

(No Model.)

2 Sheets—Sheet 1.

H. T. KINGSBURY.
WHEEL LACING AND TRUING CHUCK.

No. 597,613.

Patented Jan. 18, 1898.

Fig. 1.

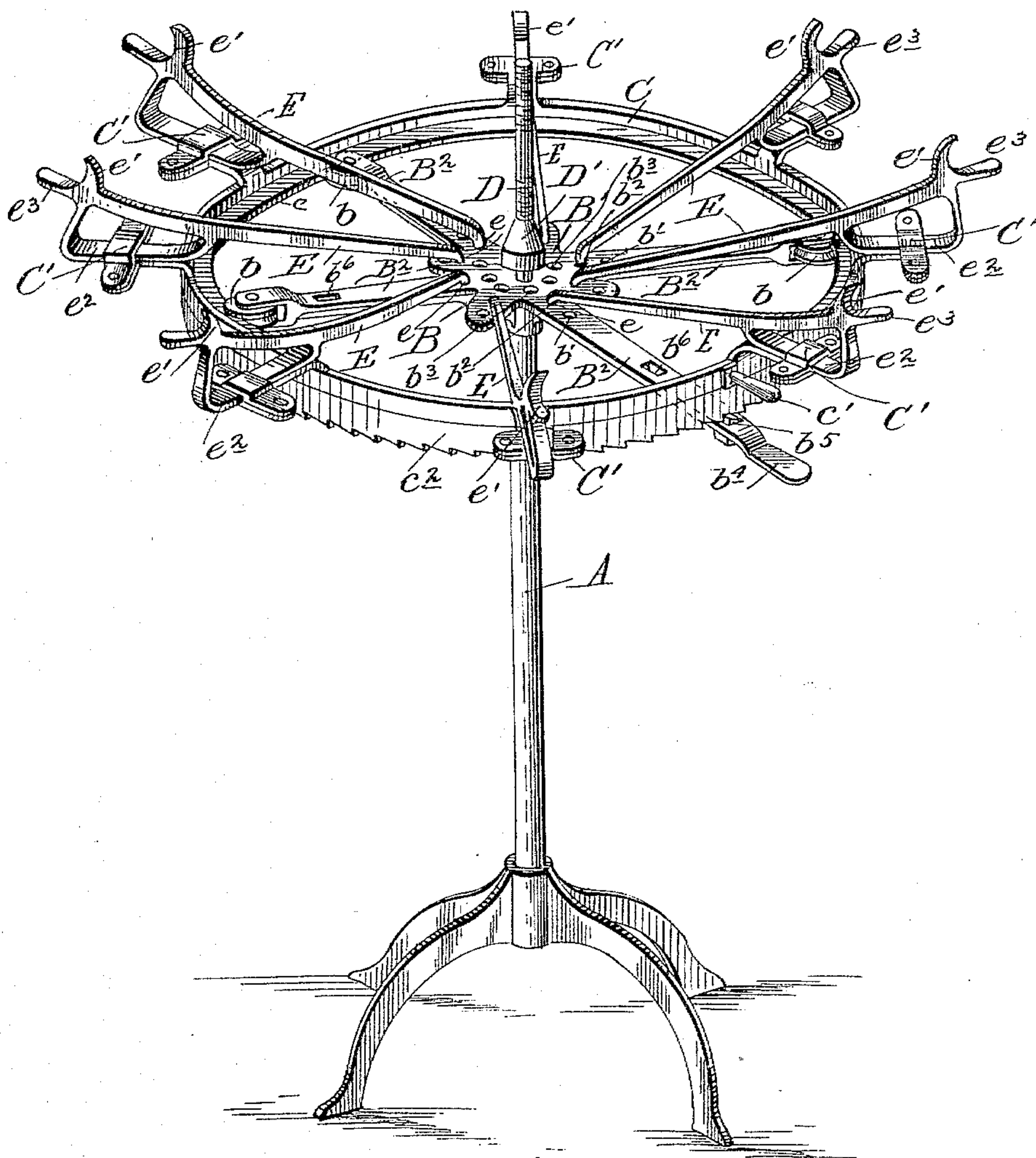
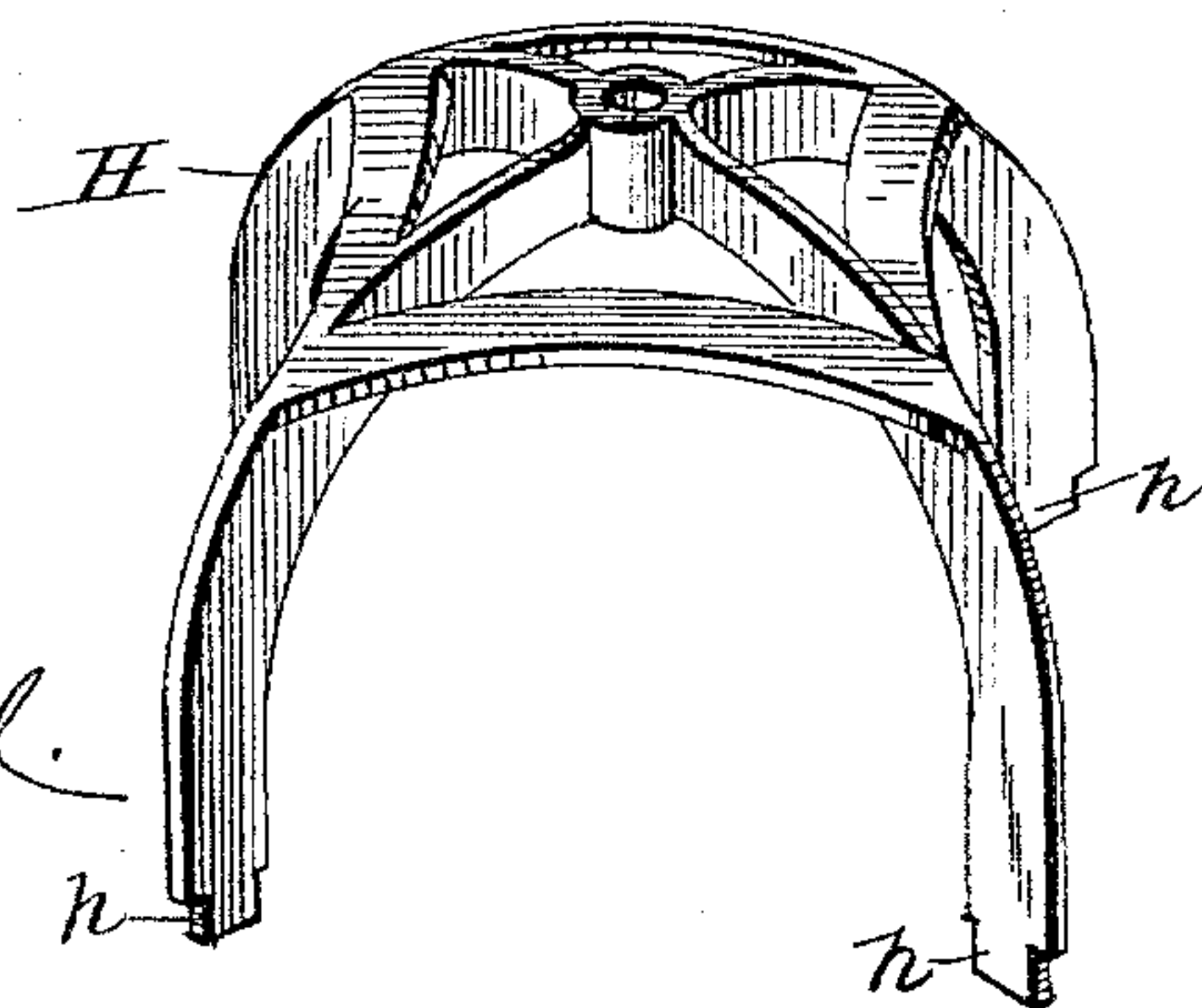


