

Keith & Bird,
Spoke-Driving Machine,
No 59,612, Patented Nov. 13, 1866.

Fig. 1.

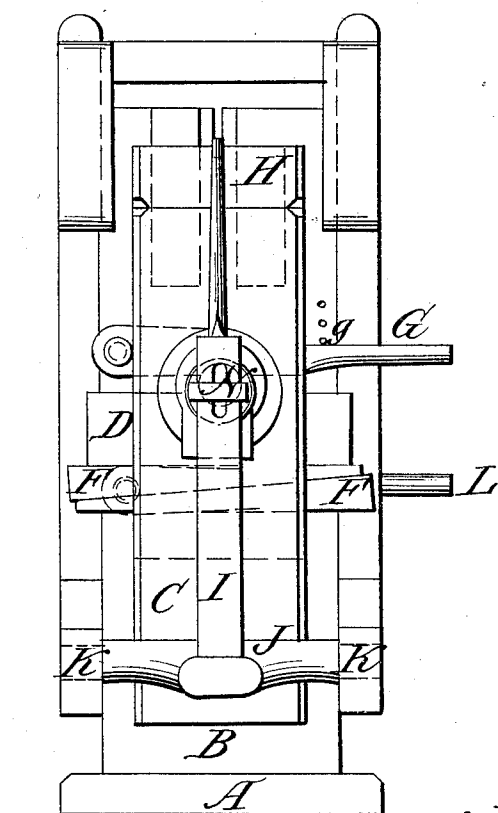
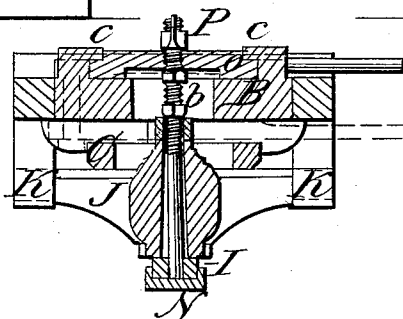
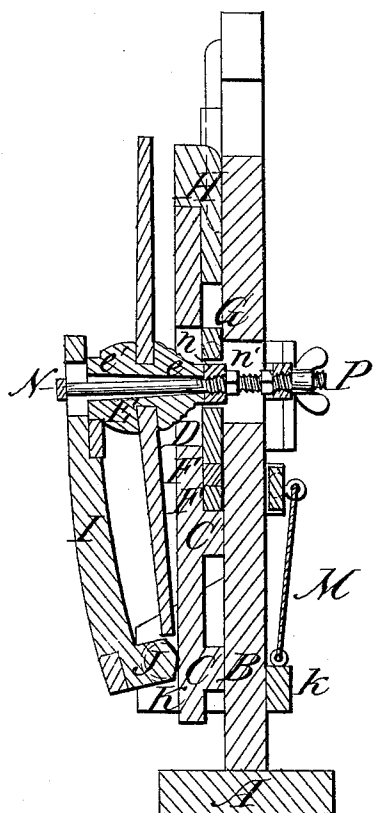


Fig. 2.



Witnesses:
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Fig. 3.

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UNITED STATES PATENT OFFICE.

ELI KEITH AND DELL BIRD, OF LA FONTAINE, INDIANA.

IMPROVEMENT IN MACHINES FOR DRIVING SPOKES IN WAGON-WHEELS.

Specification forming part of Letters Patent No. **59,612**, dated November 13, 1866.

To all whom it may concern:

Be it known that we, ELI KEITH and DELL BIRD, of La Fontaine, in the county of Wabash and State of Indiana, have invented a new and Improved Spoke-Driving Machine; and we do hereby declare the following to be a full, clear, and exact description of the same, sufficient to enable one skilled in the art to which the invention appertains to make use of it, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a front elevation. Fig. 2 is a central vertical section. Fig. 3 is a central horizontal section.

The improvement consists of a machine in which the hub is keyed, gaged, and adjusted so that the spokes may be driven in with regularity and with any required dish.

In the drawings, A is the base on which the upright piece B is erected. To the latter is firmly attached at a little distance the face-board C. The space between B and C is occupied by the slide D, upon which the point end *e* of the hub E rests, by the keys F F, which support the slide D, by the lever G, which is pressed down upon the said point of the hub, and by the gage-block H.

The butt-end *e'* of the hub is supported by the pivoted rest I, which is hinged at J to the frame K, which slides up and down upon the standard B as the lever L is raised or depressed. The lever is pivoted to the standard B, and attached by cord M to the cross-piece *k* of the frame K, so that as the lever is raised the butt-end of the hub is raised, and conversely to regulate the dish of the spokes.

The hub is slipped upon the hook-headed mandrel N, the collet *c'* resting upon the rest *i*, and the collar *n* fastened against its point end by the nut *n'*. The mandrel extends through an opening, *b*, in the standard, and through a sliding block, *o*, which slips up and

down in guides *c c* at the back of the standard. At the back end of the mandrel is a set-nut, P, by which the rest I is drawn forcibly toward the standard B, so as to grasp the hub.

Its operation is as follows: The hub being placed upon the mandrel and the end of the latter passed through the opening in the standard B, the hinged rest is brought forward, the hooked head passed through the slot in the rest, and the mandrel is rotated a quarter of a revolution, as represented at Fig. 1. The butt-end of the hub is then adjusted to the desired height and the set-nut P moderately tightened, to give the mandrel the proper inclination for the dish required. The sliding block *o* is tapped upward, and the keys F F are driven in until the slide D supports the point end *e* of the hub in the desired position. The lever G is now brought down upon the upper side of the point end of the hub and fastened by the pin *g*.

The spoke is driven by the aid of the gage-block H, which slips in cleats behind the face-board C, and so that its face is even therewith, the spoke being driven so as to preserve its parallelism with the face-board C and the face of the block H, which agrees therewith.

Different blocks H are used for varying lengths of spokes.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The arrangement upon the standard B of the adjustable frame K and pivoted rest I, operated substantially as described.

2. The combination of the adjustable rests I and D, lever G, and mandrel N, constructed and operating substantially as described.

ELI KEITH.
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Witnesses:

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