(No Model.)

3 Sheets—Sheet 1.

J. H. WESTCOTT.

LATHE CHUCK.

No. 470,369. Patented Mar. 8, 1892.

Fig. 1

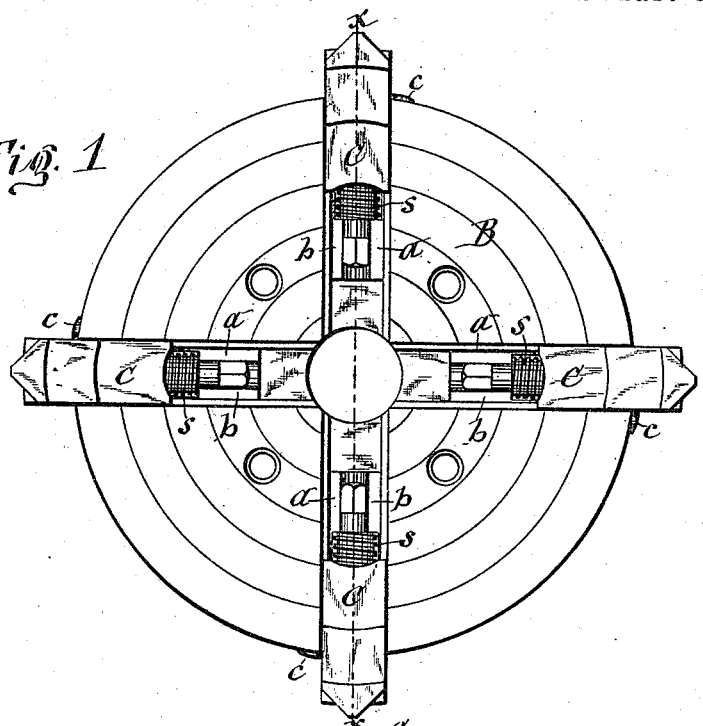
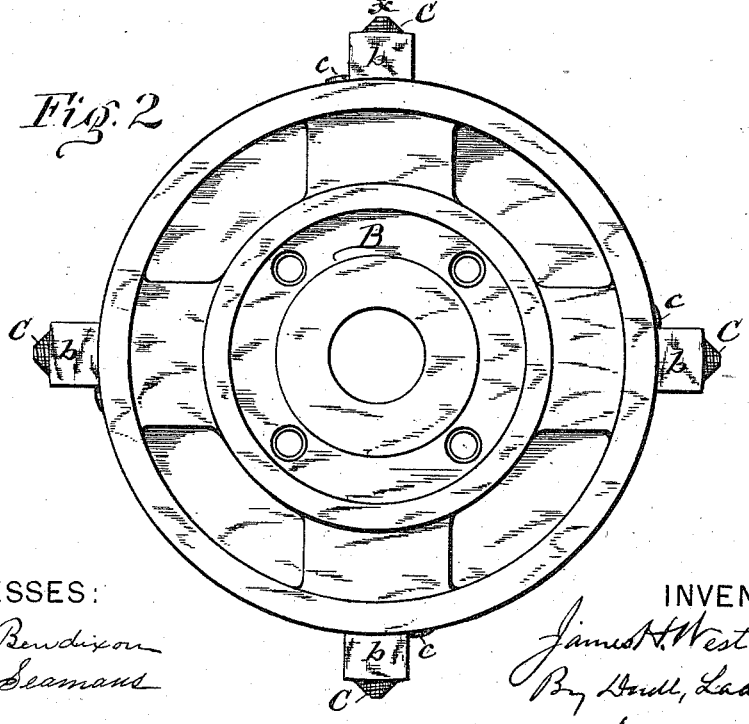


Fig. 2



WITNESSES:

C. L. Bendixon

H. M. Seamans

INVENTOR:

James H. Westcott

By Dodd, Laass & Dodd

his ATTORNEYS.

(No Model.) 3 Sheets—Sheet 2.

J. H. WESTCOTT.

LATHE CHUCK.

No. 470,369. Patented Mar. 8, 1892.

