A. B. SMITH.

CHUCKS FOR METAL-LATHES.

No. 193,424. Patented July 24, 1877.

Fig. 1.

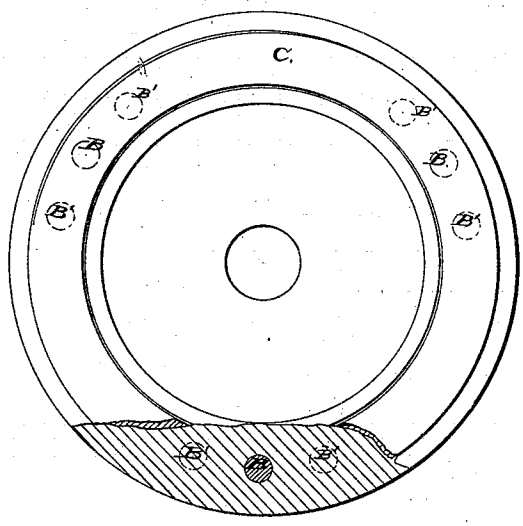


Fig. 2.

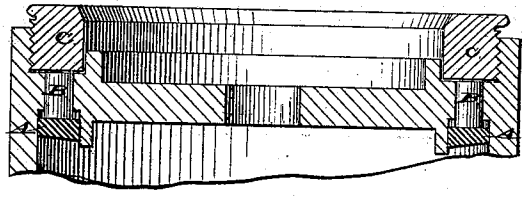
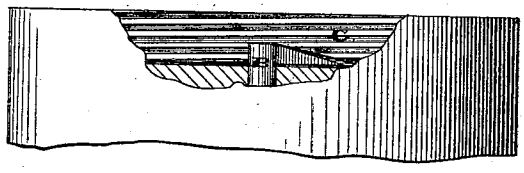


Fig. 3.



Witnesses:

M. Gardner.

A. A. Seaman.

Inventor:

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UNITED STATES PATENT OFFICE.

ANSELMO B. SMITH, OF DENVER, COLORADO.

IMPROVEMENT IN CHUCKS FOR METAL-LATHES.

Specification forming part of Letters Patent No. **193,424**, dated July 24, 1877; application filed November 25, 1876.

To all whom it may concern:

Be it known that I, ANSELMO B. SMITH, of Denver, in the county of Arapahoe and State of Colorado, have invented a new and useful Improvement in Chucks for Metal-Lathes, of which the following is a specification:

The object of my invention is to provide a chuck that can be used as a universal concentric or eccentric and independent-jaw chuck, and that can readily be changed from one of these to the other.

My invention consists in the combination and arrangement of the several parts, as hereinafter described, and specifically pointed out in the claim.

Referring to the accompanying drawings, Figure 1 is a plan view of the rear side of the chuck, showing the cammed screw ring or cap C, for operating against the pins B and B′ B′. Fig. 2 is a cross-section of the back of my improved chuck, A being the toothed ring that comes in contact with the pinions of the jaw-screws of the chuck. Fig. 3 is a view with part of the chuck cut away, to show how the cam on the screw-cap C operates on the pins B.

My invention is an improvement upon the chuck patented to Eli Horton, November 13, 1855, No. 13,787, and a detailed description of the several parts common to both chucks is therefore unnecessary.

B represents the pins which throw the toothed ring A into gear with the pinions on the jaw-screws, and are placed immediately under said pinions. B′ B′ are additional supporting-pins to the toothed ring A, and may or may not be used in the construction of the chuck. The screw-cap C may or may not have the cammed surface to move the pins B, as the screw-cap alone would force the pins B upward, which, pressing against the toothed ring A, would put it in gear with the pinions of the jaw-screws, and when the cap was turned back the pins B would be left free to go back as soon as any force was applied to the jaw-screw, as all cogged wheels have a tendency to part if not held together.

The screw-cap C has the advantage of the cammed ring by its adaptability to move a series of pins, B and B′ B′, at each jaw-screw pinion, thereby giving the geared rack connecting with the pinions of the jaw-screws an additional support, without which the geared rack has a tendency to spring toward the back of the chuck, when much strain is put on the jaw-screw. The additional pins B′ B′ entirely obviates this; also, the screw-cap can be turned down a little farther as the pins B and B′ B′ wear shorter, while the cammed ring cannot be thus used.

I do not claim as my invention the cams in the ring for operating the pins; but,

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

The combination, with the body of the chuck and the toothed ring A, of the pins B and B′ B′ and the screw-cap C, substantially as described.

ANSELMO B. SMITH.

Witnesses:

THOMAS C. CONNOLLY,

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