W. H. KING.

Lathe-Chuck.

No. 209,897. Patented Nov. 12, 1878.

Fig. 1.

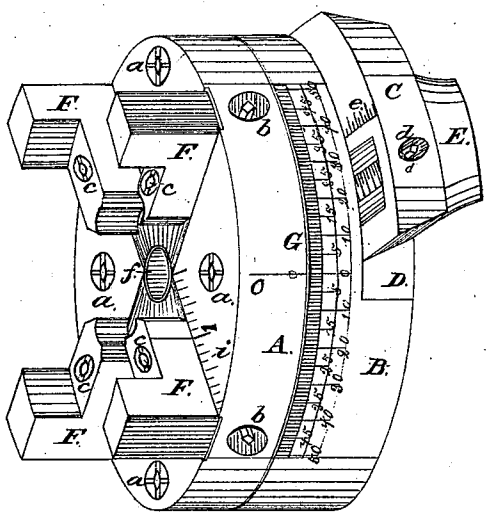


Fig. 2.

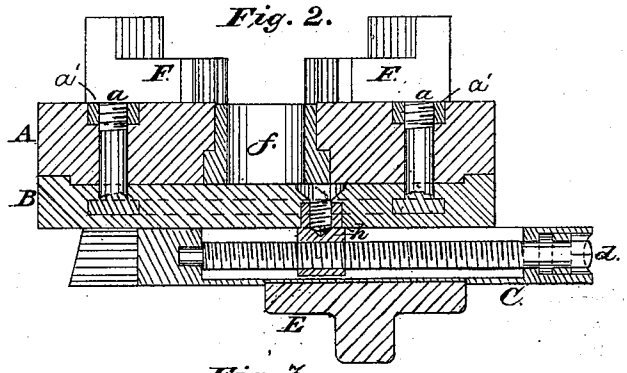
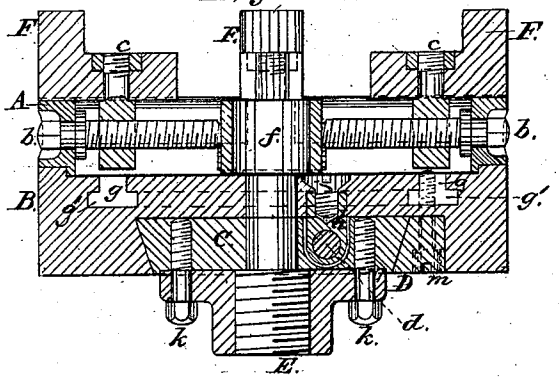


Fig. 3.



Witnesses,
C. H. Morgan
Frank E. King.

Inventor,
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UNITED STATES PATENT OFFICE.

W. HASKELL KING, OF ATHOL, MASSACHUSETTS.

IMPROVEMENT IN LATHE-CHUCKS.

Specification forming part of Letters Patent No. **209,897**, dated November 12, 1878; application filed June 4, 1878.

To all whom it may concern:

Be it known that I, W. HASKELL KING, of Athol, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Lathe-Chucks, of which the following is a specification:

This invention relates to certain improvements in lathe-chucks, and it has for its object to permit a piece of metal or other material to be worked either concentric or to any extent eccentric to the lathe-spindle, or both, without unchucking the work.

In the customary way of doing work where its position is required to be frequently shifted, it has been found necessary to change the work from one chuck to another as often as the center required to be altered to accomplish the work in progress, which involves a tedious and difficult operation, as it is almost impossible to chuck the work precisely alike twice, thereby rendering the work imperfect in execution, and requiring much more time to accomplish the desired end.

By my improvement these objections are entirely obviated, and provision is made for chucking the work in a concentric position, and afterward instantaneously adjusting it to any desired eccentric position, enabling the operator to work his material in any location or from any number of eccentric points, and also permit him to shift the work back to a concentric position, without the inconvenience of unchucking the work.

To this end my invention consists in a chuck-head constructed in three parts, the first consisting of the face-plate, which carries the dogs; the second, of a plate secured thereto, the two being capable of a rotary movement, with respect to each other, in opposite directions; and the third consisting of a plate on which the second plate is adapted to slide transversely, and which is provided with a tubular boss, by which the whole may be secured to the lathe-mandrel, as more fully hereinafter specified.

In the drawing, Figure 1 represents a perspective view of my improved chuck. Fig. 2 represents a longitudinal transverse section of the same; and Fig. 3 represents a transverse section taken at right angles to the sliding plate, which is secured to the lathe-mandrel.

The letter A represents the face-plate of the chuck, which is slotted radially for the reception of the dogs F, which are traversed back and forth by the leading-screws *b* in the ordinary manner.

The letter B represents the intermediate plate, which is secured upon a rear plate, C, having beveled edges, and adapted to travel thereon in a transverse direction either way, being traversed by means of a leading-screw, *d*, passing through a nut, *h*, secured to said plate B.

The above-described parts are similar in construction and operation to the invention as set forth and described in the Letters Patent granted to me the 22d day of November, 1870, No. 109,423, and do not in themselves form my present invention.

The plate B, on its front face, is provided with an annular slot, *g*, opening into an annular recess, *g'*, in which are located the heads of a series of screw-bolts, *a*, which pass through apertures in the face-plate A, and have secured to their threaded ends the binding-nuts *a'*, by means of which the two plates A and B may be firmly clamped together when desired. These nuts sit in countersunk recesses in the face of the plate A, so as to be flush therewith and out of the way of the work.

The letter G represents a graduated gage formed on the plate B, and O an index on the plate A, by means of which the degree to which they may be shifted can be determined after the work has been chucked; and *e* represents a similar gage, formed on the plate C, to determine the relative positions of the plates B and C.

The operation of my invention is as follows: After the work has been properly centered, by sliding the plate B to either side on the plate C the work will be thrown into an eccentric position with respect to the lathe-mandrel, and then, by loosening the nuts *a* in the face of the plate A, the said plate with the work may be rotated to any desired point upon the plate B and secured, enabling the operator to obtain any lateral adjustment that may be desired by the combined movements above described.

The advantages of my improvement will be apparent from the above description.

It will be perceived that, owing to the peculiar arrangement of the three parts forming the chuck, the work can be shifted in two directions in relation to the chuck, one transversely to the same, and one in a circle concentric or eccentric to the mandrel, according to the relative positions of the plates B and C, without removing or unchucking said work, whereby the operator is enabled to throw the work into any desired position without the least inconvenience; and, by means of the graduated gages, it will be perceived that the plates may be successively reset to any former position as often as required, thus providing for the utmost accuracy and exactness in the execution of the work.

Having now fully described my invention, I claim—

The combination of the front plate, A, of the chuck and the radially-sliding dogs, the intermediate plate, B, connected adjustably to the former by means of the screws *a*, provided with nuts *a'*, sitting in recesses in the front plate, and with heads on their lower ends sitting in the annular slots *g'*, and the rear plate, C, fitting in a dovetailed transverse recess in the rear of the plate B, the whole constructed and arranged to operate substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

W. HASKELL KING.

Witnesses:

JAMES L. NORRIS,

JAS. A. RUTHERFORD.