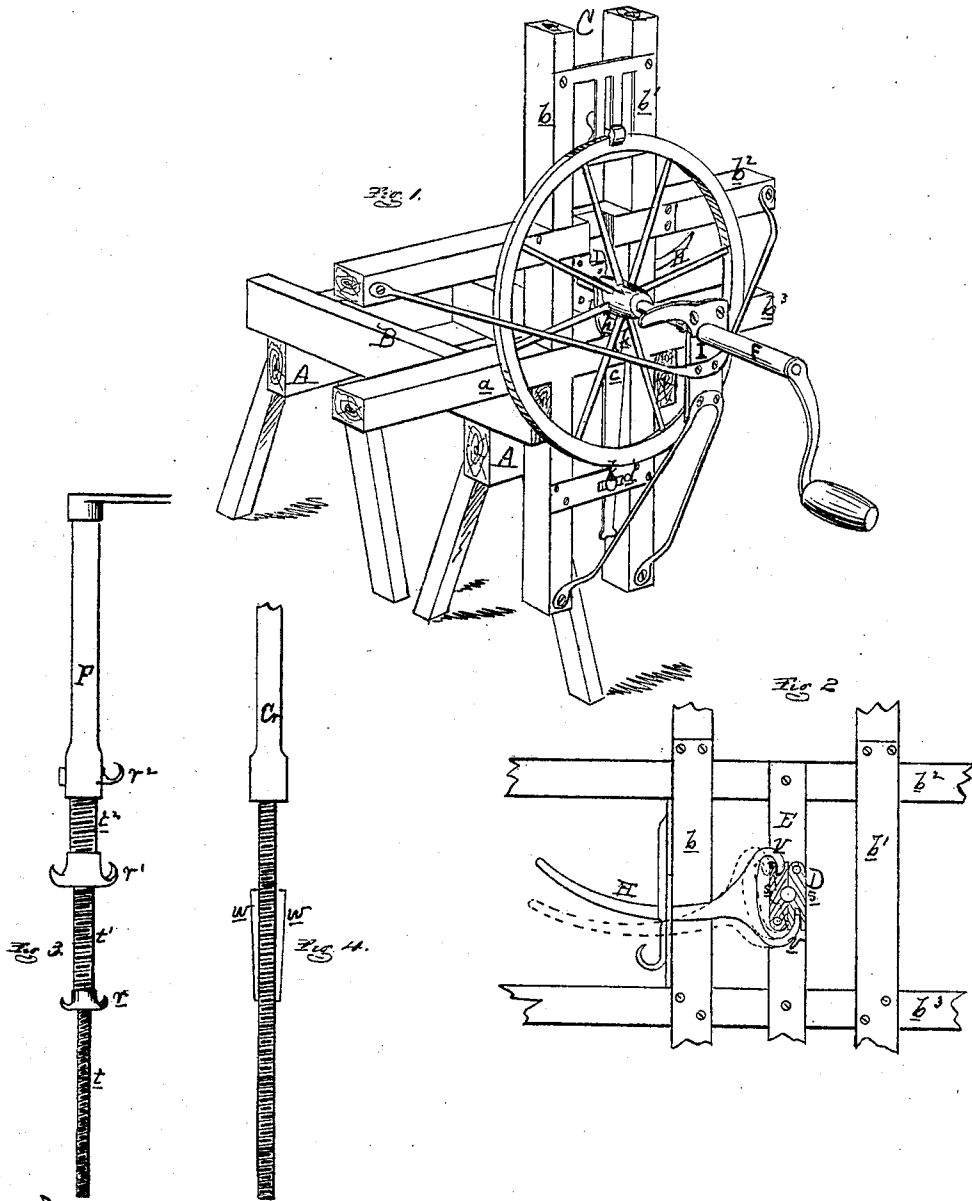


J. A. NEWELL.

Machines for Setting Boxes in Wheels.

No. 134,091.

Patented Dec. 17, 1872.



ATTEST:

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UNITED STATES PATENT OFFICE.

JOHN A. NEWELL, OF KALAMAZOO, MICHIGAN.

IMPROVEMENT IN MACHINES FOR SETTING BOXES IN WHEELS.

Specification forming part of Letters Patent No. 134,091, dated December 17, 1872.

To all whom it may concern:

Be it known that I, JOHN A. NEWELL, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a new and useful Improvement in Machines for Setting Boxes in Wheels; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my invention with wheel attached; Fig. 2 is an elevation, in section, showing the split nut and its attachments; Fig. 3 is the taper boring-tool; and Fig. 4 is the taper reamer.

Like letters indicate like parts in each figure.

The nature of this invention relates to an improved machine, upon which the wheel is easily centered, for the purpose of boring and preparing the hub to receive the boxes. The invention consists in the combination and arrangement of the various parts, as more fully hereinafter described.

In the accompanying drawing; A represents two ordinary benches or "horses" upon which rests the frame B, to the front end of which, at or near *a*, is pivoted the frame C, which is shown in a vertical position in the drawing, and is composed of the four pieces marked *b* *b*¹ *b*² *b*³, to which the wheel to be operated upon is secured, and which is done when the frame C is laid down horizontally on top of the frame B. The wheel, being laid upon the frame C, is centered, so that the center of the required bore through the hub is directly in line with the center of the draw and guide nut D, which is secured to the plate E in the rear of the frame C. The wheel is then fastened to the frame by means of the dog *c*, which is adjustable from the center in the slot *d*, the hub resting upon the cutched support *h*, which is also adjustable upon the bolt *k*, working in the transverse slot shown, and in a corresponding vertical slot in the support itself.

The wheel being thus securely fastened to the frame, the frame is raised to a horizontal position, as shown in the drawing in Fig. 1. The boring-tool F is then inserted through the hole in the hub until the end of the tool will enter the split guide-nut D, the two parts of which have been thrown apart by means of the lever H, which has two teeth, *v*, which engage one with each half of the nut. This boring-tool is provided with three series of threads, *t*¹ *t*², each being larger than the one under it, and the cutters *r* *r*¹ *r*² increase in size in a like ratio, so that the hole bored can be readily finished by the tool G provided with taper reamers *w*, to a perfect taper. The outer ends of these tools enter the opening between the two parts of the split nut, when the two parts are closed by means of the lever H, and the threads engage with the threads on the boring-bar, when the rotation of the latter will cause it to be drawn into the hub, and the cutters and reamers to do their work.

When in operation, the outer ends of the boring-tools are sustained by the rest I, securely held in place by suitable braces.

The cutters form parts of the nuts *v'* *v''*, the blades starting from opposite sides of the nuts, projecting outward and upward until the edge forms nearly a semicircle. The depth of the knives should be nearly three-fourths the diameter of the nuts.

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

1. The divided nut D actuated by the lever H, substantially as and for the purposes set forth.
2. The arrangement of the frames B C, nut D, lever H, rest I, and boring-tool F G, when the parts are constructed and combined to operate substantially as and for the purposes set forth.

JOHN A. NEWELL.

Witnesses:

THOS. S. SPRAGUE,
H. S. SPRAGUE.