

(No Model.)

T. B. DOOLEY.
GRINDING MACHINE.

No. 522,155.

Patented June 26, 1894.

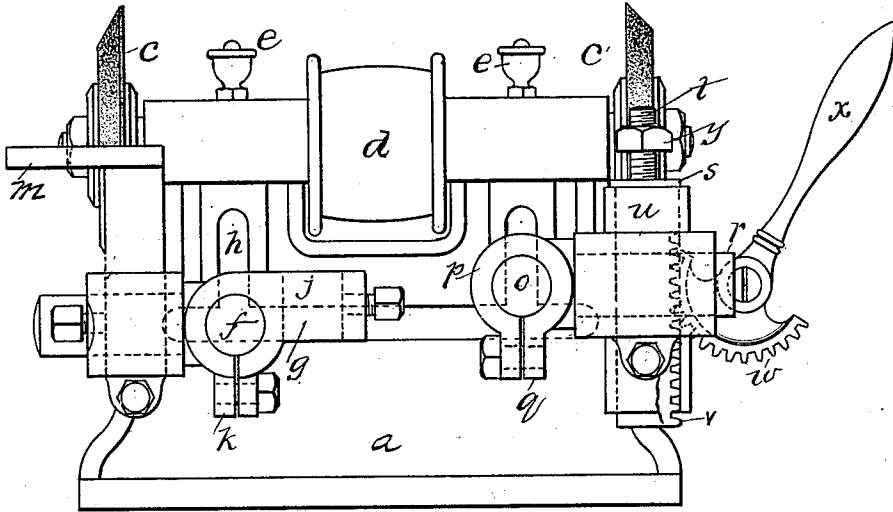


FIG. 1.

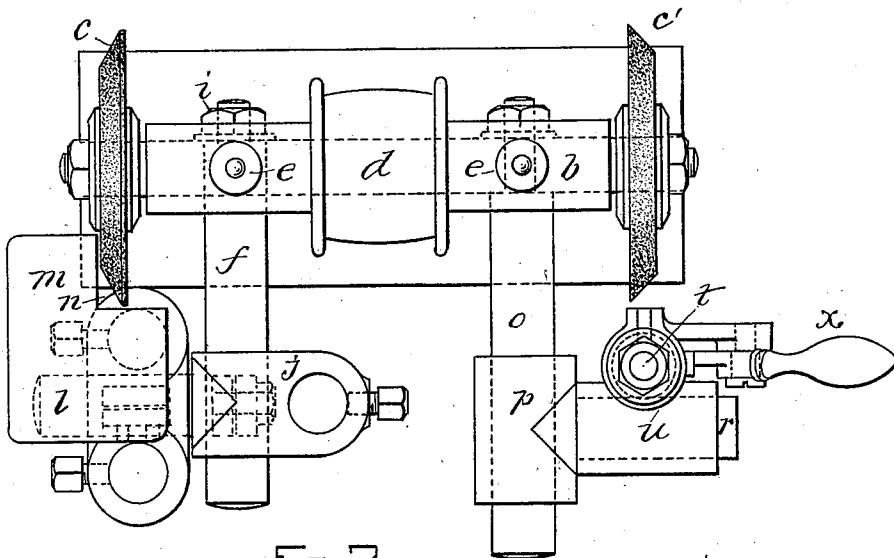


FIG. 2.

WITNESSES:

W. W. Jackson
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INVENTOR:

by Thos B. Dooley,
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attys.

UNITED STATES PATENT OFFICE.

THOMAS B. DOOLEY, OF MELROSE, ASSIGNOR TO E. BAKER WELCH, OF CAMBRIDGE, AND JOSEPH MIDDLEBY, JR., OF MALDEN, MASSACHUSETTS.

GRINDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 522,155, dated June 26, 1894.

Application filed October 9, 1893. Serial No. 487,614. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. DOOLEY, of Melrose, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Grinding-Machines, of which the following is a specification.

