J. T. BECKWITH.

Device for Leveling and Tramming Millstones while at Work.

No. 203,878. Patented May 21, 1878.

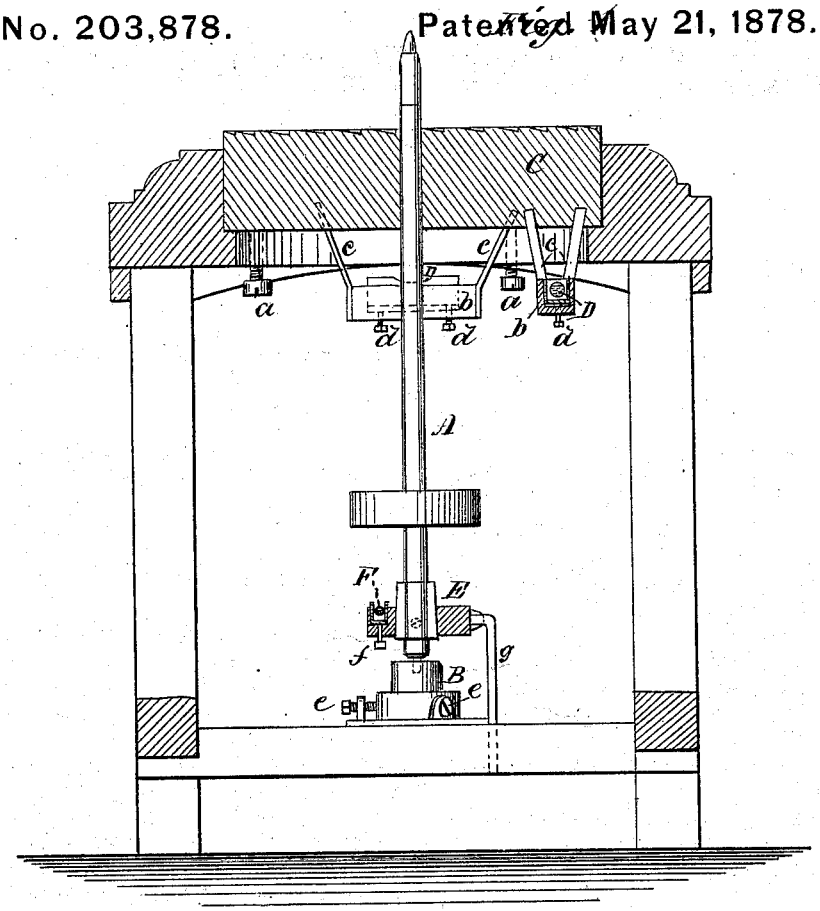
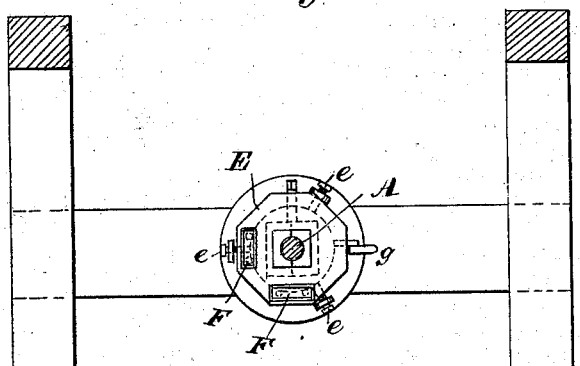


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES T. BECKWITH, OF CAMERON MILLS, NEW YORK.

IMPROVEMENT IN DEVICES FOR LEVELING AND TRAMMING MILLSTONES WHILE AT WORK.

Specification forming part of Letters Patent No. **203,878**, dated May 21, 1878; application filed November 10, 1877.

To all whom it may concern:

Be it known that I, JAMES T. BECKWITH, of Cameron Mills, in the county of Steuben and State of New York, have invented a new and Improved Device for Leveling and Tramming Millstones, Buckwheat and Rice Hullers, and Granulating-Mills while at work, of which the following is a specification:

Figure 1 is a vertical section of a portion of a mill, showing the application of my improvements. Fig. 2 is a horizontal section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to provide a means for leveling millstones, hullers, scourers, &c., expeditiously and accurately while at work.

The invention consists in combining, with a mill-spindle, two spirit-levels and an adjustable step, so that the spindle and stone may be regulated while the mill is running.

In the drawings, A is a mill-spindle, which is journaled at its lower end in an adjustable step, B, and extends upward through the lower stone C, in the usual way.

The lower stone is supported upon adjusting-screws *a*, and two spirit-level bulbs, D, properly incased, are placed in recessed bars *b*, which are suspended from the under surface of the stone by the hangings *c*. The bars *b* are provided with screws *d*, for adjusting the level-bulbs. These bulbs are arranged at right angles to each other, and parallel with the upper surface of the stone, so that when the face of the stone is properly leveled by a level resting thereon, these bulbs D are to be adjusted by turning the screws *a* until a level is indicated by the position of the air-bubble in the bulbs D, to correspond with said leveling of surface, and afterward serve as a guide to show variation, and to level the face of said surface while at work.

The spindle-step B is adjusted laterally by screws *e*, which pass through ears formed on the step-support and bear against the sides of the step.

Upon a sleeve on the spindle A a disk or plate, E, is placed, the said sleeve being fitted to the spindle, so that the spindle may revolve, while the sleeve and disk are prevented from turning by the stop *g*.

In recesses formed in the upper surface of the disk, two spirit-level bulbs, F, each inclosed in a metallic casing, are placed at right angles to each other, and parallel to the plane of rotation of the spindle. Adjusting-screws *f* pass through the disk to adjust the level-bulbs F.

The spindle is first to be trammed to the face of the stone. After it is properly trammed, the level-bulbs F are to be adjusted by set-screws *f*, to indicate the level parallel to the plane of rotation of the spindle, and afterward serve as a guide to tram or plumb the spindle by adjusting the foot of spindle until level-bulbs F indicate a true level, thus plumbing the spindle while in motion or at work.

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

The combination, with a mill-spindle, of a surrounding plate, E, containing two spirit-levels, F, and an adjustable step, B, as and for the purpose specified.

JAMES THOMPSON BECKWITH.

Witnesses:
WM. CRAWFORD,
N. HYDE.