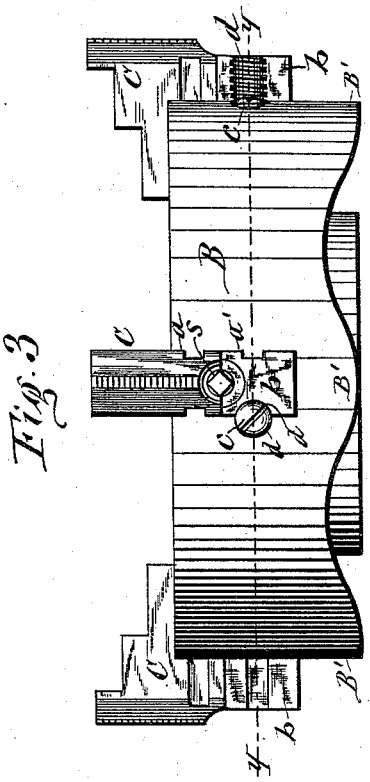


Fig. 3

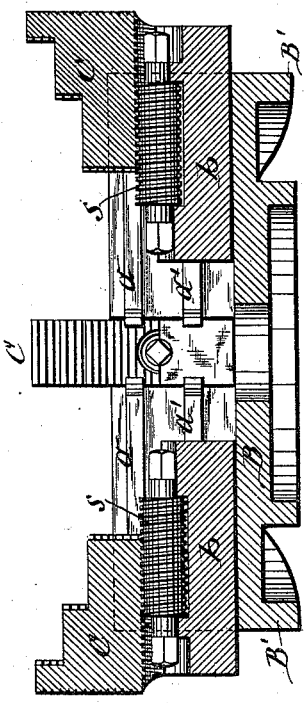


Fig. 4

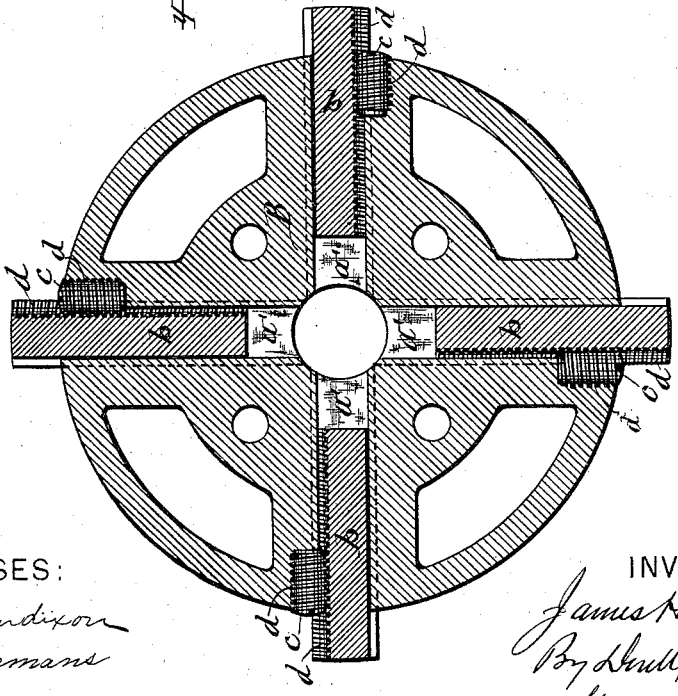


Fig. 5

WITNESSES:

C. L. Bendixon

H. M. Seamans

INVENTOR:

James H. Westcott

By Dewitt, Lass & Dewitt

his ATTORNEYS.

(No Model.) 3 Sheets—Sheet 3.

J. H. WESTCOTT.

LATHE CHUCK.

No. 470,369. Patented Mar. 8, 1892.

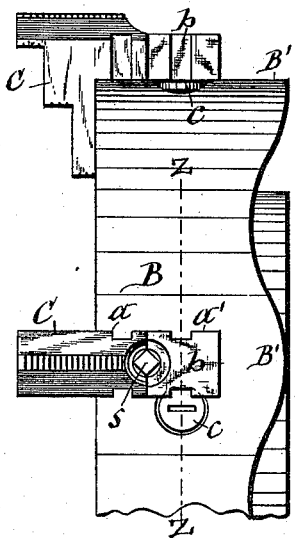


Fig. 6

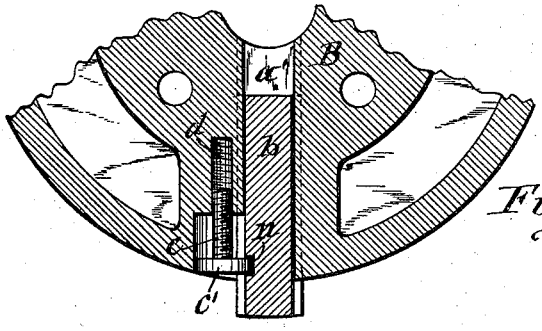


Fig. 7

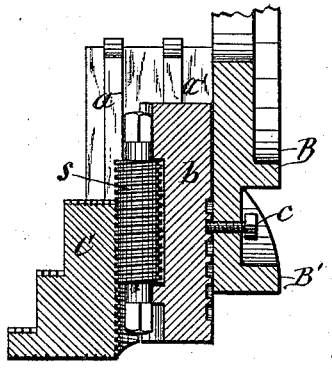


Fig. 8

WITNESSES:
C. L. Burdiyon
H. M. Seamans

INVENTOR:
James H. Westcott
By Dustly, Lyon & Dustly
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES H. WESTCOTT, OF ONEIDA, NEW YORK, ASSIGNOR OF ONE-HALF TO THE WESTCOTT CHUCK COMPANY, OF SAME PLACE.

LATHE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 470,369, dated March 8, 1892.