This invention has relation to machines for grinding blades and cutters; and it has for its object the provision of such improvements as will enable articles of the kind mentioned to be ground on any desired line or bevel, and to effect absolutely uniform work.

To these ends the invention consists of the improvements which I will now proceed to describe and claim.

Reference is to be had to the annexed drawings and to the letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings—Figure 1 is a front elevation of my improved grinding machine. Fig. 2 is a top plan view of the same.

In the drawings—*a* is the frame of the machine which may be made of any desirable material and strength, which supports a rotary shaft *b*, mounted in suitable bearings, on the ends of which are affixed emery or other grinding wheels *c c'*.

d is a pulley on the shaft *b* by which the latter may be rotated, and *e* designates oil cups for lubricating the shaft in its bearings.

f designates a rod constructed at its inner end so that it may be moved to any desired point in the horizontal slot *g* or vertical slot *h* and fixedly secured therein by a nut *i* turned thereon.

j is a bracket-like part adjustably secured on the rod *f* by a pinch collar *k*.

l, see dotted lines in Fig. 2, is a rod or stud secured at its inner end to the bracket-piece *j*, and supporting upon its outer end a table or bed *m* which is adjustably connected with the stud *l* by a pinch collar or set screw, or any other suitable way. The bed *m* is arranged opposite the grinding wheel *c* as shown, and is cut away at one point as at *n*, so that the said bed may extend to the side of the grinding wheel as well as to the front of the same.

By the construction and arrangement of parts shown and described, it will be seen that the bed *m* may be adjusted close to or farther from the grinding wheel *c*, and that it may be raised or lowered, or tipped to any angle so that a blade or cutter placed upon the bed *m*, after it shall have been adjusted as desired, may be ground at any angle required and a series of blades, after adjustment is effected, can be ground so that all shall have a uniform bevel.

At the opposite side of the machine an arrangement somewhat similar to that just described is effected, that is to say, on a rod or shaft *o* connected with the frame similar to shaft *f* there is a bracket-like piece *p*. Secured on the rod *o* by means of a pinch collar *q*, and connected with the bracket piece *p*, is a rod or stud *r* which adjustably supports a cutter supporting bed *s*, so that said bed *s* may be tipped to any desired angle, and adjusted to and from the grinding wheel *c'*, all as will be clearly understood from the description thus far given. The cutter bed *s* is supported on a bolt or bar *t* which is adapted to move vertically in the bracket part *u* on the stud *r*. The said bar *t* is provided with rack teeth *v* with which a toothed segment *w* engages, said segment being fulcrumed on a stud connected with the bracket part *u* and provided with a handle *x*, so that by moving the said handle the bar *t* may be raised or lowered.

In use the cutters may be placed upon the bolt *t* and clamped between the bed *s* and the nut *y*. After the said bed has been adjusted to the desired angle, the cutter clamp as aforesaid, may be moved up against the grinding wheel *c'*, and by operating the handle *x* ground as desired, and when the bed *s* is once adjusted, a series of cutters may be ground all having the same bevel, and with uniform depth of cut in their faces.

By the means described it will be observed that any form of cutter or blade may be ground on my improved machine with any desired bevel or inclination of grinding face.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which

it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A grinding machine comprising in its construction a rotary shaft provided with a
5 grinding-wheel, a frame in which said shaft is journaled, a rod or shaft adjustable in said frame, a bracket-piece adjustable on said rod,
a stud adjustably connected with said bracket-piece, and a cutter or blade support adjust-
10 ably connected with said stud, as set forth.

2. A grinding machine comprising in its construction a rotary shaft provided with a grinding-wheel, a frame in which said shaft is journaled, a rod or shaft adjustable in said

frame, a bracket-piece adjustable on said 15 rod, a stud adjustably connected with said bracket-piece, a vertically movable cutter or blade support adjustably connected with said stud, and mechanism for moving said cutter or blade support vertically, as set forth. 20

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 12th day of September, A. D. 1893.

THOMAS B. DOOLEY.

Witnesses:

ARTHUR W. CROSSLEY,
A. D. HARRISON.