

P. J. CLEVER.
Chucks for Metal Lathes.

No. 149,991.

Patented April 21, 1874.

Fig. 1

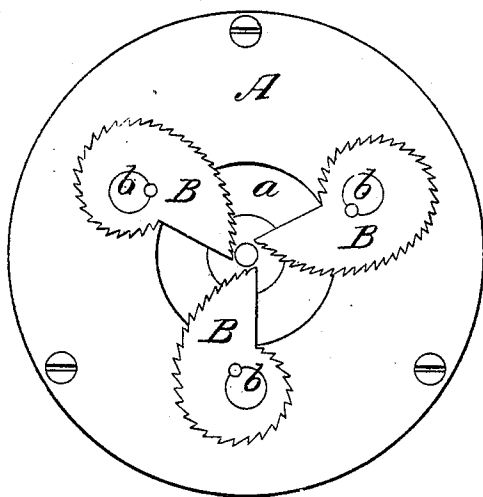


Fig. 2

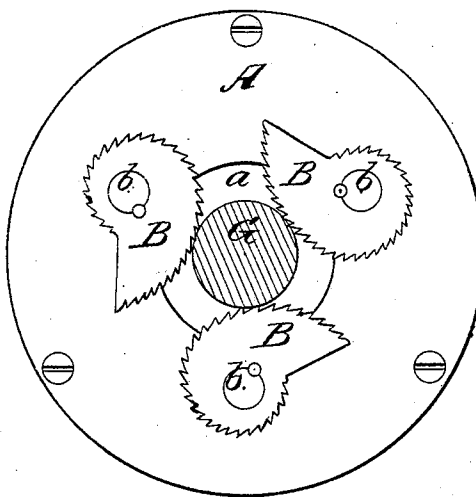


Fig. 3

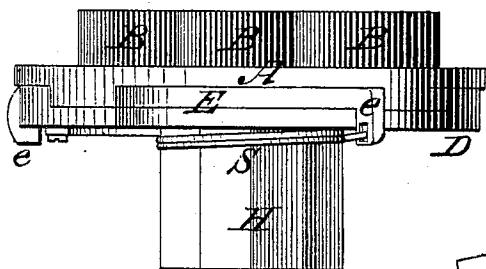


Fig. 4

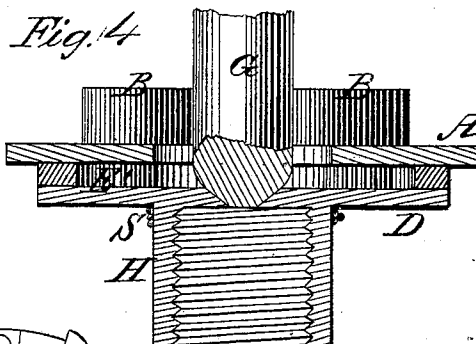
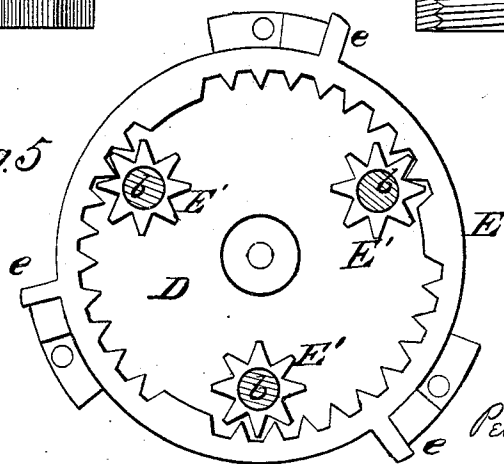


Fig. 5



WITNESSES

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UNITED STATES PATENT OFFICE.

PETER J. CLEVER, OF BRUNSWICK, MISSOURI, ASSIGNOR TO HIMSELF AND LOUIS BENECKE, OF SAME PLACE.

IMPROVEMENT IN CHUCKS FOR METAL-LATHES.

Specification forming part of Letters Patent No. **149,991**, dated April 21, 1874; application filed March 21, 1874.

To all whom it may concern:

Be it known that I, PETER J. CLEVER, of Brunswick, in the county of Chariton and State of Missouri, have invented a new and valuable Improvement in Chucks; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figures 1 and 2 of the drawing are representations of top views of my chuck. Fig. 3 is a side, and Fig. 4 a sectional, view of my chuck. Fig. 5 is a bottom view of the same.

This invention has relation to lathe-chucks which will automatically center the object to be turned at the same time that such object is being clamped in the chuck. The nature of my invention consists in the application, to a chuck-head, of scroll-shaped cams or griping-dogs, in combination with pinions which are on the axes of these dogs, and with a toothed ring and spring, whereby the dogs can be readily set apart to receive a rod or bolt between them, and will, when released, be closed on the object by the recoil of said spring, and firmly gripe the object in the chuck, as will be hereinafter explained.

In the annexed drawings, A designates the circular face-plate of the chuck-head, through which a hole, *a*, is made centrally. D designates the back plate of the head, having a screw-threaded hub, H, formed on it for securing the head on the lathe-mandrel. Between the two plates A D is a circularly-movable ring, E, having finger-pieces or handles *e* formed on its periphery, which are allowed to play between lugs formed on the plate D, and arranged equidistant from each other. The inner edge of the ring E is toothed, and the teeth engage with three pinion spur-wheels, E', which are keyed on short shafts *b*, that pass through the plate D, and have cams or griping-dogs B secured on their outer ends. The axes of the three shafts *b* are equidis-

tant from each, and equidistant from the center of the chuck-head. The griping-dogs, which are scroll-shaped and of uniform size, have serrated surfaces, which approach and recede from the center of the chuck-head when the ring E is moved about this center, so that a bar or bolt of round metal will be griped and confined so that its longitudinal axis will exactly coincide with said center, as indicated in Fig. 2 by the letter G. The ring E is acted on by a helical spring, S, which is attached by one end to one of the finger-pieces *e*, and coiled around the hub H, and suitably attached to the back plate D. This spring acts by its recoil to close the three griping-jaws against the bar G to be turned.

It will be seen from the above description that the griping jaws or dogs are adapted for firmly holding in the chuck and centering therein rods or bars of various sizes.

If desired, the chuck-head may be bored entirely through, and griping-jaws constructed as described applied on both ends of it. When this arrangement is adopted the chuck-head will be made quite long, and it will be supported in a journal-box on the upper end of a fixed standard, and rotated by means of a belt applied around one of its cylindrical ends. By these means I am able to turn long shafts and axles and support them by the chuck at the middle of their length, using in connection therewith end centers or supports.

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

The chuck-plates A D, having a toothed adjusting-ring, E, between them, in combination with finger-pieces *e*, spring S, pinions E', and griping-jaws B, shaped and arranged substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

PETER J. CLEVER.

Witnesses:

OTTO AMERLAN,
CHAS. A. WINSLOW.