2 Sheets--Sheet 1.

O. J. DOERTY.

Wheelwright Machines.

No. 152,348. Patented June 23, 1874.

Fig. 1

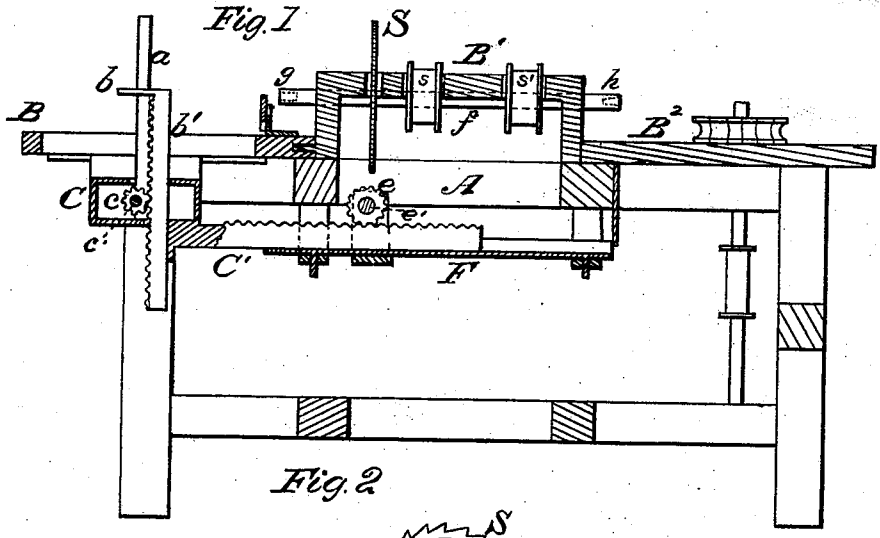


Fig. 2

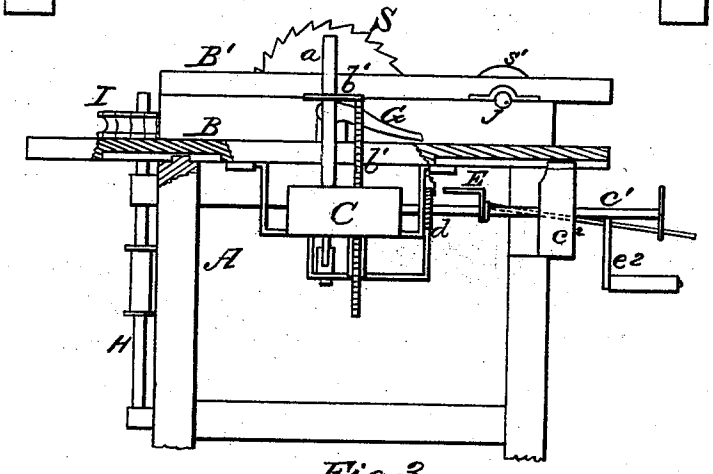
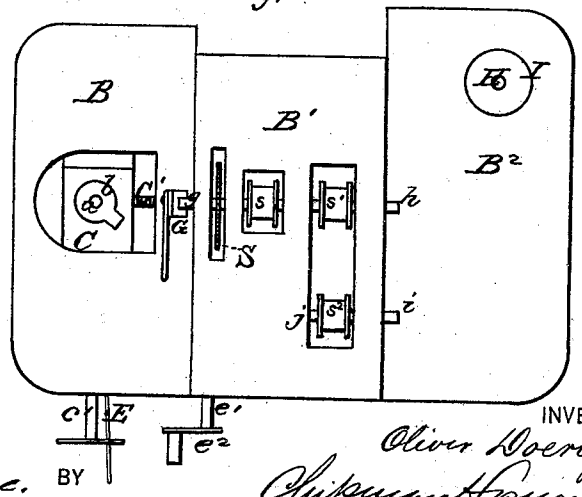


Fig. 3



WITNESSES

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2 Sheets--Sheet 2.

O. J. DOERTY.

Wheelwright Machines.

No. 152,348. Patented June 23, 1874.

Fig. 4.

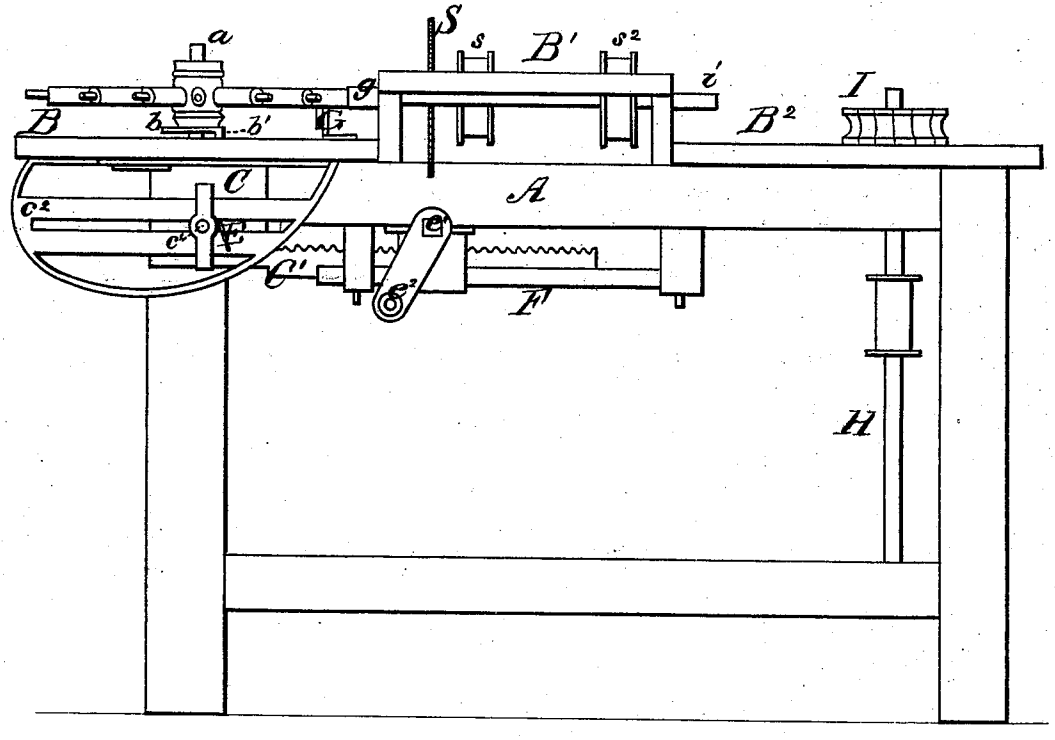
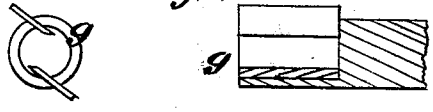


