F. NORRIS & C. E. SWEET.

Bolt-Holder and Clamping-Tool.

No. 199,220. Patented Jan. 15, 1878.

Fig: 1.

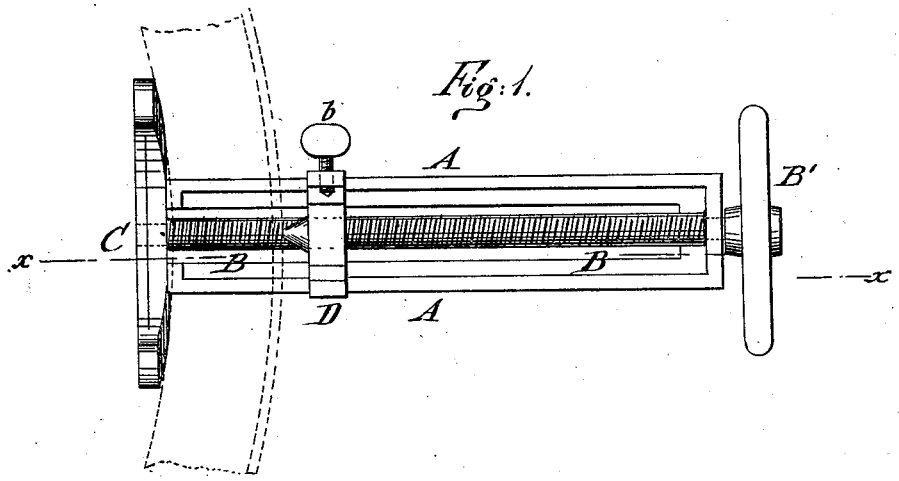


Fig: 2.

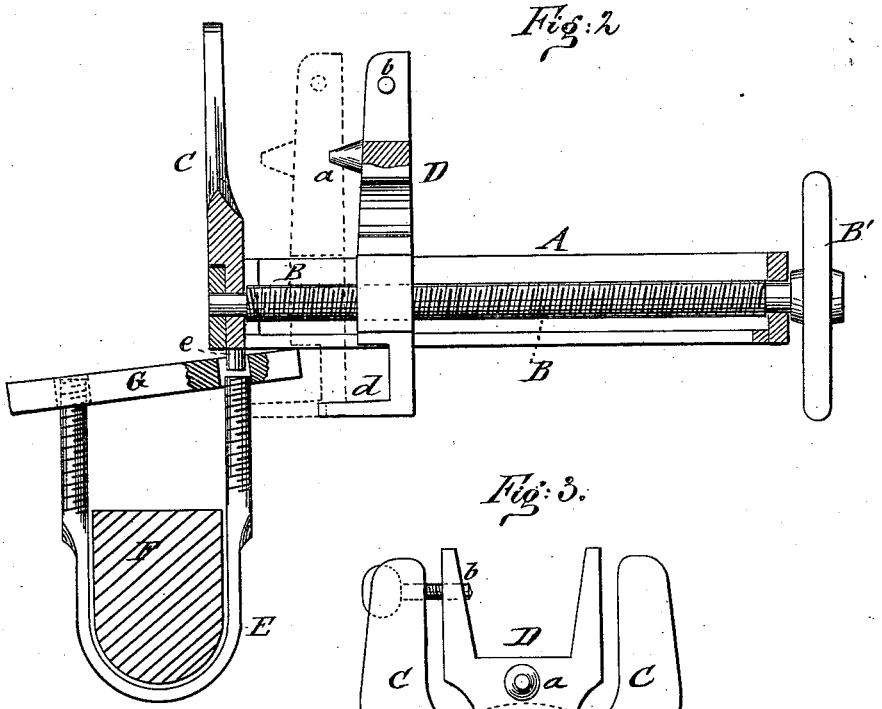
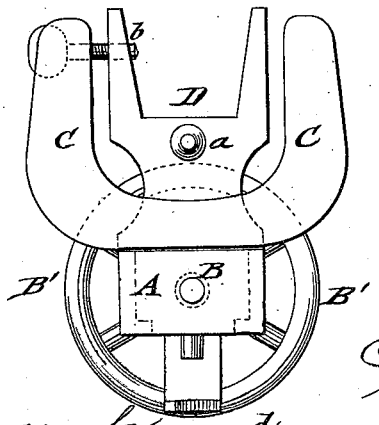


Fig: 3.



