H. WILHELM & S. F. LEYDE.

MILL BURR FURROW GAUGE.

No. 170,143. Patented Nov. 16, 1875.

Fig. 1

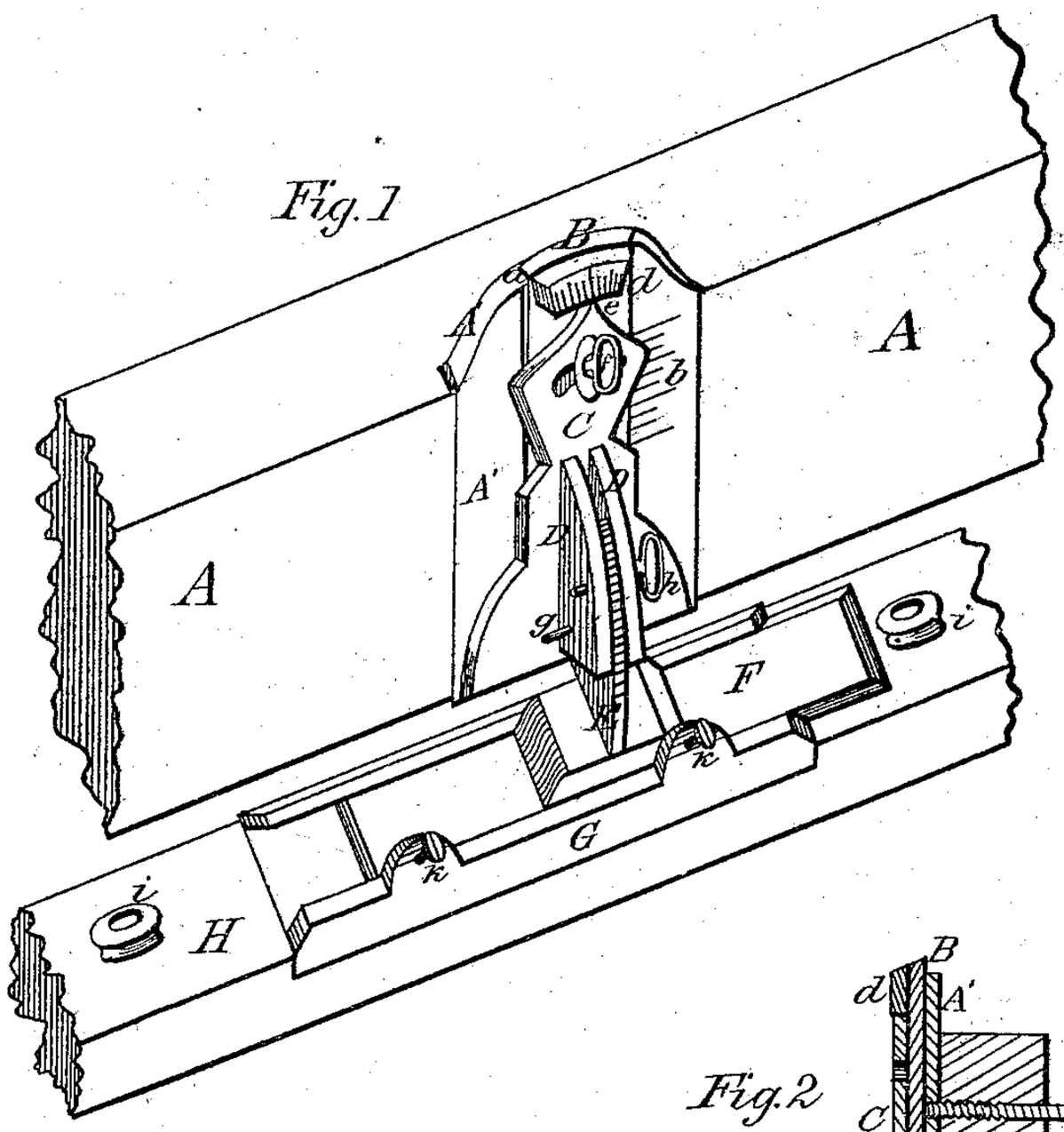


Fig. 2

