(No Model.)

C. H. HOMMEL.

WRENCH.

No. 491,888. Patented Feb. 14, 1893.

Fig. 1.

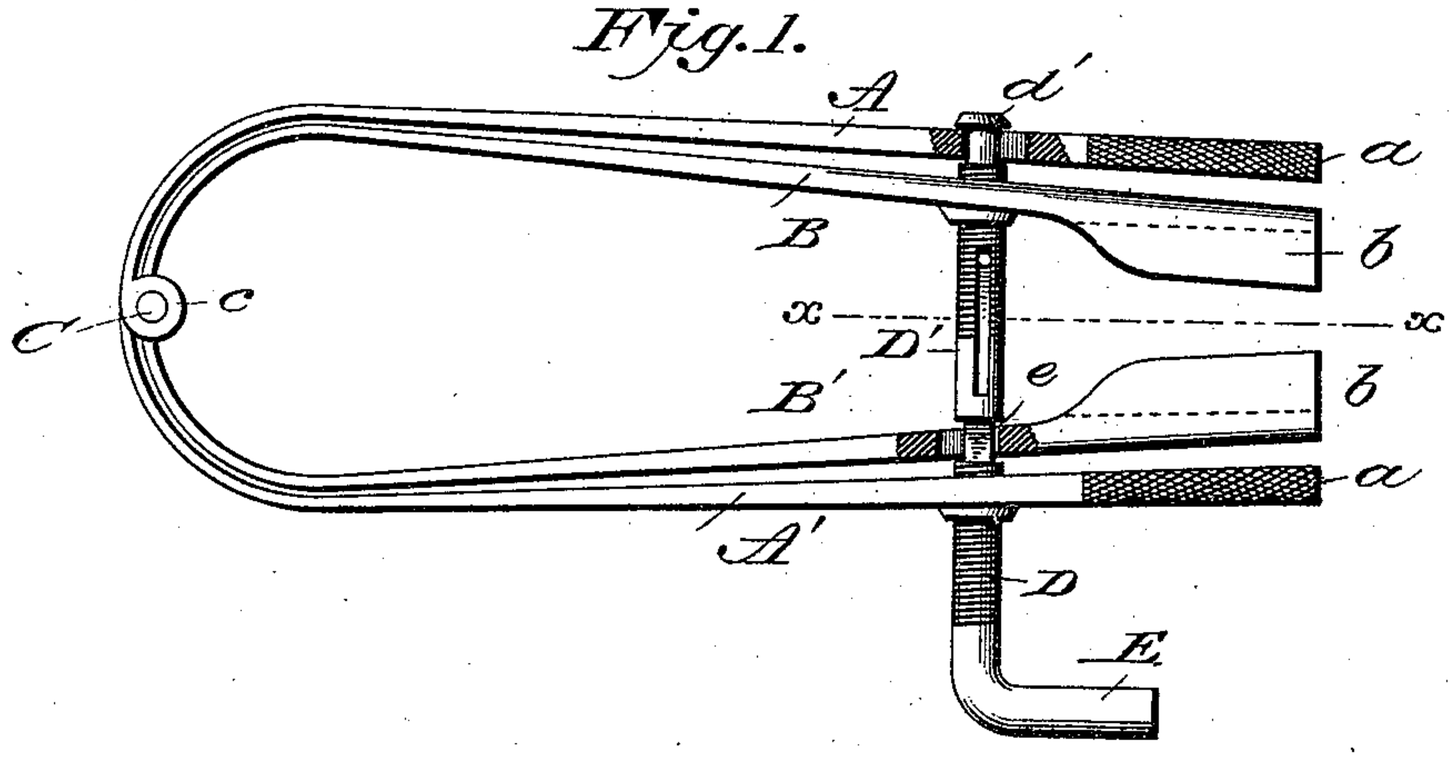


Fig. 2.

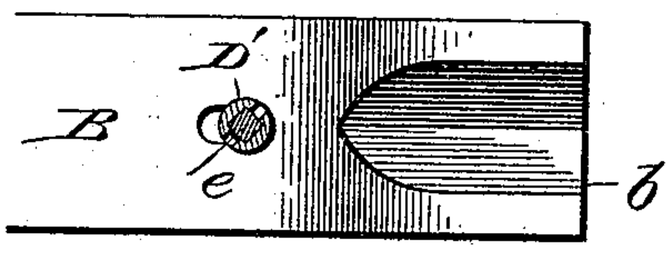
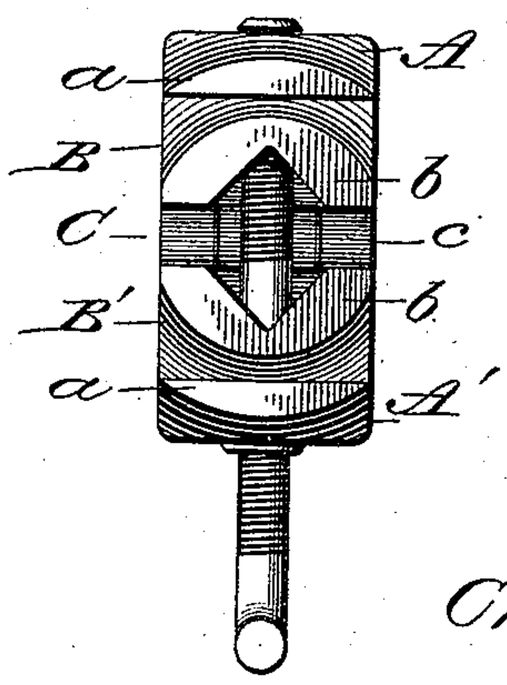


