H. Morrison,

Lathe Chuck

No. 33,399. Patented Oct. 1, 1861.

Fig. 1.

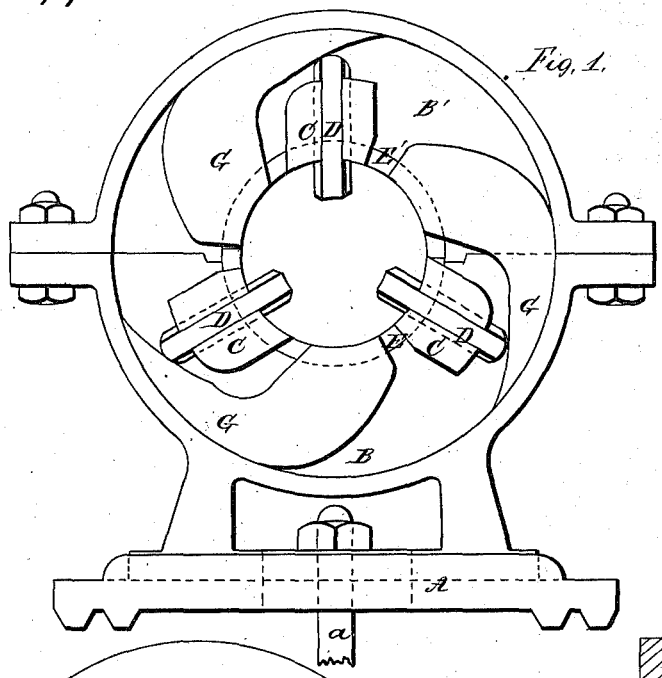


Fig. 2.

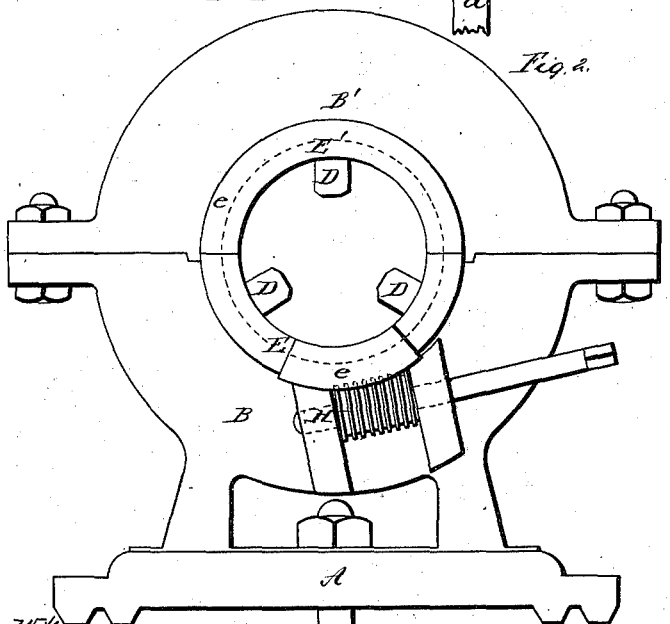
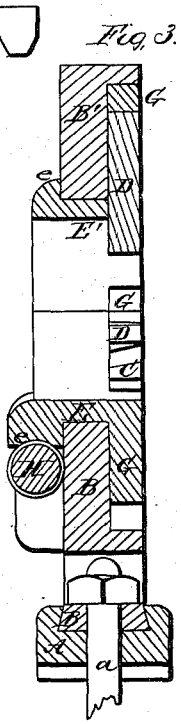


Fig. 3.



Witnesses;
L. H. Babcock
Harry Blodgett

Inventor;
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UNITED STATES PATENT OFFICE.

HENRY MORRISON, OF PATERSON, NEW JERSEY.

REST FOR ENGINE-LATHES.

Specification forming part of Letters Patent No. **33,399**, dated October 1, 1861.

To all whom it may concern:

Be it known that I, HENRY MORRISON, of Paterson, in the county of Passaic and State of New Jersey, have invented a certain new and Improved Rest for Engine-Lathes; and I do hereby declare that the following is a full and accurate description thereof, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a similar view of the opposite side, and Fig. 3 is a vertical section.

Similar letters refer to like parts in all the figures.

The nature of my invention consists in the combination and arrangement of a frame and ring made in two or more parts with certain movable cams operated by means of a worm or its equivalent and a like number of slides or bearings in such a manner that a portion may be readily removed and the whole opened for the purpose of inserting the work, and when replaced be in the proper condition for operation without the use of other fastening than sufficient to hold the frame in position. By this arrangement I am enabled to use a self-centering rest upon the necks of shafts and in similar places where such rests as heretofore constructed have been impracticable.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings, and the letters of reference marked thereon.

A is the base, adapted to fit the track or "ways" of the lathe-bed and having a slot in the center, through which a bolt *a* passes to hold it in position. The upper side of this base is formed with a dovetail groove, in which the frame B is fitted to slide, and the same bolt *a* which holds A in position also passes through a slot in the frame B and fastens that firmly to A. By loosening this bolt the frame B may be slid in the groove in A and again fastened by means of the bolt *a*.

The general form of the frame B is circular, and it is made in two parts B B′, held together by bolts passing through ears made for that purpose, as represented. One face of B B′ is recessed, and lugs C are cast or otherwise affixed within this recess, through which the slides or bearers D are fitted to slide in radial lines. A ring E E′ is fitted to turn freely within the hole in B B′ and is held in position by a flange *e* on one side and wedges or cams G attached to the other, which cams or wedges are forced by the rotation of E E′ between the ends of the slides D and the flange on B B′, and thus cause the former to move equal distances toward the center, preserving in all positions their concentricity. This ring is also made in two parts, the part E remaining in the bottom half B of the frame, and the part E′ lifting off with the other part B′ when the latter is opened, thereby enabling any article to be laid in position. When the frame B B′ is again united and fastened, the ring E E′ acts precisely the same as if in one piece, being confined by B B′, so that the moving one part necessitates a corresponding motion of the other. Motion is communicated to the ring E E′ by means of a worm or tangent screw H, mounted in bearings on B and meshing into teeth formed upon the flange *e* of the part E. By rotating the worm H by means of a crank applied to the end of its arbor the slides D are forced in or allowed to slide outward to contract or expand the size of the circle bounded by their inner ends in order to fit different sizes of work. Two or more sets of the slides D are provided of different lengths, so as to increase the range of adjustability.

I am aware that cams have heretofore been used in combination with slides arranged and operated in a somewhat similar manner in chucks and screw-cutting machines, and I make no claim to such combination; but I am not aware that any such combination has been heretofore arranged so as to allow a portion to be removed in the manner and for the purpose above set forth. Therefore,

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

The frame B B′, made in two or more parts, the cam-ring E E′, similarly constructed, the cams G, and sliders or bearers D, so combined and arranged that the entire rest may be opened for the purpose of inserting and removing the work, substantially as herein specified.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

HENRY MORRISON.

Witnesses:

G. H. BABCOCK,

HARRY M. COLLYER.