

(No Model.)

L. A. GATES.
WRENCH FOR AXLE TAPS.

No. 264,942.

Patented Sept. 26, 1882.

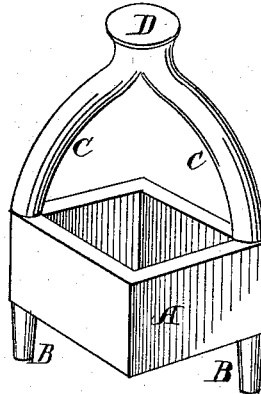


Fig. 1.

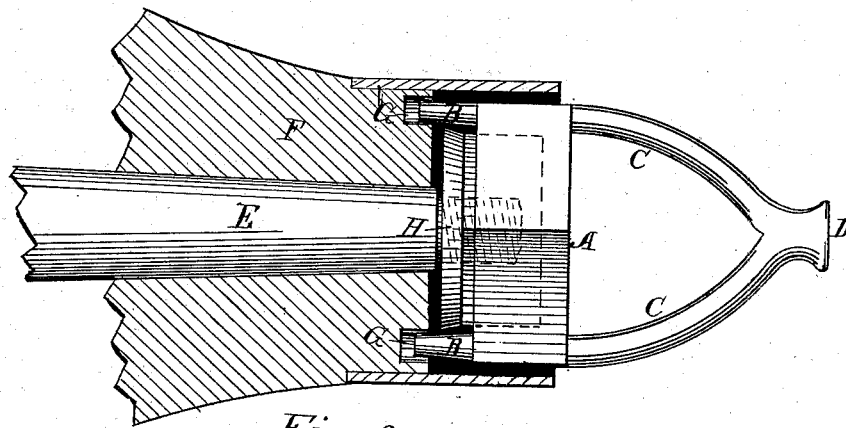


Fig. 2.

Witnesses:

O. J. Bailey
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UNITED STATES PATENT OFFICE.

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WRENCH FOR AXLE-TAPS.

SPECIFICATION forming part of Letters Patent No. 264,942, dated September 26, 1882.

Application filed May 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, LABORIOUS A. GATES, of Centreville, in the county of Wayne and State of Indiana, have invented a new and useful Improvement in Wrenches for Axle-Taps, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a view of the wrench.
10 Fig. 2 is a longitudinal vertical sectional view of the wrench applied to the screw-tap of an axle and wheel.

The object of my invention is to improve the manufacture of wrenches for axle-taps or spindle-taps for wheeled vehicles and for
15 screw taps, nuts, and bolts when used on revolving machinery or in connection therewith.

In the accompanying drawings, A represents the rectangular open-ended box or jaws
20 of the wrench, which is of the size or dimensions of the tap nut or bolt to be operated upon, so as to fit closely over or upon it.

B B represent the slightly-tapering ends of the prongs of the fork or arch of the
25 wrench, to which (the said prongs or arms) the rectangular open-ended box or jaws A of the wrench are firmly and permanently attached at opposite diagonal corners thereof, the whole wrench being in fact one unbroken
30 piece of metal cast or forged of iron or other suitable metal.

C C represent the curves of the prongs or arms of the fork of the wrench above the
35 rectangular open-ended box or jaws and between it and the head or handle of the wrench.

D represents the head or handle of the wrench, from which the prongs or arms of the fork diverge in curves, as shown.

It will be observed that by this construction the box or jaws, which is open at both
40 ends, can be more readily applied to the nut, because the eye will aid in directing this operation; also, that this peculiar structure of the box or jaws enables it to be very easily
45 kept clear of dirt.

Fig. 2 represents the wrench in position for use on the screw-tap or spindle-tap of a wheeled vehicle.

A represents the rectangular box or jaws of the wrench, fitting closely over the screw-tap,
50 with the ends of the prongs B B projecting or extending into suitable holes or sockets in the hub of the wheel made to receive them.

G G represent the holes or sockets in the hub of the wheel for the reception of the extended ends of the prongs or arms B B. 55

E represents the journal of the axle-tree, and F the hub of the wheel, and H the screw at the outer end of the axle-tree, upon which the tap is screwed. 60

In case the flange of the tap should be too wide to allow of the free passage of the extended ends of the prongs or arms B B over the edges or circumference thereof, the flange must be notched or suitable holes made in it, so as to permit the free passage of the slightly-tapering ends of the extended arms or prongs B B through the flange and into the sockets G G in the hub. 65

When the axle-tree of a wheeled vehicle is elevated so as to allow the wheel to revolve free and clear of the ground the wrench is placed in position, firmly grasping the tap, as shown, and the wheel is made to revolve in a reverse direction. The wrench, by reason of its attachment to the hub, by means of the ends of the prongs or arms extending into the holes or sockets G G, as described, revolves together with the wheel, and the tap is easily and quickly unscrewed and taken off, and by
70 changing the direction in which the wheel is made to revolve the tap is as readily and quickly screwed on and tightly fixed in its place, the wrench being operated entirely by the revolution of the wheel, &c., as set forth
75 and described. 80

I am aware that a square socket has been provided in the solid head of a wrench adapted for the same general purposes as this device, said wrench also having pins for insertion in the hub of the wheel, and I do not
85 claim that construction. 90

What I claim as new, and desire to secure by Letters Patent, is—

A wrench composed of the rectangular box or jaws A, open at both ends, as described, the curved arms C C, extended ends or prongs B B, and the head or handle D, substantially as and for the purpose set forth. 95

In testimony that I claim the foregoing I have hereunto set my hand, this 29th day of April, 1882, in the presence of witnesses. 100

LABORIOUS A. GATES.

Witnesses:

CHARLES BERTSCH,
DAVID GENTRY.