

J. L. OTIS.
Machine for Dressing Castings.

No. 159,526.

Patented Feb. 9, 1875.

Fig. 1.

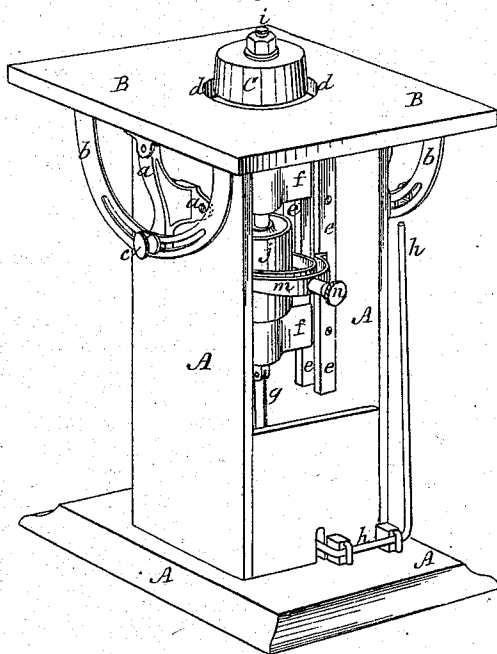


Fig. 2.

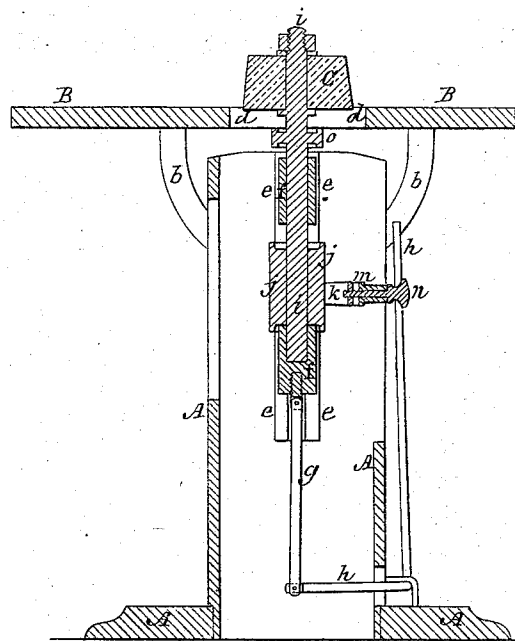
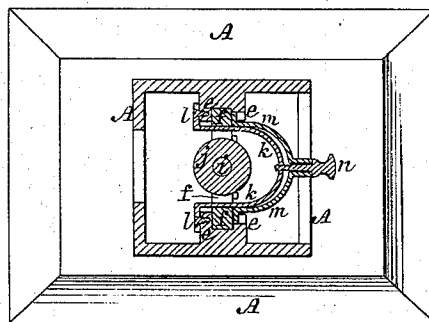


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN L. OTIS, OF LEEDS, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR DRESSING CASTINGS.

Specification forming part of Letters Patent No. **159,526**, dated February 9, 1875; application filed January 4, 1875.

To all whom it may concern:

Be it known that I, JOHN L. OTIS, of Leeds, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Machines for Dressing Stove-Plates and other Castings; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents the machine in perspective. Fig. 2 represents a vertical section through the same, and Fig. 3 represents a horizontal section through the clamping mechanism.

My invention relates, first, to the combination of a vertically-adjustable grinding head or wheel with a laterally-adjustable table, through which the head or grinding-wheel projects when said table is pivoted at points above the top of the supporting stand or column, so as to rise or fall above or below a plane through the wheel on both of the opposite sides of said wheel, as will be explained.

My invention further relates to the combination of a rotating grinding-wheel on a vertical spindle, by which it is driven, both the wheel and spindle being supported in a gate, by which, through a lever or its mechanical substitute, said gate, spindle, and wheel can be raised or lowered at pleasure with the clamping mechanism, by which they are held at any suitable height, as will be explained.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A is a base, stand, or column, to the top of which, and opposite sides thereof, are secured brackets or supports *a*, which project above the top of the stand or column A, and to the tops of which brackets the table B is pivoted, so that said table may tip or incline in two directions, and, to a certain extent, without coming in contact with the stand. Slotted arcs *b* are fastened to the under part of the table, through which set-screws *c* pass into the lower part of the brackets, respectively, by means of which the table may be held in any desired position that the special work to be done may require. Through the table B there

is an opening, *d*, to admit of the grinding head or wheel passing through it. Within the stand or column A, and between guides *e e* therein, a gate or frame, *f*, is placed, and from the lower end of this gate or frame a pitman, *g*, extends downward, and is pivoted to a bent lever, *h*, which extends upward into convenient position to be grasped and operated by the attendant on the machine. In the cross-heads of the gate or frame *f*, by suitable bearing-boxes, is supported a spindle, *i*, having a drum or band-wheel, *j*, upon it, around which a belt from any first-moving power passes, to rotate said spindle, and upon the top of this spindle, which projects up through the opening *d* in the table, is placed the grinding head or wheel C, by preference made of emery in the well-known way, and of a form suitable for the special work to be done. This head or wheel is removable, so that it may be replaced by another at any time. A bow, *k*, is fastened to the guides or stand, as at *l*, and extends around to the position occupied by the attendant on the machine; and a second bow, *m*, the feet of which press against the sliding gate *f*, is parallel, or nearly so, to that *k*, and is in near proximity to the latter, while a set or clamp screw, *n*, passes into or through both bows, so as to draw the one, *m*, tight up against the gate *f*, to hold it in any fixed position.

By releasing the clamp-screw the operator may, by means of the lever *h*, raise or lower the grinding head or stone *c*, through the opening *d* in the table, to any desirable position, and then, by running up said tightening-screw, hold the head, stone, or grinding-wheel in that position, the object being to change the grinding-surface, and so cause the grinding-wheel to wear evenly and uniformly. The top of the stand A is beveled or rounded off in the direction in which the table swings, so that the table may be set at such angle or inclination in relation to the grinding-surface as the character of the work to be done may require. A collar, *o*, is fastened to the spindle *i*, to prevent the latter and the grinding-wheel it carries from dropping too far. The table B is so hung by its pivotal connections that, when horizontal, as seen in Fig. 2, it is above the top of the stand or column A, and this admits

of the table being inclined to either the right or left of the vertical axis of the wheel, and thus almost any edge or part of the plate or casting to be dressed may be conveniently and fairly brought against the grinding-surface.

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

1. The combination of the vertically-adjustable grinding-wheel C with the table B, pivoted above the top of the supporting-stand, so that said table may be adjusted or inclined to the right or to the left of the vertical axis of

the grinding-wheel, as and for the purpose described and represented.

2. In combination with the vertically-sliding gate or frame *f*, by which the grinding-wheel is supported and raised or lowered, the clamping mechanism *k m n*, for holding said gate or wheel in its adjusted position, as and for the purpose described.

JOHN L. OTIS.

Witnesses:

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