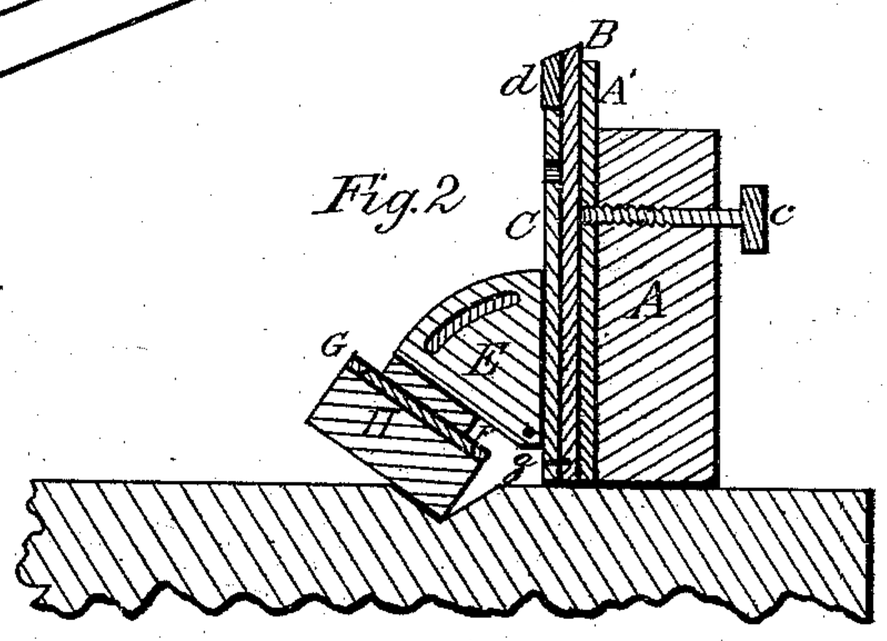
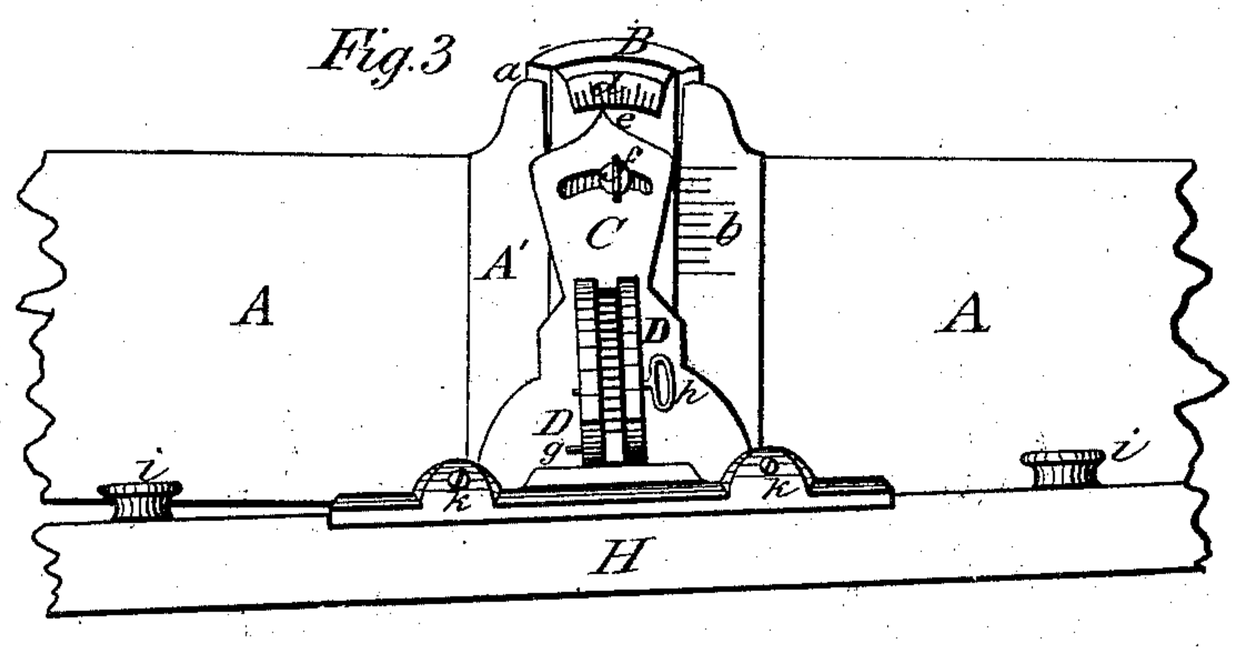


Fig. 3



Attest:
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UNITED STATES PATENT OFFICE.

