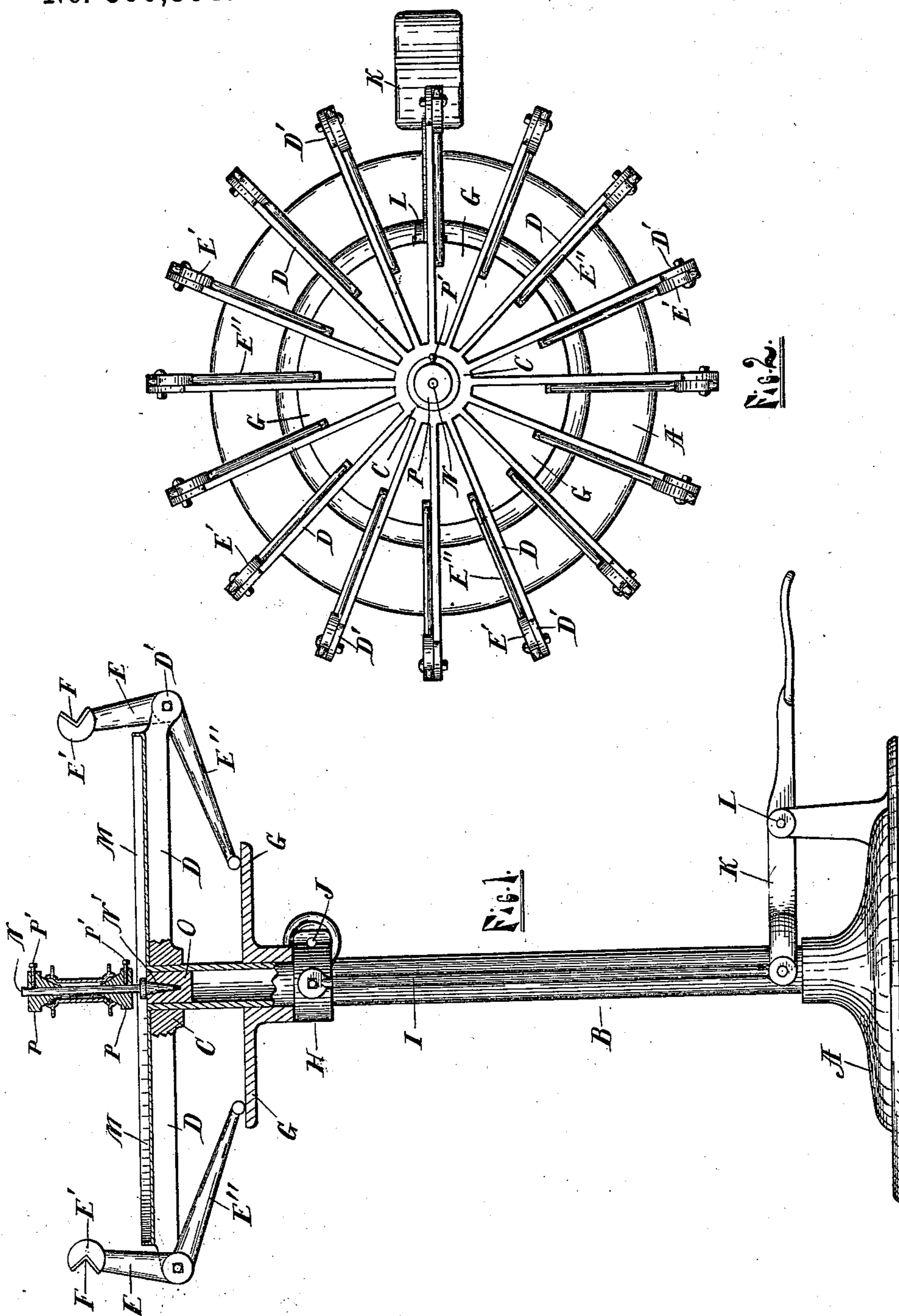


(No Model.)

R. B. HAIN.  
WHEEL CHUCK.

No. 560,354.

Patented May 19, 1896.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

RALPH B. HAIN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO THE FOX MACHINE COMPANY, OF SAME PLACE.

## WHEEL-CHUCK.

SPECIFICATION forming part of Letters Patent No. 560,354, dated May 19, 1896.

Application filed February 29, 1896. Serial No. 581,327. (No model.)

*To all whom it may concern:*

Be it known that I, RALPH B. HAIN, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Wheel-Chucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved wheel-chuck, and more especially to a chuck for setting up bicycle-wheels; and its object is to provide the same with certain new and useful features, hereinafter more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention, with parts broken away to better show the construction; and Fig. 2 is a plan view of the same with the pan M removed.

Like letters refer to like parts in both of the figures.

A represents a suitable base-plate; B, a tubular column projecting upward from the same; C, a hub or boss secured to the upper end of the column B and having a series of radial arms D, to the outer ends D' of which arms are pivoted bell-crank levers having upwardly-projecting arms E and inwardly-projecting arms E'. The arms E are provided with notches in their

Said collar is divided at one side and provided with a binding-screw J, whereby it may be fixed in place on the column B. In the upper end of the column B is a plug O, having an axial socket to receive the tapered end N' of a pin N, arranged in the axis of the series of levers E, and provided with cones P longitudinally adjustable on said pin and secured in place by set-screws P'. A pan or tray M is provided, which rests on the arms D and has an axial opening for the spindle N and is adapted to hold tools or materials used in setting up the wheels. The bell-crank levers are of equal dimensions and arranged with the corresponding parts of each lever moving in the same plane and equidistant from the axis of the pin N. When a wheel-rim is engaged by the heads E' and the flange G raised and secured by the screw J, the rim will be firmly held in a plane at right angles to the axis of the pin N and concentric therewith, and being engaged at frequent intervals by said heads, which are all equidistant from said axis, the rim will be forced to assume a true circular form. By adjusting the cones P on the pin, hubs of various dimensions may be accurately adjusted and firmly held in the center of said rim. Thus the hub and rim are firmly held in proper relation to form a perfect wheel while the spokes are inserted in place.

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

1. In a wheel-chuck, a central pin, adjustable in radial bell-crank levers,

