

E. ARMITAGE.
OSCILLATING BED-STONE.

No. 170,325.

Patented Nov. 23, 1875.

Fig. 1

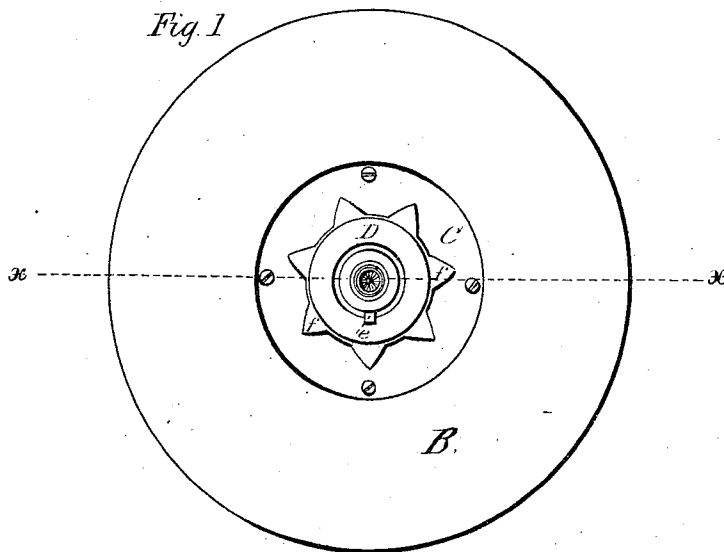


Fig. 2

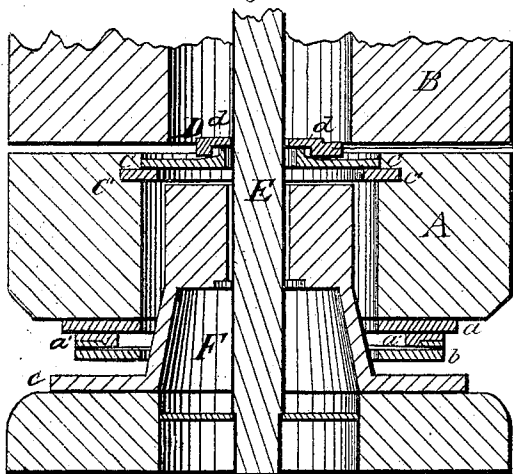


Fig. 4

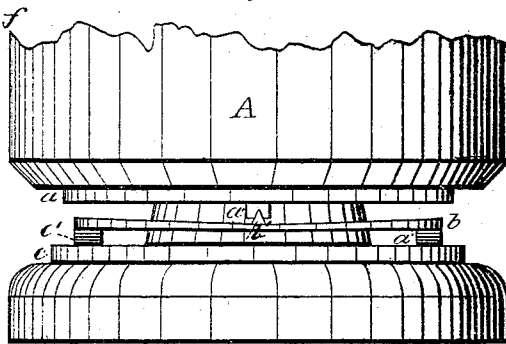
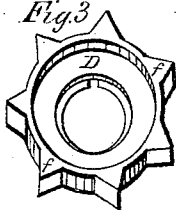


Fig. 3



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN OSCILLATING BED-STONES.

Specification forming part of Letters Patent No. **170,325**, dated November 23, 1875; application filed September 6, 1875.

To all whom it may concern:

Be it known that I, EDWARD ARMITAGE, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Oscillating Bed-Stones; and I 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 top plan of a bed-stone, provided with my improvement. Fig. 2 is a vertical transverse section after the line indicated by *x x* in Fig. 1. Fig. 3 is a perspective view of the under side of the covering-plate, and Fig. 4 is a side elevation, showing the universal joint, upon which the bed-stone rests.

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

This invention relates to that class of bed-stones that rest upon a so-called "universal joint," or some other similar device, by which they are enabled to oscillate freely in all directions; and it consists in providing the covering-plate or dust-excluder, which surrounds and is attached to the spindle in such a manner as to cover the eye of the bed-stone with a series of projecting wings or clearers, as and for the purpose hereinafter more fully explained.

In the drawing, A represents the bed-stone, and B is the upper stone. The bed-stone has an annular ring or plate, *a*, affixed to its bottom, which has two notched bearings, *a'*, placed diametrically opposite to each other. The bearings *a'* rest upon knife-edges *b'*, which are placed diametrically opposite each other upon the oscillating ring *b*, which again rests upon the knife-edges *c'* of the bottom plate *c* that surrounds the foot or bases of the bush F. By this arrangement a universal oscillating motion is imparted to the bed-stone. This bed-stone has a central depression surrounding

the eye, into which is cemented, or otherwise secured, an annular metallic ring or plate, *O'*. To this is again secured, by screws or otherwise, a metal plate, *C*, having a central opening surrounded by a raised web or flange, *d*. The opening in plate *C* must be sufficiently large to admit of the free oscillation of the bed-stone in all directions. *D* is a metallic plate, having a central opening corresponding to the diameter of the spindle *E*, to which it is firmly keyed by a pin, *e*, so as to rotate with it. This plate has a series of circumferential projecting wings, *f*, and has an annular depression or recess on its under side, as shown in Fig. 3. This hollow or recess must be of such a size that it will enable the raised flange *d* of the plate *C* to oscillate freely within it during the rotation of the spindle *E* and covering-plate *D*.

It will be observed that by this arrangement, ingress of grain, flour, or dust into the space between the spindle and eye of the bed-stone is effectually prevented, and leakage of the flour made impossible. The wings *f* of the plate *D* will, as it rotates, distribute the grain or flour, as it accumulates near the center, out toward the periphery of the bed-stone, and thereby prevent the grain or flour from entering into the space between the top of plate *C* and the under side of plate *D*, at the same time causing it to be more uniformly distributed over the surface of the bed-stone.

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

The cap or dust-excluder *D*, provided with the projecting wings or clearers *f*, substantially as and for the purpose herein shown and specified.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

EDWARD ARMITAGE.

Witnesses:

E. S. WEST,
WM. ORR.