Fig. 2.



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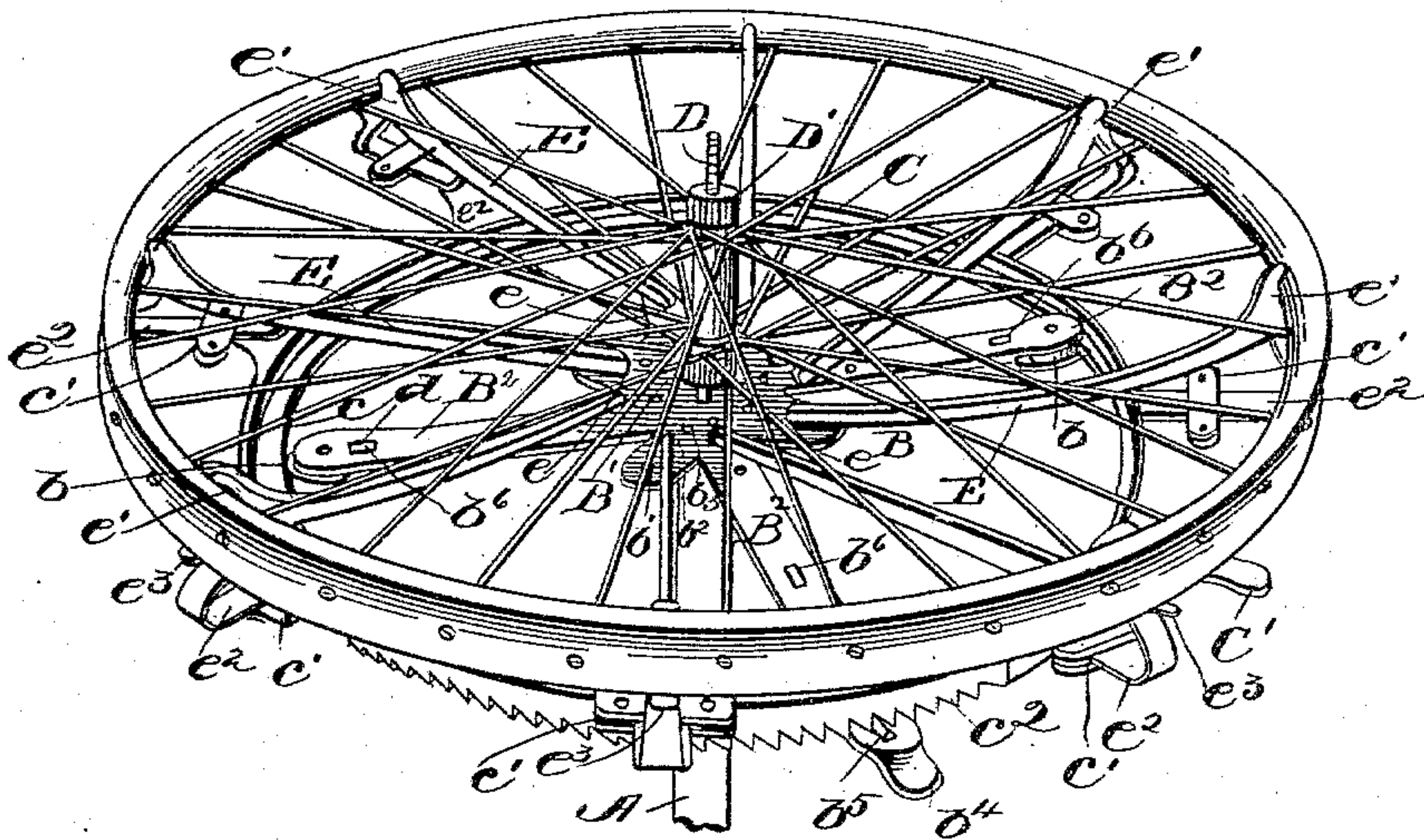
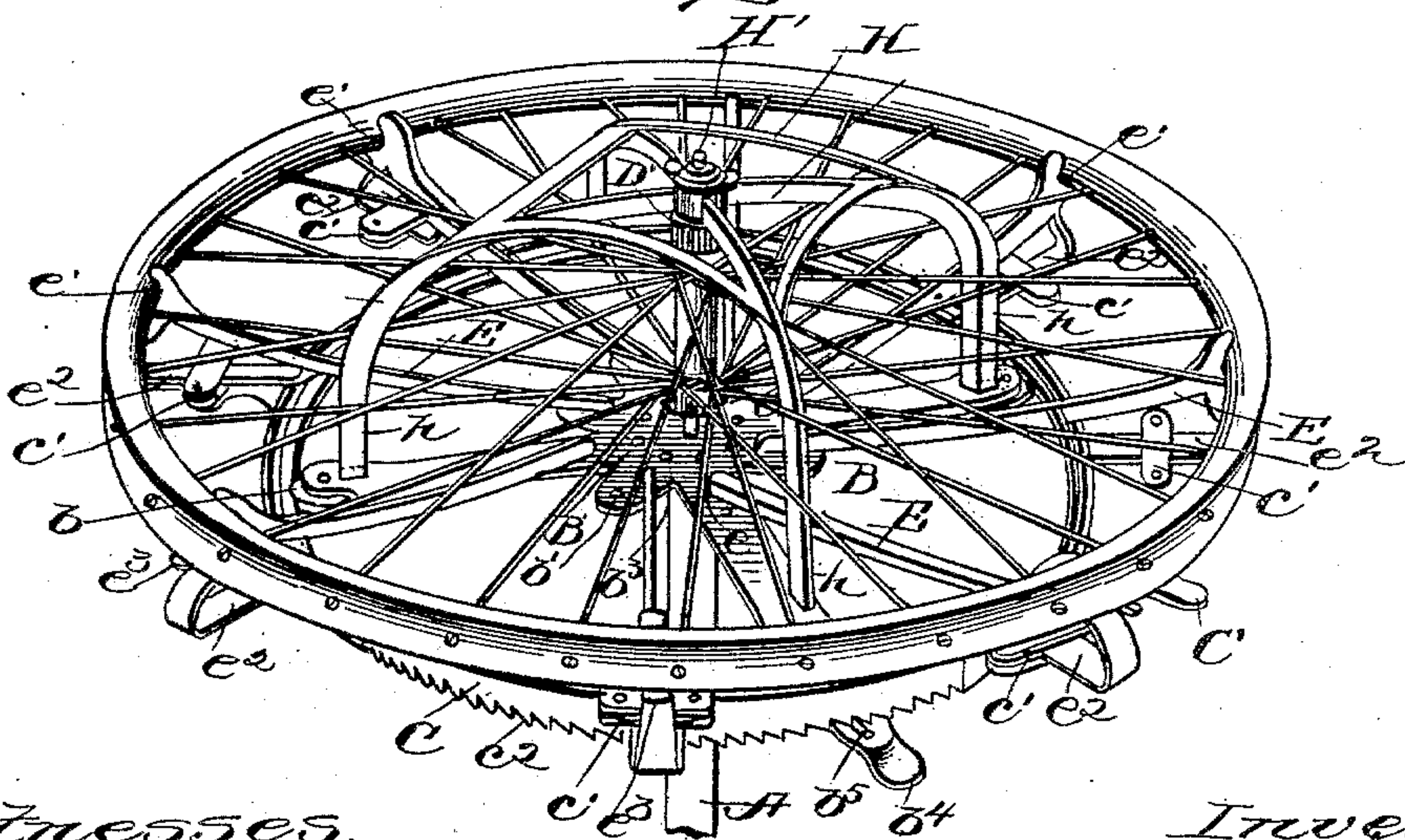