HENRY WILHELM AND SALATHIEL F. LEYDE, OF MINERVA, OHIO; SAID LEYDE ASSIGNOR OF ONE-HALF HIS RIGHT TO JOHN F. LEYDE.

IMPROVEMENT IN MILL-BURR FURROW-GAGES.

Specification forming part of Letters Patent No. **170,143**, dated November 16, 1875; application filed September 21, 1875.

To all whom it may concern:

Be it known that we, HENRY WILHELM and SALATHIEL F. LEYDE, of Minerva, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Mill-Burr Furrow-Gages; and we do hereby declare that the following is a full, clear, and exact description thereof, which 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, and in which—

Figure 1 is a perspective view. Fig. 2 is a vertical section of a burr-millstone, showing the application of our gage or guide; and Fig. 3 is a front view.

Similar letters of reference indicate corresponding parts in all the figures.

This invention consists in the construction and arrangement of a gage or guide for ascertaining the depth, pitch, and angle of the furrows in a burr-millstone; and its object is to enable those engaged in furrowing millstones to produce furrows of exactly the same depth, pitch, and angle, this being of the utmost importance, in order that the burr may run true and do perfect work.

In the drawing, A represents a level, made of wood or other suitable material, the under side of which must be perfectly true and even. A′ is a metal plate, having a dovetailed slot, *a*, and a scale, *b*, engraved on one side of the slot. B is a metallic plate, that slides in the slot *a*, and may be retained in any given position by a set-screw, *c*, inserted through the back of level A. At the top of plate B is a scale, *d*, and to the lower part of this plate is pivoted another plate, C, the top of which forms a point or indicator, *e*. The plate C may be retained in any suitable position in its relation to plate B by means of a set-screw, *f*. To the bottom of plate C are affixed, at right angles, the segments D, which form jaws or bearings for the graduated segment E, pivoted at the center of the arc at *g*. The graduated segment E may be secured in any given position in its relation to the bearings D by a set-screw, *h*. To one side of the segment E is affixed, at right angles, a metallic plate, F, that slides in a dovetailed plate, G, that is affixed upon, or sunk into, the sliding staff H. *i i* are finger-knobs, by which the staff H may be moved upon the plate F. It may be retained in any given position upon this plate by means of set-screws *k k*.

The manner of using this device is as follows: The level A is placed upon the smooth part of the millstone alongside of the furrow already cut. The set-screws *c f h k* are then loosened, and the staff H is allowed to drop into the furrow until its lower edge touches the bed thereof. All the set-screws are then again tightened, when the position of the staff H will indicate the exact depth, pitch, and angle of the furrow. In cutting the next furrow it is gaged during the process of cutting by placing the level A upon the top of the stone, next to the furrow, loosening the set-screws *k k*, and sliding the staff H up or down through the furrow as it is being cut. In other words, the vertical motion of the plate B will denote upon the depth-scale *b* the exact depth of the furrow, and as every furrow is deeper at the eye or bosom of the burr than at the circumference, the point *e* of the oscillating plate C will denote the pitch of the furrow upon the pitch-scale *d*. The segment E will, by its gradations, indicate the exact angles of the walls or sides of the furrow, while the operation of "staffing" or gaging the furrow may be done without moving the level A simply by sliding the staff H along the sliding plate F.

Having thus described our invention, we claim and desire to secure by Letters Patent of the United States—

The device for gaging the furrows in burr-millstones herein described, consisting of the level A, sliding plates B and F, oscillating plate C, having the jaws D D and graduated segment E pivoted thereto, staff H, and set-screws *c f h k*, all combined and arranged substantially as and for the purpose hereinbefore set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

HENRY WILHELM.
SALATHIEL F. LEYDE.

Witnesses:
C. LAUTZENHEISER,
JAMES JEROME.