Application filed June 25, 1891. Serial No. 397,419. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. WESTCOTT, of Oneida, in the county of Madison, in the State of New York, have invented new and useful Improvements in Lathe-Chucks, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of chucks which have the jaws adjustable independent of each other by separate screws mounted in radially-movable boxes or carriers, which latter are also adjusted by means of screws connected thereto and to the body. Heretofore said carrier-adjusting screws have been confined longitudinally in the body, so as to allow pinions on the inner ends of said screws to engage an annular rack, by means of which a universal adjustment is effected. By confining the said screws as aforesaid the movement of the jaw-carriers is limited, and consequently the adjustment of the jaw is correspondingly limited.

The object of this invention is to augment the range of adjustment of the jaw-carriers of the class of chucks to which this invention pertains; and to that end the invention consists in the improved construction and combination of parts hereinafter fully described, and specifically set forth in the claims.

In the annexed drawings, Figures 1 and 2 are respectively front and rear views of a chuck embodying my invention. Fig. 3 is a side view of the same. Fig. 4 is a transverse section on line *x x*, Fig. 1. Fig. 5 is a sectional view of the chuck on line *y y*, Fig. 3, and in a plane at right angles to the axis of the chuck. Fig. 6 is a side view of a portion of the chuck embodying a modification of my invention. Fig. 7 is a sectional view taken in a plane indicated by dotted line *z z* in Fig. 6; and Fig. 8 is a sectional view of a chuck, taken on a line lengthwise of one of the jaws and illustrating further modifications of my invention.

Similar letters of reference indicate corresponding parts.

B represents the body of the chuck, which is provided with the usual radial ways *a a*, in which are seated, movable longitudinally, the work-gripping jaws C C. Back of said ways and parallel therewith are grooves *a'*, which extend through the periphery of the body B in the same manner as the ways *a a*, and in said grooves are seated boxes or screw-carriers *b b*, which are adapted to be moved longitudinally in said grooves. In the said carriers are journaled the usual screws *s s*, which engage screw-threaded grooves in the backs of the jaws and serve to adjust said jaws independently of each other to their requisite position to grip between them the article to be operated on. In order to allow the said screw-carriers to be adjusted independent of each other and with increased range of adjustment, I employ set-screws *c c*, which are connected to the body and engage the said carriers. By drawing the carriers part way radially outward the jaws C C and their adjusting-screws *s s*, being carried with said carriers, are thus supported a greater distance from the center of the chuck, and the adjustability of the jaws is augmented to a corresponding degree. By tightening the set-screws *c c* the carriers *b b* are retained in their adjusted position.

I preferably apply the set-screws *c c* at the sides of and parallel with the carriers by providing the sides of said carriers and the adjacent sides of the grooves *a' a'* with screw-threaded grooves *d d*, into which the set-screws are inserted, said grooves *d d* extending through the periphery of the body B to allow the screw *c* to be removed, which in this case is necessary to allow the carrier *b* to be moved longitudinally outward when desired to obtain greater range of adjustment of the jaw C and secure to the chuck a large article to be operated on. After the carrier *b* has been set into its desired position the screw *c* is again inserted in the grooves *d d*, and the engagement of said screw with the screw-threads in the grooves locks the carrier in its position. After that is effected the jaw C is adjusted by means of the screw *s* in the usual and well-known manner. One of the advantages of the aforesaid arrangement of the screw *c* consists in its transmission of the strain of the jaw C laterally to the chuck-body and to the solid portion thereof at the side of the groove *a'*. The removal of the screw *c*, however, may be obviated by making the screw-threaded socket *d* wholly in the body B and providing

the outer end of the screw with an annular head c', which engages a notch n in the side of the carrier b, as shown in Figs. 6 and 7 of the drawings. By turning this screw the carrier b is caused to move in or out with it. I do not, however, wish to be limited to the aforesaid specific arrangement of the set-screw c, inasmuch as it may be inserted in a screw-threaded hole through the back of the body B and made to bear with its inner end on the back of the box b, as illustrated in Fig. 8 of the drawings. The carriers b are elongated to extend the entire length of the grooves a', and are thus adapted to be set so as to project a considerable distance from the periphery of the body B. To enable the projecting portions of the carriers to resist the strain from the jaws C C, said carriers must be made of ample thickness, and inasmuch as the grooves a' a' have to be of corresponding depths the body B is liable to be weakened. I compensate for this weakening effect by reinforcing the chuck-body by enlargements B' B' of its depth.

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

1. The combination, with the chuck-body, the jaws, and separate screws for moving said jaws independently of each other, of the screw-carriers seated in the chuck-body and movable independently of each other and a set-screw applied to each carrier at the side thereof and parallel therewith to retain said carrier in its adjusted position, substantially as specified.

2. The combination, with the chuck-body, the jaws, and screws for moving the same, of the screw-carriers seated in the chuck-body and a set-screw applied to each carrier at the side thereof and parallel therewith and adapted to engage the screw-threads of said carrier to retain it in its adjusted position, substantially as specified.

In testimony whereof I have hereunto signed my name this 19th day of June, 1891.

JAMES H. WESTCOTT. [L. S.]

Witnesses:

SANDS H. GOODWIN,

ROBT. L. MOTT.