Fig. 5.



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UNITED STATES PATENT OFFICE.

OLIVER J. DOERTY, OF FINDLEY, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN H. JOHNSTON, OF SAME PLACE.

IMPROVEMENT IN WHEELWRIGHT-MACHINES.

Specification forming part of Letters Patent No. **152,348**, dated June 23, 1874; application filed May 16, 1874.

To all whom it may concern:

Be it known that I, OLIVER J. DOERTY, of Findley, in the county of Hancock and State of Ohio, have invented a new and valuable Improvement in Wheelwright-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a longitudinal section of my machine. Fig. 2 is a cross-section, and Fig. 3 is a plan view; and Fig. 4 is a side view, and Fig. 5 is a detail view.

This invention has relation to machinery for the manufacture of spoked wheels; and it consists in combining with a circular saw, which is suitably mounted on a table, a centering-post which is movable up to and from the saw, and a vertically-adjustable wheel-support, whereby the ends of inserted spokes of wheels of different diameters can be truly sawed ready to have tenons formed on them, as will be hereinafter explained.

In the annexed drawings, A designates the frame of the machine, on which are three tops, B B^1 B^2. C designates a carriage, which is arranged below an opening through the top B, and suitably guided, so that it can be moved up to and from a circular saw, S. To this carriage is rigidly secured a vertical post, *a*, which is designed to receive the hub of a wheel and center the same. When a spoked hub is put on the post *a* it is supported on a shelf, *b*, through which the post *a* passes freely. The shelf *b* is secured to the upper end of a rack, *b'*, which is guided in the carriage and movable up and down by means of a pinion spur-wheel, *c*, which is keyed on a horizontal rod, c^1, having a T-handle on its outer end. Rod c^1 passes through a long guide, c^2, which allows it to move along with the carriage. The shelf and its rack are sustained in place, when adjusted, by means of a ratchet-wheel, *d*, and a pawl, and by means of a tripping-rod, E, (shown in Fig. 2;) the pawl last referred to can be detached from the ratchet-wheel *d* when it is desired to lower the shelf *b*. C' designates a horizontal rack, which is secured to the carriage C and supported in a guide, F, below the table-tops B B^1. With the teeth of this rack a pinion spur-wheel, *e*, engages, which wheel is keyed on a horizontal shaft, e^1, and provided on its outer end with a crank, e^2. By these means the carriage C is adjusted up to or from the saw S. The saw S is applied on an arbor, *f*, which is supported in bearings beneath the raised top B^1, and provided with two belt-pulleys, *s* s^1. The ends of the arbor *f* extend out beyond the sides of the raised top, and one end is constructed with a tenon-cutter, *g*, and the other end with a boring-bit holder, *h*. On the same side of the top B^1 as the bit-holder *h* is another bit-holder, *i*, and a shaft, *j*, which carries a pulley, s^2, and receives rotation from the pulley s^1 by means of a belt. At one corner of the frame A, and applied on a vertical shaft, H, which is driven by a belt, is a circular cutter-head, I, presenting a concave periphery armed with cutters for shaping and rounding up fellies. The bits used in the holders *h* and *i* are for boring tenon-holes in the fellies, and also dowel-holes. Between the tenon-tool *g* and the post *a* is a spoke-clamp, G, consisting of a notched piece and a hand-lever. This clamp G is in close relation to the said tenon-tool, and is designed for rigidly holding the spokes while forming tenons on them.

The operation is as follows: After the spokes have been driven into a hub the latter is applied on the post *a*. The spokes are then moved up to the saw S by adjusting the carriage C, and their ends are cut off, so as to leave the spokes of an equal length. The carriage C is then adjusted back and the shelf *b* lowered so as to bring all the spokes in the same plane with the arbor *f*. Each spoke is then presented to the cutter *g* and a tenon formed on it.

The saw S is also used to cut fellies of the proper length.

It will thus be seen that the spokes can all be cut of a uniform length and tenoned without removing the wheel from its centering-post *a*.

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

The centering-post *a*, applied to a carriage, C, in combination with the vertically-adjustable shelf *b* and a saw, S, substantially as and for the purposes described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

OLIVER J. DOERTY.

Witnesses:
J. M. RICKETS,
J. H. JOHNSTON,
SAM. F. POORMAN.