C. A. PERKINS.

MOUNTING FOR EMERY GRINDERS.

No. 181,715. Patented Aug. 29, 1876.

Fig: 1.

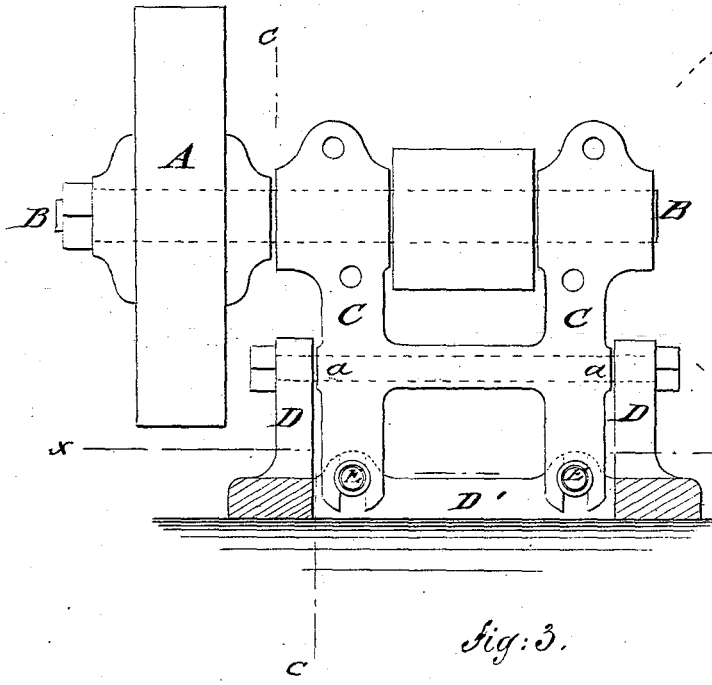


Fig: 2.

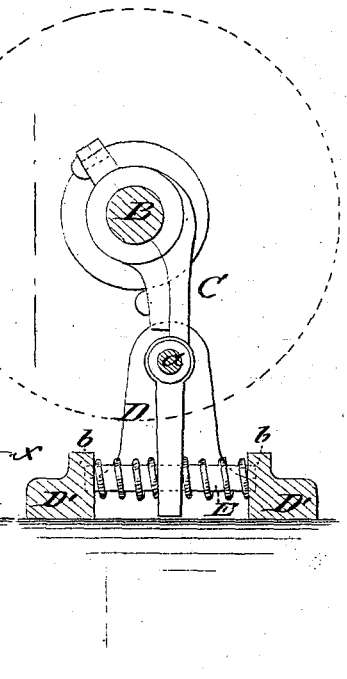
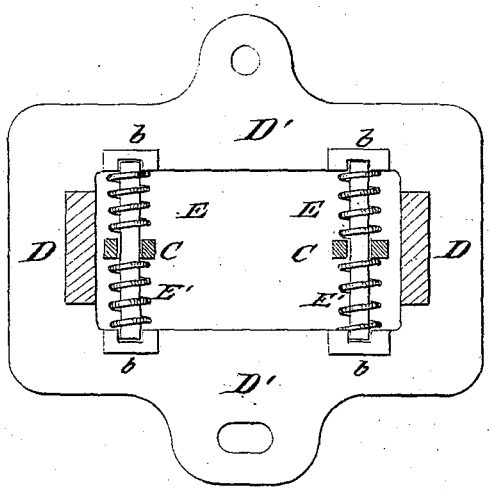


Fig: 3.



WITNESSES:

Chas. Nida.

John Goedtals

INVENTOR:

C. A. Perkins

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES A. PERKINS, OF FISHERVILLE, NEW HAMPSHIRE.

IMPROVEMENT IN MOUNTINGS FOR EMERY-GRINDERS.

Specification forming part of Letters Patent No. **181,715**, dated August 29, 1876; application filed July 31, 1876.

To all whom it may concern:

Be it known that I, CHARLES A. PERKINS, of Fisherville, in the county of Merrimack and State of New Hampshire, have invented a new and Improved Emery-Grinder, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side elevation, and Figs. 2 and 3 are respectively vertical transverse and horizontal sections of my improved emery-grinder on lines *c c* and *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide an improved emery-grinder, by which may be polished, in connection with the ordinary engine-lathe, any cylindrical or irregular forms of work hung on the lathe-centers, and revolving either in the same or in the opposite direction from the emery-wheel.

The special advantage secured by the grinder consists in the polishing of cylindrical surfaces that do not run true on the lathe-centers, being specially applicable to the polishing of wagon-axles and similar articles.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the drawing, A represents an emery-wheel that is hung to an arbor or shaft, B, which is mounted on the oscillating frame C. The frame C is hung by the pivot or bolt *a* to the supporting posts D of a base-plate, D′. The lower ends of the oscillating frame C are forked and placed over the lateral rods E that are placed into recesses *b* of the bed-plate, being acted upon at both sides by the spiral springs E′. The wagon-axle, or other work that does not run perfectly true on the centers, is placed on the lathe-centers, and the grinder is bolted onto the carriage in the place usually occupied by the tool-post. The emery-wheel is revolved in suitable manner, being usually driven in an opposite direction from the wagon-axle.

When the wheel is moved up to the work it follows the surface of the axle, being thrown back by the untrue parts of the axle, and forward again by the springs, the action of the springs tending to keep the circumference of wheel in contact with the surface of the axle, whether the same runs true or not, producing thereby the even and rapid polishing of the axles and similar objects.

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

The combination of the oscillating arbor-carrying frame C, having slotted lower ends, with lateral rods E and spiral springs E′, of base-plate D′, substantially as and for the purpose described.

CHARLES A. PERKINS.

Witnesses:

D. ARTHUR BROWN,

G. FRANK BLAKE.