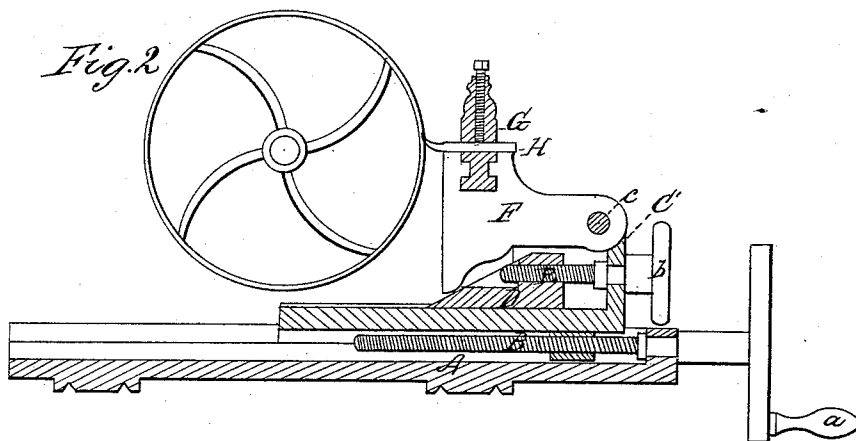
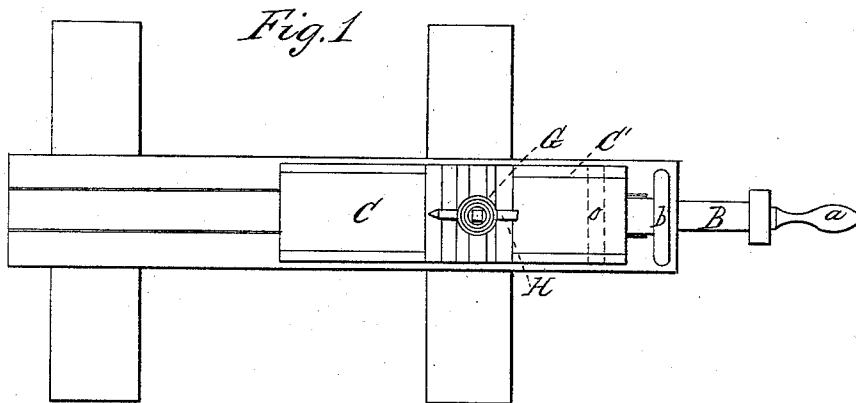


J. E. Burdge,

Lathe Rest,

N^o 67,630.

Patented Aug. 13, 1867.



Witnesses;
Charles L. Fisher
Mark Welcomes

Inventor;
J. E. Burdge

United States Patent Office.

J. E. BURDGE, OF CINCINNATI, OHIO.

Letters Patent No. 67,630, dated August 13, 1867.

IMPROVED ADJUSTABLE REST FOR LATHES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. E. BURDGE, of Cincinnati, in the county of Hamilton, and the State of Ohio, have invented a new and useful Improvement in Adjustable Rests for Lathes, of which the following is a full and clear description, reference being had to the accompanying drawings, making part of this specification.

The nature of my invention consists in hinging or pivoting the end of an adjustable tool-rest to the slide rest, and causing a wedge-shaped block operated by a screw to elevate or depress the inner end of the adjustable rest, whereby the tool may be elevated or depressed in front of the article while being turned, thus obviating the necessity of drawing back the rest, as is the case with ordinary rests.

Figure 1 is a plan of my improved rest.

Figure 2 is a longitudinal section of the same.

A is the slide which moves back and forth upon the ways of the shears of the lathe. The screw B, provided with a crank-handle, *a*, located outside of the slide, engages the nut pendent from and attached to the under side of the slide-rest C. This rest is dove-tailed to the slide A, and is caused to traverse back and forth across the lathe. The slide-rest C has the hollow post C' secured to or making part of its outer end, and projecting upwards. To the extreme end of the post C', furthest removed from the centre of the lathe, is pivoted by the pin *c* the adjustable rest F which carries the tool-holder G, and in which is secured the tool H. Beneath the adjustable rest F is the wedge-shaped block D. It is moved in a direction transversely with the lathe, in a guiding groove in the upper surface of the slide-rest C by the screw E, which is provided with a small burred wheel, *b*, outside of the hollow post C'.

In order to make nice adjustments of the cutting edge of the tool to the surface of the article being turned, the tool is first removed from the article, in machines now generally in use, by running back the slide-rest, and then, by means of bevelled rings between the tool and rest, either elevating or depressing the cutting edge of the tool, or by elevating the tool-holder after the rest has been run back. In a still later improvement in rest, the tool-holder is elevated or depressed, and the tool suitably adjusted, by elevating one end of a lever-rest by means of a screw which passes through it and impinges upon the slide, the opposite end of the lever-rest being pivoted to the opposite end of the slide, which construction necessitates a limited diameter of the article being turned, since the lever-rest extends from one side of the lathe to the opposite side, beneath the wheel or shaft being faced or turned off. In the adjustable rest for lathes constructed as herein described, the great advantage attained over all others is that when the tool arrives at the end of the cut, the lathe can be reversed without moving back the rest the moment the screw which is being operated upon commences to turn back. When it arrives at the place to commence a new cut the tool will drop down exactly where it was at the commencement of the previous cut. Then all that is necessary to do is to turn the screw moving in the rest enough to make the new cut, thus avoiding the necessity of backing out the tool at each and every cut made on the screw operated on, and returning it again, as is done in all other rests. In cutting screws, the tool in its backward motion passes over the thread without cutting it, and by an automatic device may be caused to cut deeper each time it makes a direct motion, and thus obviate the necessity of the constant attendance of the operator.

I do not claim the longitudinal carriage A, nor the transverse sliding-head C, or any mode of operating the same, neither do I claim forming the tool-block of two parts, or raising or lowering the same by an incline plane, for they are common to most rests; but what I claim, is—

Hinging one end of the tool-block F to the transverse sliding-head C' by a bolt, *c*, and raising and lowering the other end of the tool-block F by means of a wedge, D, or an equivalent device, whereby the cutting edge of the tool H may be raised or lowered, as desired, while the lathe is in motion, or otherwise, and presenting it in a proper position to the material being turned, substantially as described.

J. E. BURDGE.

Witnesses:

C. L. FISHER,
WILLIAM Q. McCOMAS,
JOHN H. BOGART.

MAY 16 1867