(No Model.)

N. S. BOUTON.

CHUCK FOR CAR WHEELS.

No. 436,886. Patented Sept. 23, 1890.

Fig. 1.

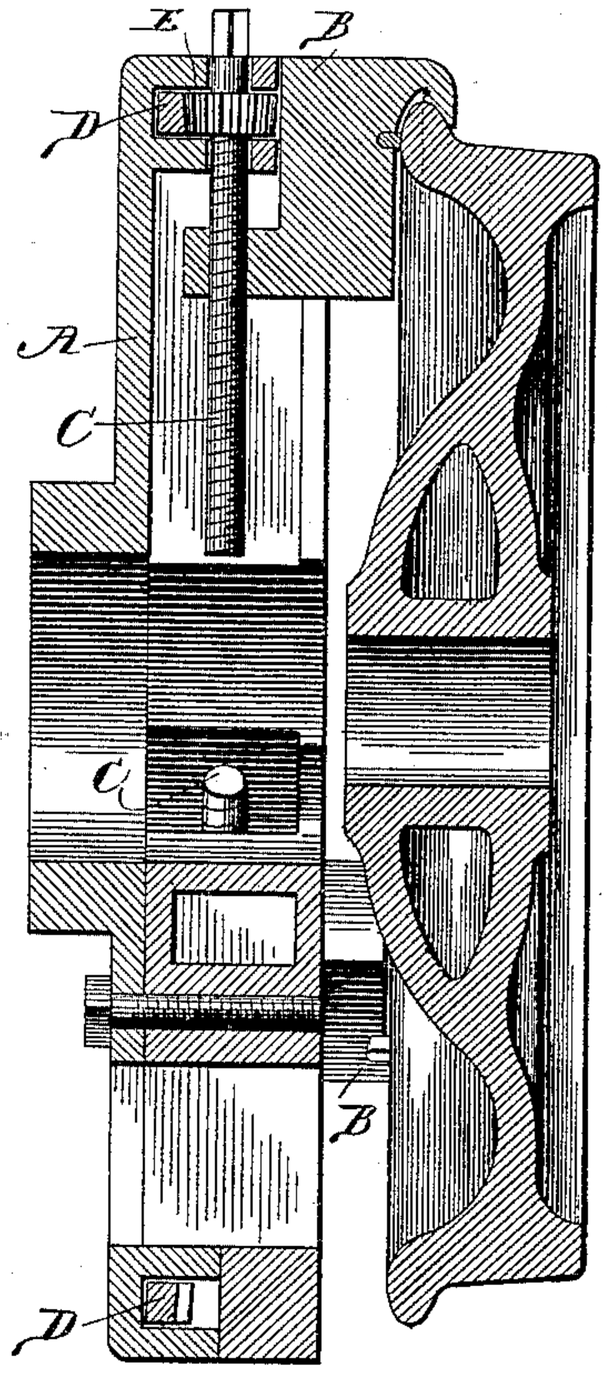


Fig. 2.

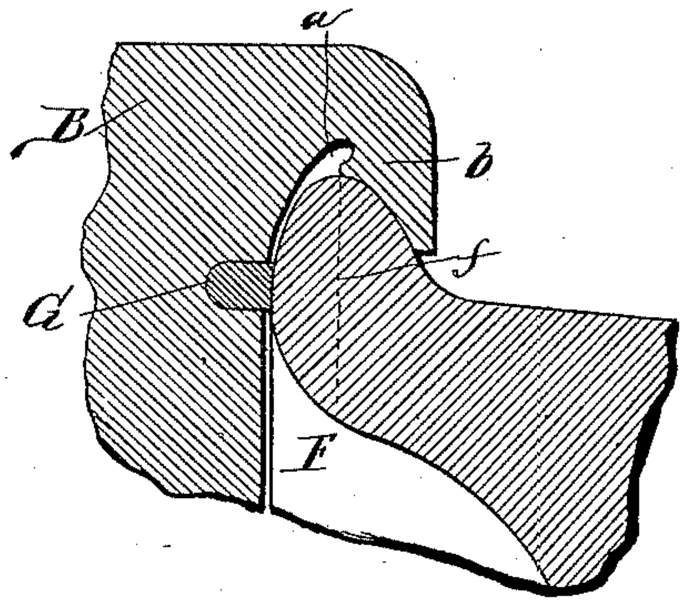
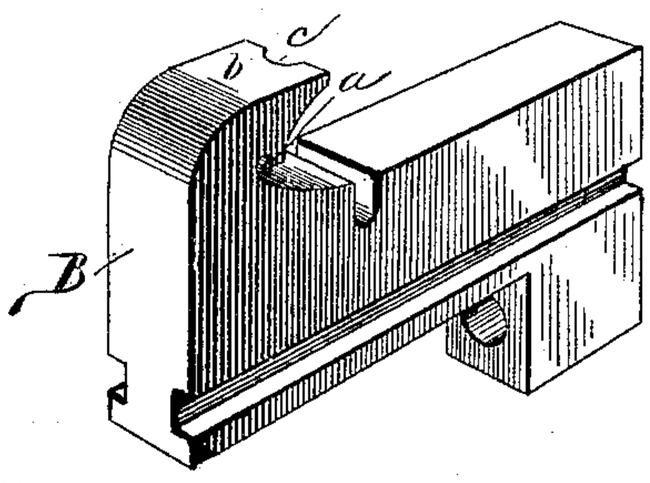