Fig. 3.



witnesses.

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UNITED STATES PATENT OFFICE.

HARRY T. KINGSBURY, OF KEENE, NEW HAMPSHIRE.

WHEEL LACING AND TRUING CHUCK.

SPECIFICATION forming part of Letters Patent No. 597,613, dated January 18, 1898.

Application filed June 3, 1897. Serial No. 639,261. (No model.)

To all whom it may concern:

Be it known that I, HARRY T. KINGSBURY, a citizen of the United States, residing at Keene, in the county of Cheshire, State of New Hampshire, have invented certain new and useful Improvements in Wheel Lacing and Truing Chucks, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The invention relates to a lacing and truing chuck for bicycle-wheels.

The object of the invention is to provide a simple and effective chuck for clamping the rim in true relation to the wheel-hub while the spokes are being laced and secured to the hub and rim.

The invention will be first described, and then specifically pointed out in the claims.

Referring to the drawings forming part hereof, Figure 1 is a perspective of the improved lacing and truing chuck with the arbor-brace removed. Fig. 2 is a similar view with a rim and hub in position for lacing and securing the spokes prior to the application of the arbor-brace. Fig. 3 is a similar view with said brace in position, and Fig. 4 is a perspective of the arbor-brace.

A represents a standard having a suitable supporting-base, and B is the horizontal bed of the chuck, mounted on the upper end of the standard.

The bed B is formed of a center piece B', from which extend a series of radial arms B², on the outer ends of which turns the horizontal concentric clamp-operating ring C, the connection being effected by providing the outer ends of the arms B² with peripherally-grooved horizontal wheels b, which receive a peripheral flange c on the inner side of the ring C. The center piece B' has a vertically-threaded hub-supporting arbor D, provided with upper and lower adjustable centering-cones D' D', adapted to be adjusted toward and from each other so as to clamp and center hubs of different lengths. Concentric with the arbor D are formed circularly-arranged series of apertures b' b² b³ to receive the inner downwardly-bent pivot ends e of the rim-clamping arms E, the outer ends of the said arms being in sliding connection with and provided beyond ring C with con-

cave jaws e' to engage the inner convex edge of the wheel-rim. When the arms E are in engagement with the outer series of apertures b', they are adapted to clamp a thirty-inch rim, while the next series b² provide for a twenty-eight-inch rim and the outer aperture b³ for a twenty-six-inch rim. As adjusted in the drawings, the arms will clamp a twenty-eight-inch rim. The arms E are provided with the slides e², which are mounted to slide in the guides or brackets C' on ring C. One of the radial arms B² is provided with a handle b⁴, and the ring C is provided with a handle c'. The lower edge of the ring C is provided with ratchet-teeth c², which are engaged by a pawl b⁵, carried by the handle b⁴, so that when the handles b⁴ c' are pressed together and the clamping-arms E thereby forced outwardly to clamp the wheel-rim the pawl will lock the parts in their adjusted position. When the pawl is released and the handles forced apart, then the arms E will be drawn inwardly out of engagement with the rim. In order to support the rim in the path of the said arms E when the arms are thus drawn inwardly, I provide said arms on their outer ends with supports e³, which project beyond the main parts of the jaws e'. These supports e³ are, in fact, extensions of the lower ends of the jaws e', and the rim when placed thereon will lie directly in the outward path of the said jaws e'.

