

945,499.

Patented Jan. 4, 1910.

FIG. 1

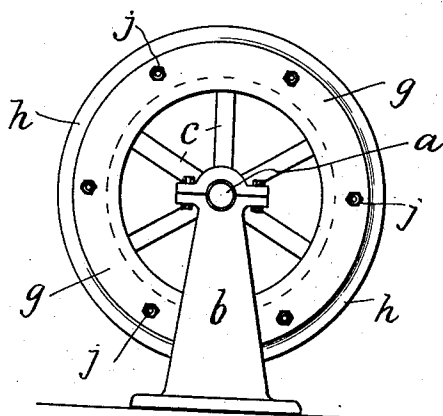


FIG. 2

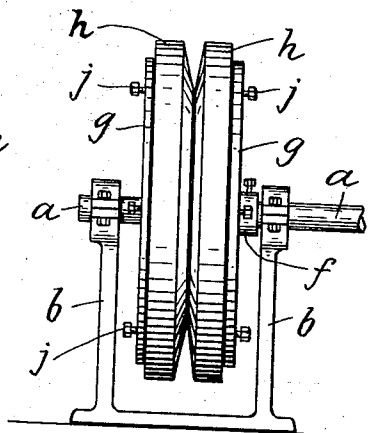
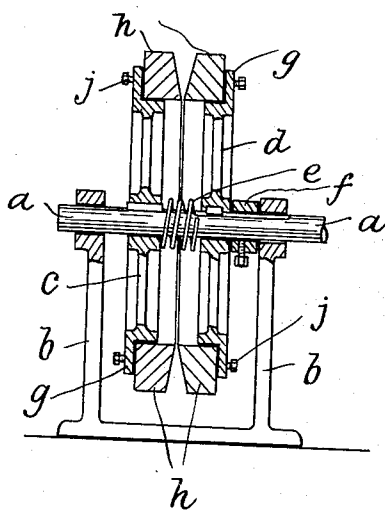


FIG. 3



WITNESSES;

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JOHN STURTRIDGE DREADON, OF MITITAI, NORTHERN WAIROA, NEW ZEALAND.

GRINDSTONE.

945,499.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed November 20, 1908. Serial No. 463,632.

To all whom it may concern:

Be it known that I, JOHN STURTRIDGE DREADON, subject of the King of Great Britain, residing at Mititai, Northern Wairoa, New Zealand, have invented a new and useful Improved Grinding Device; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention consists in an improved construction of that class of device in which provision is made for both sides of a bladed instrument being ground at the one time, but which may also be used in the ordinary way.

According to this invention, suitable grinding material, which may be of stone or of other approved nature, is secured within the periphery of two wheels mounted upon a shaft adjacent to each other, in such a manner that the adjacent surfaces of the grinding material will be in juxtaposition and revolve together. These surfaces are tapered inward so that the two together form a wedge shaped opening into which the tapered edge of a tool is adapted to fit in order that both faces of the tool may be ground.

One wheel is fixed on the shaft, while the other is made free to slide to and fro on it, while being arranged to rotate therewith. Means are provided whereby the position of the movable wheel may be varied with regard to the fixed wheel in order that the width of the opening between the grinding faces may be regulated.

The construction of the invention is illustrated in the accompanying drawings, in which,—

Figure 1 is a side elevation. Fig. 2 an end elevation, and Fig. 3 a cross sectional elevation of the grinding device.

The shaft *a* is carried horizontally in suitable bearings upon standards *b* and provided with any approved means by which it may be revolved. Upon the shaft are mounted the wheels *c* and *d*, the wheel *c* being firmly keyed to the shaft, while the wheel *d* is mounted upon a feather key in order that it may be moved to and fro along the shaft. A spring *e* is placed around the shaft between the two wheels, and bears outward against the bosses thereof in order

to normally press the two wheels apart. A collar *f* is mounted upon the shaft *a* outside the wheel *d* by means of which the wheel *d* may be kept at any desired distance apart from the wheel *c*.

The outer periphery of each wheel is formed with a side flange *g* on its outer edge, so as thus to provide a receptacle to receive the grinding material *h* which may be of any approved material, such as blocks of stone or emery compositions, shaped to fit around the wheel's periphery. The adjacent surfaces of the grinding material carried on both wheels will thus be in juxtaposition, and the distance between them may be regulated by varying the position of the wheel *d* upon the shaft. These adjacent surfaces will be tapered as shown in the drawings, so as to provide the wedge shaped opening between them into which the edge of the tool to be ground may be placed so that it may be acted upon by the grinding surfaces on both sides.

Set screws *j* are screwed through the side flanges *g* and bear against the grinding material *h*. By means of these screws, any wear upon the inner grinding faces may be compensated for and the opening between such faces, adjusted.

The outer peripheries of the grinding material *h* may be used for grinding in the usual manner.

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

In a grinding device, a pair of relatively-separable wheels each having an edge flange, blocks of grinding material secured around the periphery of each wheel, with those on one wheel normally in juxtaposition to those on the other, and set screws at intervals passing through the flange of each wheel and bearing against the blocks of grinding material, in combination with means connected with both wheels for rotating the same in unison.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

JOHN STURTRIDGE DREADON.

Witnesses:

E. GRUBE-SMITH,
E. F. COURTNEY.