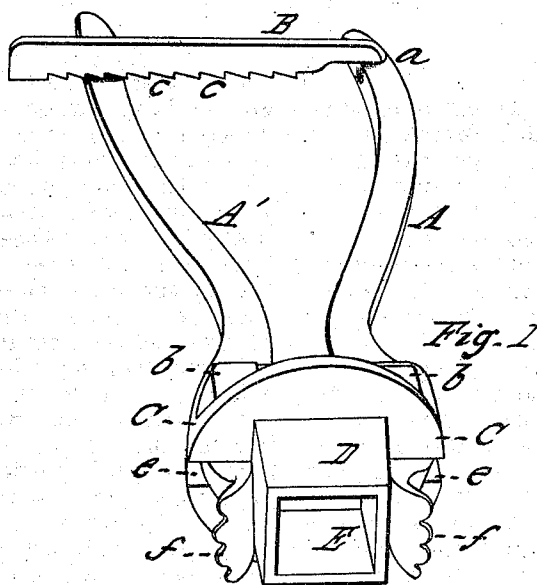


T. BLODGETT.
Carriage-Wrenches.

No. 155,785.

Patented Oct. 13, 1874.



Witnesses,

J. P. Hall
C. E. Duckland.

Inventor,
Theodore Blodgett.
 By *J. A. Curtis*
 his atty.

UNITED STATES PATENT OFFICE.

THEADORE BLODGETT, OF BELCHERTOWN, MASSACHUSETTS.

IMPROVEMENT IN CARRIAGE-WRENCHES.

Specification forming part of Letters Patent No. **155,785**, dated October 13, 1874; application filed July 16, 1874.

To all whom it may concern:

Be it known that I, THEADORE BLODGETT, of Belchertown, in the State of Massachusetts, have invented a new and useful Improved Carriage-Wrench; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, and to the letters of reference marked thereon, in which the figure is a perspective view of my invention.

My invention relates to a wrench for removing both the wheel and the nut from the axle of a carriage at the same time; and it consists of a pair of levers operating in connection with a toothed bar on one end, and each terminating, at the other end, in a jaw, and these levers are pivoted into, and used in connection with, a head-piece containing a socket to receive the nut of the carriage.

In the drawing, C represents a head-piece with a slot, *e*, (one on each side,) and also provided with a projection, D, in the front end of which is a socket, E, made to receive the nut of the carriage. A A' represent two levers, pivoted at *b* to the head-piece C, and to the end of one of these levers is pivoted the toothed bar B, and the short ends of said levers terminate in the jaws *f*, which protrude beyond the face of the head-piece C a little distance.

The operation of my invention is as follows: When it is desired to remove the wheel from the axle, the long arms of the levers are held apart, and the socket E placed over the nut, with the two jaws *f* inside the hub of the wheel. The levers are then forced together, forcing the jaws *f* apart and against the hub of the wheel inside, and are held there by the toothed bar B, pivoted to one lever, A, the teeth *c* of which bar catch upon the other le-

ver, A'. The wheel, being raised from the ground, is then made to revolve in the same direction in which the nut unscrews from the axle, and the nut is thereby turned off, and the nut, wrench, and wheel are held firmly together, and may be put aside until it is desired to replace the wheel upon the axle; which being done, the wheel is revolved thereon in the opposite direction to that in which it was before revolved, and the nut is thereby turned on, and the wheel secured to the axle.

It is evident that a link or similar device for holding the levers A A' together when the wrench is being used would be equally operative and effective as the bar B.

This wrench is particularly useful in oiling the wheels of carriages, or, in any other case in which it is desired to remove the wheel from the carriage, prevents the hands from becoming soiled in these operations, and keeps all the parts together until the wheel is replaced upon the axle.

In order that the jaws *f* may take a firm hold against the inside of the hub it may be desirable to serrate the jaws *f*, as shown in the drawing, although this may not be actually required for the successful operation of the device.

Having described my invention, what I claim as new is—

An improved carriage-wrench, consisting of the head-piece C, provided with the socket E, in combination with the levers A A', jaws *f*, and mechanism for holding the levers together, substantially as described.

THEADORE BLODGETT.

Witnesses:

FRANKLIN DICKINSON,
M. S. BLODGETT.