoming soiled, and also obviating the necessity of the operator taking hold directly of the greasy nut. When the nut is again applied on the axle after the latter is gripped, then the wrench, by a slight pull outward, becomes readily detached from the nut, as the spring yields sufficiently to disengage the free ends of the spring from the sides of the nut.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A wrench provided with an open arched jaw, the members of which have slots in their ends, and an arched spring fastened at its middle to the middle of said jaw and hugging the sides thereof, its lower ends being curved upwardly and inwardly through said slots, whereby their extreme ends project within the inner faces of said jaw to engage the sides of a nut, as and for the purpose set forth.

2. A wrench, consisting of a straight handle provided at one end with a U-shaped open jaw, said jaw having slots on the under side of each member, and a plate-spring fastened in the middle of said jaw, its ends being curved downward to hug the outside of said members, inwardly through said slots, and thence upwardly, as and for the purpose set forth.

WILLIAM JOHN LEACH.

Witnesses:

EDA MEINHARDT,  
ANTOINETTE MEINHARDT.