

P. D. CUMMINGS.
Grinding-Machines.

No. 145,488.

Patented Dec. 16, 1873.

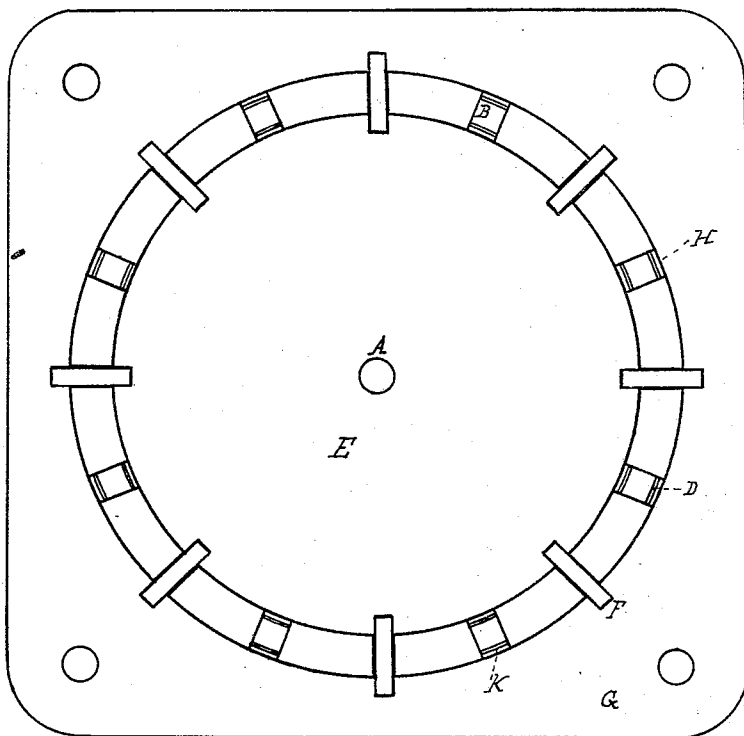


Fig. 1.

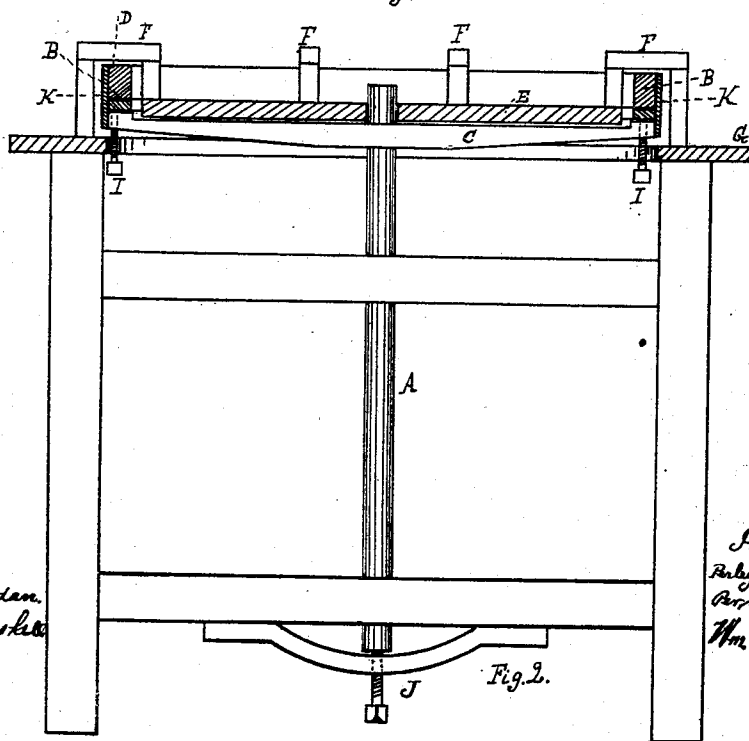


Fig. 2.

Witnesses:
Frank H. Jordan.
Edwin H. Black.

Inventor:
P. D. Cummings
Per. atty.
Wm. Henry Clifford.

UNITED STATES PATENT OFFICE.

PERLEY D. CUMMINGS, OF PORTLAND, MAINE.

IMPROVEMENT IN GRINDING-MACHINES.

Specification forming part of Letters Patent No. **145,488**, dated December 16, 1873; application filed August 25, 1873.

To all whom it may concern:

Be it known that I, PERLEY D. CUMMINGS, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Grinding-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a top plan. Fig. 2 is a side elevation in section.

Same letters show like parts.

The object of my invention is to produce a machine for grinding tools, iron, wood, and other substances. It consists of a rim or annulose wheel rotating upon a proper shaft, in combination with supports or brackets and an outer rim or band. It also consists of the combination of the rim-wheel with an inner bed or table.

In the drawing, A shows the shaft of the grinding-wheel. B is the annular wheel. C are supports, extending from the shaft A out to the grinding-rim B, imparting the rotation of the shaft to the wheel and supporting the wheel.

The advantage of my improved form of grinding-wheel is, that tools, wood, or any metals can be ground or reduced to pulp or powder on it by application either to the top edge D or to the outer or inner periphery.

E is a suspended bed or table within the annular wheel B. The purpose of this table is that articles to be operated upon may be applied to the grinding-wheel as well upon its inner periphery as upon its top edge. With this table so placed it is plain that the inner periphery and top edge may be both used at the same time. It is supported by brackets F, rising from a stationary flooring, G, passing up over the wheel, and secured to the suspended bed or table. H show spaces or boxes in and through which to place or insert the articles to be ground on the top edge of the wheel.

When the articles are applied to the inner periphery to be ground, proper braces or levers can be used on the suspended bed or table to keep the articles in contact with the inner periphery of the grinding-wheel D.

When placed under the floor of a shop or factory, this form of wheel or grinding-stone can be covered when not in use, and by lifting a trap or other arrangement be exposed when desired.

The wheel or grinding-surface D will wear away when used on the top edge. By the regulating-screws I, the rim-wheel or grinding-stone can be raised as it wears away. The shaft A can be, in the same manner, set up by the screw J working through the step of the shaft.

K is an exterior band or tire encompassing D, to strengthen it and prevent its flying apart when it is in revolution.

Rotation can be produced by gears or other convenient means of imparting power.

I do not claim placing the cutting or grinding wheel in a horizontal position; neither do I claim any other form of wheel except the annular. I disclaim any grindstone like that set forth in Patent No. 12,820, May 8, 1855.

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

1. The annular wheel or grinder D, having the supports C, band K, and rotated upon the vertical shaft A, in the manner herein described, so as to be capable of use both upon the top edge and inner periphery thereof.

2. In combination with the annular wheel D, supports C, and band K, as described, the suspended table E and brackets F, rising from the fixed flooring G, as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of August, 1873.

PERLEY D. CUMMINGS.

Witnesses:

WM. HENRY CLIFFORD,
C. F. WASHBURN.