

J. L. ROBERTS & R. K. DAILY.

Improvement in Machine for Boring Hubs.

No. 125,616.

Patented April 9, 1872.

Fig. 1.

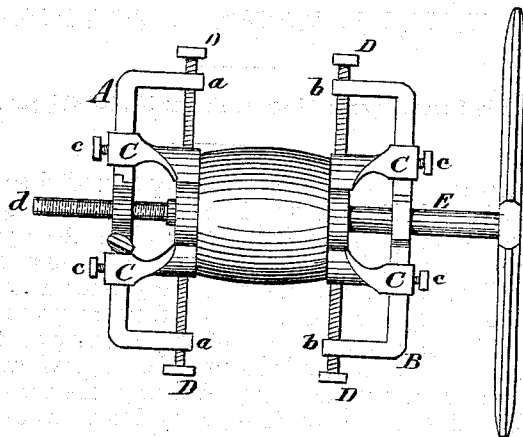


Fig. 3.

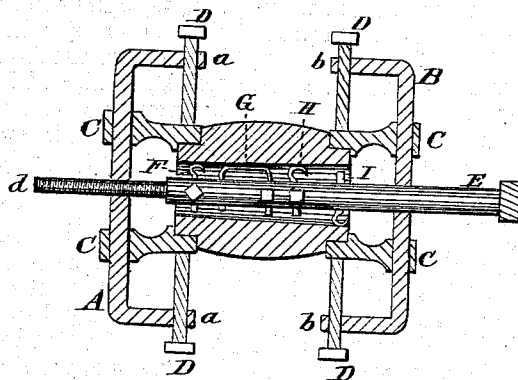
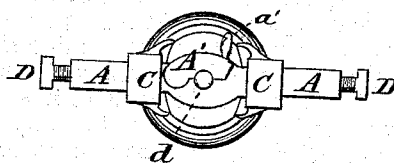


Fig. 2.



Witnesses.
Chas. Poole
John R. Young

Inventors,
J. L. Roberts and R. K. Daily, by
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UNITED STATES PATENT OFFICE.

JOHN L. ROBERTS AND ROSWELL K. DAILY, OF WAVERLY, IOWA.

IMPROVEMENT IN MACHINES FOR BORING HUBS.

Specification forming part of Letters Patent No. 125,616, dated April 9, 1872.

To all whom it may concern:

Be it known that we, JOHN L. ROBERTS and ROSWELL K. DAILY, of Waverly, in the county of Bremer and in the State of Iowa, have invented certain new and useful Improvement in Machines for Setting Boxes in Wheel-Hubs; 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, in which—

Figure 1 is a side elevation of our device as applied to a hub. Fig. 2 is an end elevation of the same, and Fig. 3 is a central longitudinal section on line *x x* of Fig. 2.

Letters of like name and kind refer to like parts in each of the figures.

The object of our invention is the production of a cheap and simple tool, by means of which small manufacturers are enabled to bore out the interior of a hub for the reception of its box in such a manner as to cause the exterior of the latter to exactly coincide with the interior of said hub; and to this end said invention consists in the device as a whole, when its several parts are constructed and combined substantially as and for the purpose hereinafter shown.

In the annexed drawing, A and B represent two rectangular bars of metal, the ends of which are bent inward in parallel lines and at a right angle to the central portion of said bars. Fitted around and sliding upon the central portion of each bar A and B are two arms, C, which extend inward to a distance about equal to the length of the ends *a* and *b* and in lines parallel with the same. The inner ends of the slides are extended laterally, and are curved inward so as to conform to the average circle of the end of a wheel-hub. A screw, D, passing inward through a threaded opening, provided within the end of each arm *a* and *b*, has its end swiveled within the inner end of the contiguous slide or clamp C, so as to enable the same to be pressed inward or drawn outward upon or with relation to the bars A and B. Each of the bars A and B is provided with a central opening for the reception of a boring-bar, E, the opening within the bar A

being threaded so as to correspond to and receive the threaded portion *d* of said boring-bar, while the opening within the bar B is plain, and has a size but slightly larger than the diameter of said boring-bar, so as to enable the same to move freely within said opening. As thus constructed, the frame is fitted to and secured upon a hub, as shown in the drawing, the curved ends of the clamp being caused to embrace the ends of said hub against which they are pressed by means of the set-screws, while the boring-bar is passed through the center of said hub, and rests within its bearings in the frame bars. A number of cutters F, G, H, and I are secured to or upon the boring-bar, and made radially adjustable, so as to conform in sweep to the intended size of the different portions of the bore of the hub, after which said bar is caused to revolve within its bearings, and being drawn forward by means of its threaded end, its cutters remove the surplus material and enlarge the interior of said hub to the desired size. By causing the first cutter F to roughly shape the opening, the second or long cutter G to smooth and finish the same, and the third cutter, H, to cut the recess for the large end of the box, the whole operation may be performed at one time, and in the most perfect manner. In order that the boring-bar may be quickly inserted within or removed from the threaded opening within the bar A, a portion, A', of said bar is removed upon the line shown in Fig. 2, one of its ends hinged while the other is held in place by means of a screw, *a*. By withdrawing said screw the hinged part A' may be turned back so as to open or divide the threaded opening and enable the boring-bar to be placed within. Suitable scales or subdivisions are provided on the outer side of each frame bar, by means of which the sliding jaws can be readily adjusted to position with relation to the boring-bar. If desired, a set-screw, *c*, may be inserted within the end of each sliding jaw C, and caused to bear upon the frame bar, so as to more securely confine said jaw in position when adjusted thereto.

The device thus constructed is simple, easily

constructed, efficient in operation, and can be furnished at so small a cost as to bring it within reach of ordinary mechanics.

Having thus fully set forth the nature and merits of our invention, what we claim as new is—

The hereinbefore-described device as a whole, consisting of the frame bars A and B, the sliding jaws C, the screws D, and the boring-bar

E provided with suitable cutters, when said parts are constructed and combined substantially as and for the purpose shown.

JOHN L. ROBERTS.
ROSWELL K. DAILY.

Witnesses:

W. W. BAILEY,
H. S. HOOVER.