Fig. 3.



Witnesses
L. S. Elliott.
C. M. Johnson

Charles H. Hommel
Inventor
By
Attorney

UNITED STATES PATENT OFFICE.

CHARLES H. HOMMEL, OF SAYVILLE, NEW YORK.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 491,888, dated February 14, 1893.

Application filed November 23, 1892. Serial No. 452,928. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. HOMMEL, a citizen of the United States of America, residing at Sayville, in the county of Suffolk and State of New York, have invented certain new and useful Improvements in 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in axle-nut wrenches; the object of the same being to provide a wrench of improved construction, which is provided with jaws which engage with the nut and with the inner part of the hub-band, so that by simply turning the wheel the axle-nut will be removed from the spindle, and can be replaced in the same manner; and the invention consists in a wrench made up of jaws which are adapted to engage with the nut and with jaws which engage with the inner-side of the hub-band, said jaws being hinged together at one end and provided near the opposite end with an expansible bolt, by means of which the relative distance between the jaws which engage with the nut and those that engage with the hub-band can be varied, the expansible bolt permitting the jaws to fit different sized nuts; as will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification: Figure 1 is a side elevation. Fig. 2 is a sectional view through the line x—x of Fig. 1. Fig. 3 is an end view.

A and A′ designate the outer members or jaws of the wrench, the ends a thereof being curved and corrugated on one side so as to engage with and grasp the inner side of the hub-band.

B and B′ designate the jaws which engage with the nut, the ends b of which are bent at an angle to engage with the corners of said nut.

The jaws A A′ and B B′ are made of hard metal and preferably taper from their inner ends to their outer ends which engage with the nut and hub-band. The inner end of each jaw is provided with a loop c, so that all of said jaws can be hinged together by a single pintle C.

D designates one part of a bolt which is threaded to engage with a threaded perforation in the jaw A′, and beyond said threads this part of the bolt is provided with a shoulder which retains the jaw B′ thereon and with a spindle e which enters the hollow section or part D′. The outer end of the spindle is provided with a cross-pin which slides in slots formed in the hollow section so as to limit the movement of the parts upon each other. The section D′ is threaded to engage the threaded aperture in the jaw B, while the jaw A is held on said section by a collar d'. One of the sections of the bolt is provided with a suitable crank-handle E, and by turning said crank-handle it will be obvious that the jaws A and B and A′ and B′ can be adjusted to and from each other to the desired extent, which adjustment can be made after the jaws are placed over the nut and within the hub-band, and will hold the wrench in position by pressure against the inner side of the hub-band, said pressure forcing the jaws against the nut and band.

By providing an expansible bolt a variation as to the distance between the nut grasping jaws can be made, and such a wrench may have a capacity for different sized nuts.

When the wrench hereinbefore described has been placed in a position for use it will be retained in position and will hold the nut centrally within the hub-band when the wheel and nut have been removed from the spindle.

Having thus described my invention, what I claim as new, and desire to secure by Letters-Patent, is:

1. In an axle-nut wrench, the combination of the jaws A and B and A′ and B′ connected to each other at their inner end, the outer pair of jaws being curved and corrugated to engage with the inner side of the hub-band, the inner jaws having angular outer ends which engage the nut, the jaws A′ and B being threaded to receive a bolt which passes through the other jaws, substantially as shown, and for the purpose set forth.

2. In a wrench, the combination, of the jaws A and A′ and B and B′, connected together to move in line with each other one jaw of each

pair engaging oppositely threaded portions of a bolt, while the other jaw of each pair is held upon the bolt, said jaws being adapted to engage with the nut and hub-band at one end, and pivoted to each other at their other end, substantially as set forth.

3. In combination with the jaws A and A′ and B and B′, a bolt consisting of sections D and D′ expansibly connected to each other, each section having threaded portions which engage with threaded apertures in two of the jaws while the other jaws are located on the bolt substantially as shown, all of the jaws being hinged together at their rear ends, and a handle for turning both sections of the bolt in unison, for the purpose set forth.

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

CHARLES H. HOMMEL.

Witnesses:

OTTO R. GOTTWALD,

JNO. Z. O'BRIEN.