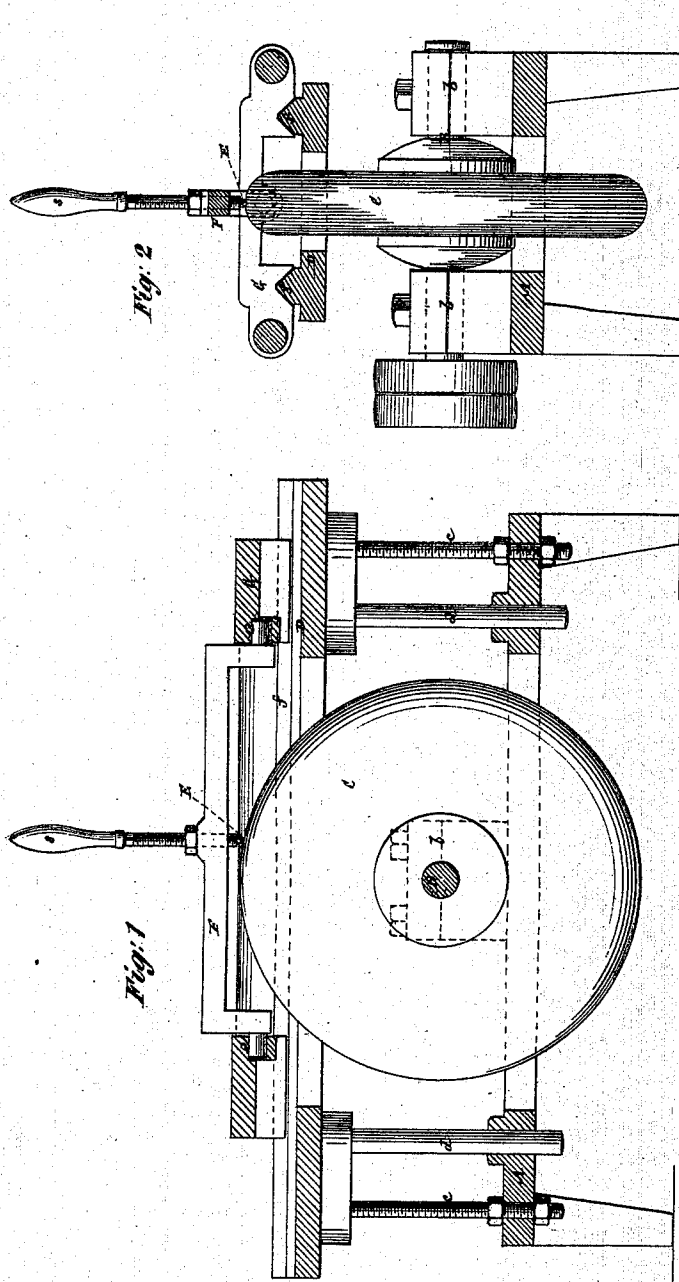


J. W. COLE.

Machines for Dressing Wheels, &c.

No. 139,774.

Patented June 10, 1873.



Witnesses:
Michael Ryan
Fred H. H. H.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MACHINES FOR DRESSING WHEELS, &c.

Specification forming part of Letters Patent No. 139,774, dated June 10, 1873; application filed December 7, 1872.

CASE C.

To all whom it may concern:

Be it known that I, J. WENDELL COLE, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain Improvements in Machines for Dressing Wheels and other circular bodies of transverse curvature on their peripheries, of which the following is a specification:

This invention is mainly designed for turning or dressing emery or other grinding wheels of transverse curvature on their peripheries, applicable to the grinding or dressing of the bearing-surfaces of journal-boxes. The invention generally consists in a combination, with a revolving shaft or carrier of the wheel or body to be dressed, of a diamond or other cutter, carried by a swinging bail-like holder, arranged over or outside of the periphery of the wheel and with its axis of motion in a plane which corresponds with that of the wheel's rotation, whereby a wheel or other circular body of transverse curvature on its periphery may be ground or dressed true and of any desired curvature or curvatures with great facility and dispatch.

In the accompanying drawing, which forms part of this specification, Figure 1 represents a vertical longitudinal section of a machine constructed in accordance with my invention; and Fig. 2 a transverse vertical section of the same.

Similar letters of reference indicate corresponding parts.

A is the main frame, having journal boxes or bearings *b b* for support of the shaft or carrier B, by which the emery or other grinding wheel C to be dressed is rotated. D is an upper bed or table, carried by the frame A, and through which the wheel C projects. This table D carries the swinging diamond or other cutter E, and may be vertically adjustable by means of separate or suitably-connected screws *c c* and guides *d d* to adapt the cutter E to different diameters of wheels; or the wheel-carrier B may be similarly adjustable relatively to the cutter E, for the same purpose. F is the swinging tool or cutter holder, of bail-like construction, and arranged over or outside of the periphery of the wheel C, and

having the axial line of its bearings *e e* in a plane which, being extended, crosses or intersects at right angles the plane in which the axis of the wheel C, or its carrier B, lies; or, in other words, corresponds with the plane of the wheel's rotation.

The bearings *e e* of the bail-like tool-holder F are represented as arranged within or on a sliding bed, G, constructed to fit ways *f f* upon the table D, disposed in directions parallel with the plane of the wheel's rotation to allow of the cutter E being shoved up to and from the work for the purpose of graduating its action on the wheel, and of centering it thereover; but said cutter-holder may be arranged to swing in fixed bearings connected with the table D, and the cutter E be either permanently or adjustably centered relatively to the axial line of the wheel; or, again, the latter, if preferred, may be carried so as to be correspondingly adjustable relatively to the cutter.

The diamond or other cutter E is adjustable, as by a screw-thread on its shank, or otherwise, in a radial direction, within or through its holder, to vary the distance of its cutting point or edge from the axial line or center of the holder, and so to change the curvature of its cut.

In the operation of the machine it is only necessary, in order to effect a perfectly-true dressing of the wheel, both circumferentially and as regards the transverse curvature of its periphery, to swing the bail-like cutter-holder F by a handle, S, common to it and the cutter, after the latter has been brought over the center of the wheel backward and forward across the peripheral portion of the revolving wheel.

An emery-grinder thus dressed may be used to advantage in grinding the interior or bearing surfaces of journal-boxes, inasmuch as the same will be found perfectly true, and to conform, on its periphery, to the required curvature of the bearing; provided the point of the cutter be properly adjusted relatively to the axial line of the cutter-holder.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination, with the revolving shaft

or carrier B, by which the wheel or body to be dressed is rotated, of the cutter E and its swinging bail-like holder F, arranged in relation with the shaft or carrier B and with the wheel or body to be dressed, substantially as and for the purpose specified.

2. The diamond or other cutter E, adjustable in a radial direction within its bail-like holder F, in combination with the adjustable

bed D and revolving shaft or carrier B, having its axis in a plane which intersects the axial line of the cutter-holder, essentially as described.

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Witnesses:

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