H is the arbor-brace to support the arbor D against lateral strain. This brace is in the form of an arched frame or spider having a central aperture to receive the upper end of the said arbor, on which it is held by a thumb-nut H', and the lower ends of the brace-arms h enter apertures b⁶ in the outer ends of the radial arms B².

The operation, briefly summarized, is as follows: The handles b⁴ c' are forced apart, and hence the arms E will be moved inwardly. The rim is now placed on the supports e³ and the handles moved toward each other to force the clamping-jaws outwardly until their jaws receive the rim. The hub will then be placed on the arbor and properly centered and adjusted by the cones D' D'. The spokes will then be laced properly in place and their tightening-nipples started, after which the arbor-brace will be secured in place. To get

the best results, tighten four nipples and then pass to the other side and tighten four more, and so continue around the rim, snapping the spokes and depending on the sound
5 to get a uniform tension. It is not necessary to strain the spokes very tight, but it is necessary to tighten them uniformly. After all of the spokes are thus tightened the wheel when removed will be found to be perfectly
10 true.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with the bed having
15 a series of radial arms provided at their outer ends with grooved rollers, and a clamp-operating ring having a flanged inner side projecting into the roller-grooves, of a series of clamping-arms pivoted concentrically at
20 their inner ends to said bed, extending across and in sliding connection with said ring and terminating at their outer ends in rim-engaging jaws, substantially as described.

2. The combination with the bed having
25 concentric series of apertures, and a clamp-operating ring mounted to turn on the bed, of a series of clamping-arms having lateral pivots at their inner ends to enter the apertures of any series, said arms crossing and in
30 sliding connection with said ring for projection and retraction thereby and terminating at their outer ends in jaws to engage the rim; substantially as described.

3. The combination with the table having
35 a central hub-arbor provided with hub-adjusting devices or cones, and a ring turning on the bed concentric with said arbor, of clamping-arms pivoted at their inner ends concentric with the arbor and extending out-
40 wardly across and in sliding connection with the ring for retraction and projection thereby, the outer ends of the jaws being provided with rim-engaging jaws, substantially as described.

4. The combination with the bed, having
45 a handle provided with a pawl, the central hub-arbor provided with hub-adjusting devices, a ring turning on the bed and having a rack engaged by said pawl and a handle on
50 the ring of the clamping-arms pivoted to the

bed, in sliding connection with the bed and retracted and projected thereby when said handles are moved apart and toward each other respectively, the outer ends of the arms being provided with rim-engaging jaws, sub-
55 stantially as described.

5. The combination with the bed having a central hub-supporting arbor, a removable spider-like arbor-brace having a central aperture to receive the outer end of the arbor, the
60 depending arms of the brace being adapted to engage sockets or apertures in the bed, and means for securing the brace to the arbor, of the rim-clamping arms and their operating means, substantially as described.

6. A lacing and truing chuck comprising a base, a standard, a bed on the upper end of the standard, a hub-supporting arbor, an arbor-brace, a ring turning on the bed concentric with the arbor, means for operating and
70 locking the ring, and the rim-clamping arms pivoted at their inner ends concentric with the arbor and extending outwardly across and in sliding connection with the ring, the outer ends of the arms being provided with
75 jaws to engage the rim, substantially as described.

7. A lacing or truing chuck, comprising a support, or bed, a hub-arbor, a series of clamping-arms having jaws at their outer
80 ends to engage a wheel-rim, said arms being adjustable longitudinally for different sizes of rim and means for projecting and retracting the arms, substantially as described.

8. The combination with the bed or plate
85 having a hub-arbor and a series of apertures concentric therewith, of a series of clamping-arms having pivotal connection at their inner ends with said apertures and provided with rim-engaging jaws at their outer ends,
90 the said apertured plate and the ring being capable of rotary movement relative to each other to project and retract the clamping-arms, substantially as described.

In testimony whereof I affix my signature
95 in presence of two witnesses.

HARRY T. KINGSBURY.

Witnesses:

W. L. MASON,
J. M. CONNOR.