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

NATHANIEL S. BOUTON, OF CHICAGO, ILLINOIS.

CHUCK FOR CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 436,886, dated September 23, 1890.

Application filed May 16, 1890. Serial No. 352,027. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL S. BOUTON, of Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Chucks for Car-Wheels, of which the following is a specification.

The object of my invention is to provide a chuck in which a car-wheel may be automatically centered accurately with reference to the portion cast in the chill, the tread being left unobstructed by the chuck-jaws, however, so that it may be ground without first mounting the wheel on a mandrel.

In the accompanying drawings, Figure 1 is a section of a chuck and a car-wheel held therein. Fig. 2 is a section on a larger scale of a part of the rim of a car-wheel and part of the chuck-jaw. Fig. 3 is a perspective of the chuck-jaw removed from the chuck.

A, Fig. 1, is the face plate or body of the chuck, in which the jaws B B (three or more in number) are fitted to slide in the ordinary manner, each jaw being moved by a screw C. The latter are connected so as to revolve simultaneously by a toothed ring D meshing with a pinion, as E, on each screw C. As car-wheels are usually made, the chill extends about to the middle or greatest diameter of the flange F, as indicated by the line *f*, (see Fig. 2,) the line of junction of the chilled and unchilled portions of the flange being sharply defined. Sometimes a ring of sand is put in the flange of the chill, so as to make what is known as a "sand-flange" wheel. The ring of sand, being rigidly held in the chill and being trued with reference to the rest of the chill-surface, makes the portion of the wheel which is formed by it practically as true as if cast in a chill without a sand-flange. I therefore include the part of the wheel so cast in the chill as, for my purpose, a part of the chilled surface. The portion of the flange cast in the chill is of course true with the rest of the chilled face of the wheel, and will serve to center the wheel by.

I construct the bearing-face *b* of the chuck B so as to make contact with the chilled portion only of the flange and cut away the inner portion of the bearing-face, as seen at *a*, so that the unchilled portion of the flange shall not touch the chuck-jaw. The bearing face *b* of the jaw is curved to fit a car-wheel of the usual diameter—*i. e.*, 33 inches—but, to better adapt it to car-wheels, both larger and smaller, a portion of the central portion of the bearing-face may be cut away, as seen at *c*, Fig. 3. The inner edges of the bearing-face of the chuck-jaw form a guide-line by which the car-wheel may be set, the edges of the chilled flange-surface being made to coincide therewith. To make this adjustment I provide a groove in the radial face *d* of the chuck-jaw, in which a wedge G is set. Said wedge comes in contact with the inner portion of the wheel-flange, and can be driven in or out, so as to bring the wheel into proper position after the jaws have been partly closed thereon. The jaws being tightened the wheel will be properly set and the tread will be in position for grinding, and the hub for boring, also, if desired. The wedge G serves to keep the jaw from slipping on the inclined face of the flange. The use of the wedge G or any equivalent is not necessary in all cases, as the chilled part of the flange F is not always of such a shape as to prevent the jaw from getting a secure hold thereon without the assistance of the wedge; but in most cases it, or an equivalent—such as a screw or stiff spring—would be needed, unless the chill were extended farther on the flange than usual.

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

1. The combination, in a chuck adapted to hold chilled flanged wheels, of jaws adapted to bear on that part only of the wheel-flange which extends from the tread or face of the wheel to the greatest diameter of the flange, being that portion which is cast in the chill, said jaws being adapted to center the wheel thereby, and means for operating said jaws, all substantially as described.

2. The combination, in a chuck for wheels, of jaws having a bearing-face *b*, adapted to bear on the chilled portion of the wheel-flange only, and a wedge, as G, in the face of the chuck-jaw, substantially as shown and described.

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Witnesses:
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