WITNESSES:

Chas. Nida.

J. H. Scarborough.

INVENTORS

F. Norris.

C. E. Sweet.

BY Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

FRED NORRIS AND CLAYTON E. SWEET, OF WAPPINGER'S FALLS, N. Y.

IMPROVEMENT IN BOLT-HOLDER AND CLAMPING-TOOL.

Specification forming part of Letters Patent No. **199,220**, dated January 15, 1878; application filed November 27, 1877.

To all whom it may concern:

Be it known that we, FRED NORRIS and CLAYTON E. SWEET, of Wappinger's Falls, in the county of Dutchess and State of New York, have invented a new and Improved Combined Tire-Bolt Holder and Clamping-Tool, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, Fig. 2 a vertical longitudinal section on line *x x*, Fig. 1, and Fig. 3 an end elevation, of our improved tire-bolt holder and clamping device.

Similar letters of reference indicate corresponding parts.

This invention has for its object to furnish for blacksmiths, carriage-manufacturers, and others an improved combination-tool, that may be used for the purpose of holding the tire-bolts for screwing on their nuts, also for coupling shafts into position on the axles, for putting on the clip-bars of axle-clips, and for clamping purposes generally.

The invention consists of a fixed fork at the end of a frame, carrying a screw for adjusting a movable standard, having a conical teat for bearing on the tire-bolt, a recessed top, with clamp-screw, for attaching the shaft securely thereto, and also a bottom rest-piece, that works in connection with a fixed bottom pin, for securing the clips to their connecting clip-bars.

Referring to the drawing, A represents the supporting-frame of our improved combination-tool, and B the screw that passes longitudinally through the open interior part of the frame, and turns in end bearings of the same, being revolved by a hand-wheel, B′, at one end of frame A. To the opposite end of frame A is attached a fixed standard, C, that is made of fork shape at the upper part, while a movable post, D, travels, by a nut portion fitted onto the screw, along guides of frame A, either forward or backward, according as the screw is turned in one or the opposite direction.

The upper part of the movable post D is provided with a projecting teat, *a*, that extends toward the forked standard, so as to bear on the end of the tire-bolt, while the standard bears on the inside of the felly, as shown in Fig. 1.

By clamping the forked standard and teat tightly to the felly and bolt, the latter is retained, and admits the screwing on of the nut, the forked standard facilitating the convenient application of the wrench to the nut.

In this manner the nuts may be quickly and easily screwed on without the annoying turning of the bolt when trying to screw on the nut.

The upper part of the movable standard D is recessed sufficiently to accommodate the inserting of a shaft and clamping the same tightly by a set-screw, *b*.

When the fork is placed back of the axle the shaft-eye may, by means of the movable post that is screwed forward, be conveniently inserted into its bearing, the anti-rattling rubber block compressed, and the pivot-bolt passed through the eye, and thus the shaft coupled in convenient manner.

The lower part of the movable part D is made with a rectangular extension, *d*, and the horizontal piece of the same slightly cut out or concaved, so as to form a seat for one of the bolt ends of the axle-clips.

A pin, *e*, at the lower end of the fixed standard C, is inserted into the hole of the clip-bar, and by moving the post D forward the free bolt end is forced toward the hole, so that the clip-bar may be applied thereto.

The clip is spread before being applied to the axle by the clip-bar G, and is afterward drawn together, the pin being placed in one hole of clip-bar G, and the movable holder D against one of the screw ends of clip. Then, by turning the screw forward, the clip is sprung into the hole of clip-bar.

What I claim is—

1. In a combination-tool for clamping purposes, the combination of a supporting guide-frame, a fixed and forked end standard, and a traveling post adjusted by actuating screw-bolt, the movable post having a recessed top part, as shown and described.

2. In a combination-tool for clamping purposes, the combination of a supporting guide-frame, having a fixed and forked end standard and bottom pin, with an adjustable traveling post, having an angular bottom bearing, for the purpose specified.

FRED NORRIS.
CLAYTON E. SWEET.

Witnesses:
UDA E. HOPKINSON,
J. PORTER ORR.