

UNITED STATES PATENT OFFICE.

EDWARD L. McCLAIN, OF GREENFIELD, OHIO.

COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 419,701, dated January 21, 1890.

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To all whom it may concern:

Be it known that I, EDWARD L. McCLAIN, a citizen of the United States, residing at Greenfield, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Coffee-Mills; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the annexed drawings, which form part of this specification.

My invention comprises certain specific improvements in the construction of hand coffee-mills, the details of said improvements being hereinafter more fully described, and pointed out in the claims.

In the annexed drawings, Figure 1 is a vertical section of a coffee-mill embodying my improvements, said section being taken in the plane of the handle and the hopper being closed by its swing-lid. Fig. 2 is a plan of the mill, its shaft and shaft-bearing being sectioned transversely and the position of the operating-crank being indicated by dotted lines.

A is the mill-hopper, having at bottom any approved form of concave *a* and at top an annular flange B, resting upon the cover C of mill-box D, the latter being provided with a customary door and a suitable receptacle for the ground coffee.

E is the dome-shaped hopper-cover, having at its base an annular flange *e*, of practically the same shape and size as the hopper-flange B, which flanges B *e* are secured together and also fastened to the mill-box by screws *b*. This fixed cover E extends a little more than half-way over the hopper A and has at its center a neck F, screw-threaded internally, as at *f*, to engage with the external thread *g* of a tubular bearing G, the smooth longitudinal bore of which H is traversed by the shaft I, having a grinder *i* at its lower end. Furthermore, the screw *g* of shaft-bearing G has a left-hand thread, for a purpose that will presently appear.

J is a customary swing-lid pivoted to the mill, as shown at *j* in Fig. 2.

K is a non-circular nut or collar on the upper end of the shaft-bearing G, which collar supports the hub *l* of the operating-crank L; but, if desired, a washer M may be interposed between said collar and hub. Hub *l*

is engaged with a screw-threaded shank *i'* of the shaft I, said screw *i'* being right-handed.

N is a cast handle integral with the cover E and having a base-plate *n*, which is perforated to admit one or more screws O, where-with said plate is fastened to the top of the mill-box. It is evident the handle N affords a convenient grasping device for holding the mill immovably when in operation, the grinding being effected by turning the crank L in the usual direction; but this turning of said crank will not loosen the shaft-bearing G, because its screw-thread *g* is left-handed. Therefore, after the feed of the mill has once been regulated there is no danger of it being accidentally disarranged.

To adjust the grinding-cone when occasion requires, the collar K is grasped with a suitable implement, and the shaft-bearing G is then screwed either up or down, so as to raise or lower the shaft I, and thus cause the grinder *i* to approach the concave *a* or to recede therefrom, the downward prolongation of said bearing affording an extended guide for said shaft, and thereby centralizing the latter within the hopper. Consequently the grinding-surfaces *a i* are caused to wear evenly.

I claim as my invention—

1. The combination, in a coffee-mill, of hopper A, having a concave *a*, the fixed hopper-cover E, having an internally-threaded neck F *f*, the longitudinally-adjustable shaft-bearing G H, engaged with said neck by the left-hand thread *g*, the shaft I, journaled in the bore H of said bearing and having at its lower end a grinder *i* and at its upper end a right-hand-threaded shank *i'*, and a crank L, having a screw-threaded hub *l*, engaged with said shank, all as herein described, and for the purpose stated.

2. In a coffee-mill, the hopper-cover E, having an integral handle N, provided with a perforated base-plate *n*, that rests upon the box-top C and is secured thereto by fasteners O, as herein described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD L. McCLAIN.

Witnesses:

H. N. NEWBECK,
J. F. WILSON.