(No Model.)

J. C. MILLIGAN & J. CHAUMONT.

COFFEE MILL.

No. 312,493. Patented Feb. 17, 1885.

Fig. 1

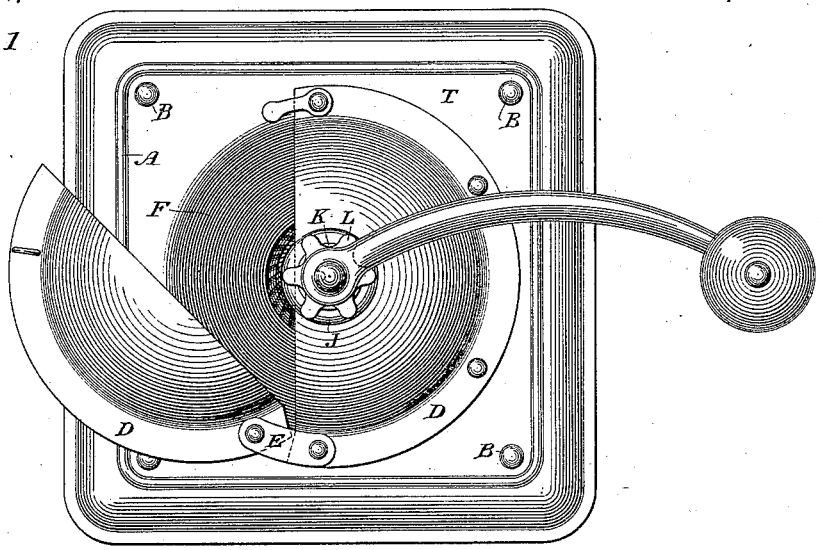


Fig. 3

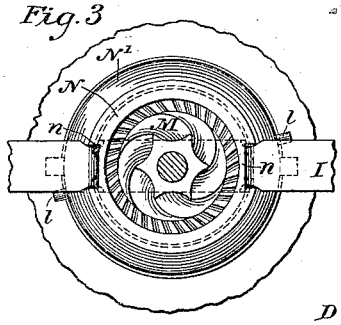
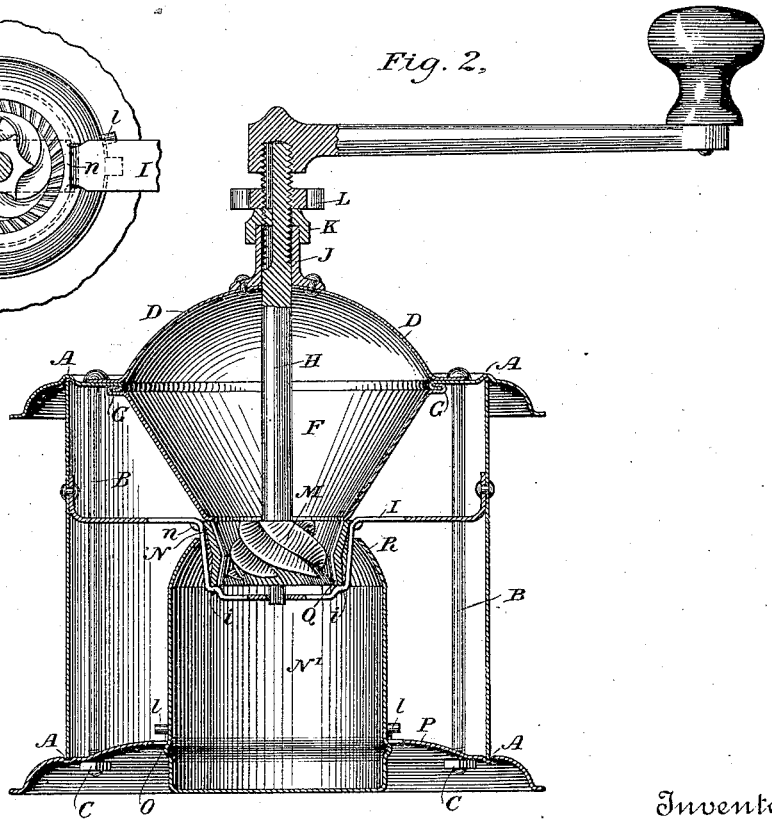


Fig. 2.



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UNITED STATES PATENT OFFICE.

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COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 312,493, dated February 17, 1885.

Application filed July 22, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN C. MILLIGAN and JULES CHAUMONT, citizens of the United States, residing, respectively, in Brooklyn, in the county of Kings, and in Woodhaven, in the county of Queens, both in the State of New York, have jointly invented certain new and useful Improvements in Coffee-Mills, of which the following is a specification.

Our invention relates to that form of coffee-mill, designed more especially for family use, in which the mechanism is inclosed in a box or case, with the crank-shaft for operating the same protruding from the top, and having a suitable receptacle beneath for receiving the coffee after being ground.

The object of our invention is to provide a neat substantial utensil, of simple construction, with the parts so arranged in relation to each other that no wastage shall occur during its use.

