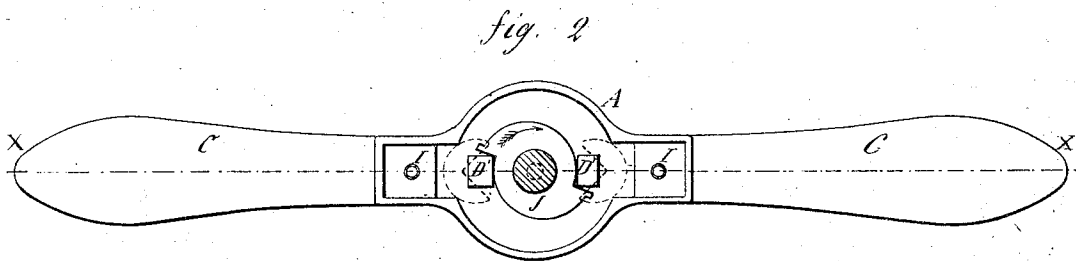
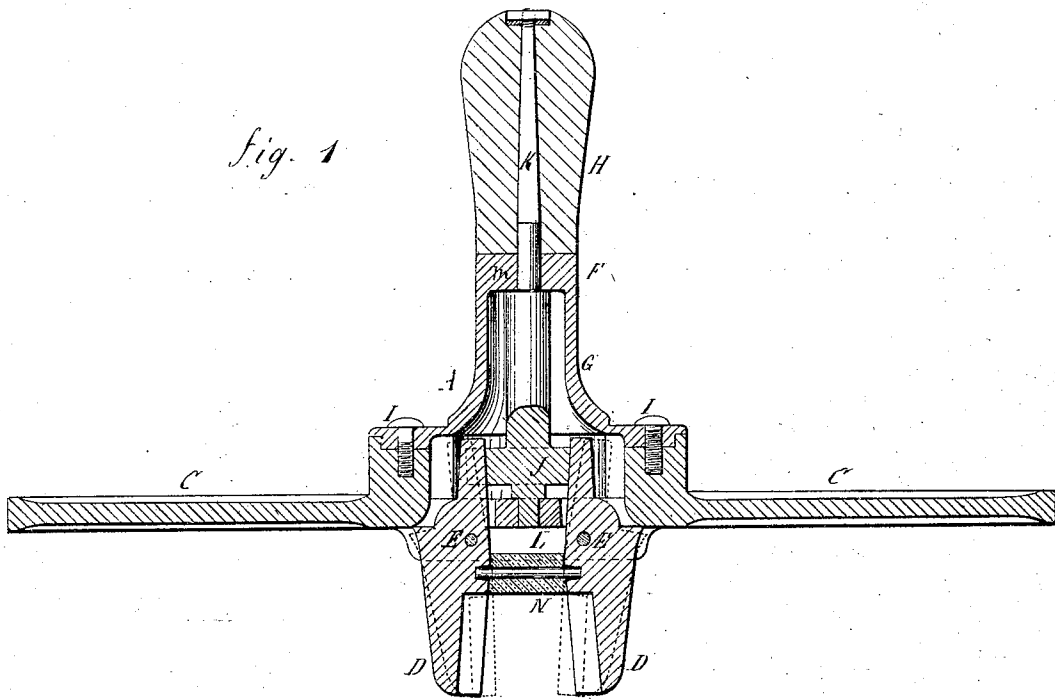


H. CUTLER.
Carriage Wrenches.

No. 153,544.

Patented July 28, 1874.



WITNESSES:

C. Newell.
Deignick

INVENTOR:

H. Cutler

BY

Wm. L. ...

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HENRY CUTLER, OF ASHLAND, MASSACHUSETTS.

IMPROVEMENT IN CARRIAGE-WRENCHES.

Specification forming part of Letters Patent No. **153,544**, dated July 28, 1874; application filed May 9, 1874.

To all whom it may concern:

Be it known that I, HENRY CUTLER, of Ashland, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Carriage-Wrenches, of which the following is a specification:

The invention will first be fully described, and then pointed out in the claim.

In the accompanying drawing, Figure 1 is a longitudinal section of the wrench taken on the line *x x* of Fig. 2. Fig. 2 is a view of the back with the adjusting-handle off, showing the outer ends of the jaws (in dotted lines) and the eccentric, by means of which the jaws are adjusted.

Similar letters of reference indicate corresponding parts.

A is the stock, consisting of a head and the operating-levers C C. D D are the jaws, which are attached to the head by the pivot-pins E E. F is the adjusting-handle, consisting of two parts, G and H. The former is attached to the head by the screws I I, and is chambered out to receive the eccentric J. The shank of the eccentric K passes through the chamber and through the part H of the handle. The shank is made fast in this part of the handle, so that, by turning it, the eccentric is turned. The eccentric is governed in position, as it is revolved, by the pivot L, where it enters a hole in the stock-head, and by the bearing *m* in the lower part G of the handle.

The action of the eccentric on the jaws is seen in Fig. 2. These jaws are levers, and the eccentric operates on their upper or short ends D' D', the fulcrums being the pins E E. N is a spring, of india-rubber or other suitable kind, between the jaws, which keeps the jaws spread apart, as seen in Fig. 1; but, when the eccentric is turned in the direction indicated by the arrow, the outer ends of the jaws are forced toward each other, as seen in dotted lines, to gripe and hold the nut.

With this wrench a nut may be removed from the axle, or from any other place, and then replaced without touching it with the fingers. The operating-levers C C allow of all the purchase required for starting a large nut.

The advantages of this wrench, for the purposes specified, over ordinary wrenches must be obvious to all.

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

An improved wrench, consisting of two-part handle G H, cam J, having shank K and pivot L, jaws D D, held apart by spring N, and lever-arms C, all substantially as shown and described.

HENRY CUTLER.

Witnesses:

B. T. THOMPSON,

E. HERBERT CUTLER.