In the accompanying drawings, Figure 1 is a plan view showing the manner in which the lid is hinged and swung to one side for the purpose of allowing the coffee to be placed in the hopper beneath. Fig. 2 is a vertical transverse section, and Fig. 3, a horizontal transverse section, showing the grinding mechanism and the metallic strap supporting the crank-shaft.

The case is formed of sheet metal, preferably iron, the top and bottom parts containing grooves, as shown at A, into which the upper and lower edges of the sides enter, and are secured by the drawing together of the top and bottom by means of the four rods, B, which are provided with screw-threads and nuts for that purpose, as shown as C. The four sides are formed of one strip of metal bent at right angles at three corners of the case and the ends joined together at the fourth corner by being bent and soldered, or in any other suitable manner. The lid D is formed of two parts in the shape of a dome, one of which is hinged, as shown at E in Fig. 1, and the other part permanently riveted to the top plate, T. A circular hole is formed in the top plate, T, of the box, of suitable size to admit of the insertion of the hopper F, which is made of tinned sheet-iron, and to which it is attached at the edges by means of a lapped and folded joint, as shown at G. The crank-shaft H passes vertically through the center of this hopper, having its lower bearing upon the cross-bar I, which, being fastened to the sides of the case, not only acts as a strong support or brace thereto, but holds the outer portion of the grinding mechanism in place. This outer portion of the grinding mechanism rests upon the brace I at the points *i i*, and is held at its upper edge by means of the notches *n n* at opposite points in the rim N, Fig. 3, into which the brace I fits. The upper bearing of the shaft passes through the collar J, which is secured to the stationary part of the lid. Above the collar J is the movable bushing K, fitting loosely on the shaft, and bearing against the upper surface of this bushing is the nut L, which latter is provided with a thread corresponding to that upon the crank-shaft, as shown in the drawings. By means of this nut the shaft may be raised or lowered, and with it the grinder M, attached to its lower extremity, thus regulating the fineness of the product.

In the center of the bottom plate, P, is a circular hole of suitable size for the insertion of the movable receptacle N′, which has two lugs, *l l*, upon its exterior, so located as to pass through corresponding slots in the edge of the hole. Consequently when the vessel is inserted a proper distance and turned slightly in its position it is kept firmly in place, being prevented from entering too far by the annular bead O, raised in its surface. This receptacle is narrowed at its mouth, as shown at R, for the purpose of fitting closely to the grinding mechanism, and at such a distance above the delivery of the grinder at Q as to prevent any spilling and wasting of the product.

The advantages of this construction are lightness and durability, on account of its case being made entirely of sheet metal. By means of the four corner-bolts the mill can be taken apart and cleaned easily, and any portion can be repaired or replaced, if required. The tinned sheet-iron hopper is neater and lighter than when made of other material.

We are aware that a receptacle for ground

coffee has heretofore been made which was in part narrowest at its upper edge, and was arranged to inclose the grinding mechanism; but this device was provided with a valve, drawer, or other opening through which the ground coffee was removed. We do not claim such an arrangement, our ground-coffee receptacle being removed bodily to give access to its contents.

We claim as our invention—

1. In a coffee-mill, the combination, with a hopper and grinding mechanism located at the lower portion thereof, of a sheet-metal case consisting of top piece supporting said hopper, bottom, and side pieces, the rods B and the strap I, said strap serving to support the grinder and the lower portion of the shaft, substantially as described.

2. A coffee-mill having a sheet-metal case formed of the top piece, the hopper, the side portions formed in a single piece, the suitably-apertured bottom P, a receptacle, N′, extending through the aperture in the bottom, and the tie-rods B, substantially as described.

3. A coffee-mill having a hopper, a receptacle, a sheet-metal case consisting of the top piece formed with groove A for receiving the edges of the sides, side portions formed in a single piece, a bottom, P, apertured for the reception of said receptacle, and also provided with grooves A for receiving the edges of the sides, and suitable tie-rods, B, substantially as described.

4. In a coffee-mill, the combination, substantially as hereinbefore set forth, with the grinder and case, of the removable receptacle N′, adapted to be inclosed within said case, and having a narrow mouth encircling the grinding mechanism, and extending a suitable distance above the delivery, and a depending portion to receive and contain the ground coffee, as described.

5. In a coffee-mill, the combination, substantially as hereinbefore set forth, with the grinder and case, of the receptacle N′, adapted to be inclosed within said case, and having a narrow mouth encircling the grinding mechanism, and extending a suitable distance above the delivery, and also extending downward to contain the ground coffee, and means, as described, for fastening said receptacle within the case, substantially as described.

6. In a coffee-mill, the combination, with the plate P, having an aperture in its center, and suitable slots at the edge of said aperture, of the receptacle N′, having lugs *l*, adapted to pass through the slots in plate P, and a bead, O, for closing said aperture, as set forth.

7. In a coffee-mill, the combination, substantially as hereinbefore set forth, with the grinders and the case, of the receptacle N′, the mouth of which is directly beneath and inclosing the discharge-opening of said grinders, and means, substantially such as described, for permitting such receptacle to be inserted and withdrawn through the bottom of said case.

In testimony whereof we have hereunto subscribed our names this 10th day of July, A. D. 1884.

JOHN C. MILLIGAN.
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Witnesses:
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I. H. SMITH.