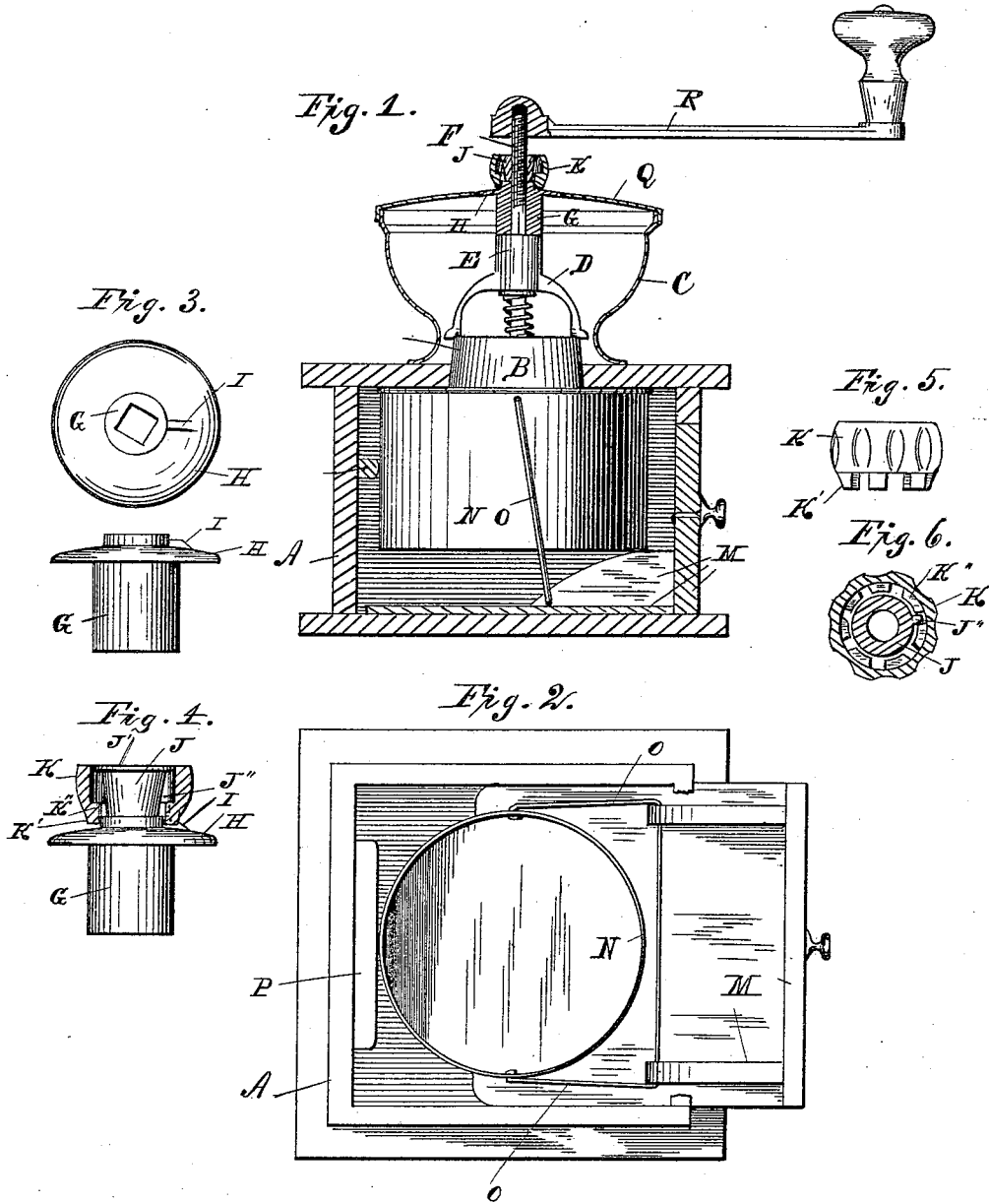


(No Model.)

C. MORGAN.  
COFFEE MILL.

No. 461,784.

Patented Oct. 20, 1891.



Witnesses:

*Edw. N. Berry,*  
*W. P. Wirtz*

Inventor:

*Charles Morgan,*

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*Attys.*

# UNITED STATES PATENT OFFICE.

CHARLES MORGAN, OF FREEPORT, ASSIGNOR TO THE ARCADE MANUFACTURING COMPANY, OF MADISON, ILLINOIS.

## COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 461,784, dated October 20, 1891.

Application filed March 26, 1891. Serial No. 386,523. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES MORGAN, a resident of Freeport, in the county of Stephenson and State of Illinois, 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, such as will enable others skilled in the art to which it pertains to make and use the same.

This invention relates particularly to means for causing all the coffee coming from the grinding mechanism to enter the receptacle provided to receive it, even though it be in a dust-like condition, and also to certain burr-adjusting devices and their connection with a portion of the hopper-cover.

In the drawings, Figure 1 is a partial central vertical section of the mill and box. Fig. 2 is a plan view of the box with the top removed. Figs. 3, 4, 5, 6, and 7 are detail views.

In the figures, A is a box whose outer walls are without novelty. In and upon the top of this box are fixed a grinding-shell B and a hopper C, the latter being crossed by a bridge D, which has at its middle an integrally-formed elongated bearing E for the spindle F of the grinding-cone. Upon this bearing rests a block G, having a non-cylindrical axial opening to fit the corresponding part of the spindle. Near the top of this block and a little above the plane of the upper edge of the hopper is an integrally-formed upwardly-convex disk H, having upon its upper surface a rib I. Upon the block G rests a nut J, that works upon the threaded upper part of the spindle and has at its upper limit a flange J' and upon one side a feather or rib J''. An outwardly-corrugated sleeve K loosely incloses the nut and has upon its lower side a series of teeth K' to engage the rib I upon the disk H. These teeth project within the inner wall of the sleeve, as lugs K'', and engage the rib J'', so that if the sleeve be rotated the nut must move with it. The sleeve may be raised until the lugs strike the flange J'. This disengages the rib I, but leaves the rib J'' still between the lugs. Now, since the block and its disk cannot turn upon the spindle, it follows that the nut cannot rotate upon the

spindle while the teeth engage the rib I, and hence that the vertical adjustment of the spindle is impossible; but if the sleeve be raised and rotated the nut turns upon the spindle and either raises or lowers it, thus adjusting the mill to grind to any desired degree of fineness. When the sleeve is again permitted to drop, its teeth again engage the rib I and the accidental variation of adjustment is prevented. The crank is provided with a threaded recess to receive the upper end of the spindle, and the depth of the recess is such that when the crank is screwed down to its lowest point the sleeve cannot be disengaged from the rib I, and hence no vertical adjustment of the burrs, accidental or otherwise, is possible until the crank be wholly or partially unscrewed. The cover Q of the mill, or the part of the cover ordinarily removed, is the continuation of the disk which forms a part of the cover, and is raised and slipped over the crank R when material is to be placed in the hopper, the central perforation usually occupied by the disk being large enough, so that it passes readily over the enlarged end of the crank, which is merely screwed upon the upper end of the spindle. With this construction all the parts except the crank are in operative position when the mill is packed for shipment.

The drawer M, sliding in the box below the mill proper, is not necessarily provided with the usual side and rear walls, but is provided with a distinct coffee-receptacle. (Shown in this instance as a metallic cup N.) The cup is provided with arms O, pivoted upon opposite sides near its top and pivotally secured at the other end to the bottom or to fixtures thereon. These arms then extend upward and rearward from the bottom, and when the drawer is pushed inward till a cup strikes a projection P upon the rear wall of the box, continued motion swings the cup upward by virtual rotation about the lower ends of the arms until it meets the top of the box, inclosing the grinding mechanism within its rim. The parts are so related that when the cup is at its highest point the face of the drawer is flush with the walls of the box and the arms are still inclined. As soon as the drawer be-

gins to move outward, gravity causes the cup to fall gradually until it again rests upon the bottom of the drawer. The cup is preferably non-detachable from the drawer. Evidently the vertically-adjustable cup serves the same purpose, whether it meets the top of the box, a sunk hopper, or the outer wall of the grinding-shell, and so, too, other constructions, whereby pressing the drawer inward also raises it so that the coffee is received from the burrs in a tightly-closed receptacle, are also within my invention.

What I claim is—

1. The combination, with a coffee-mill box and grinding mechanism mounted in the upper part thereof, of a coffee-receptacle sliding beneath said mechanism, and means whereby so sliding it shall at the same time raise it, substantially as set forth.

2. The combination, with a coffee-mill box and grinding mechanism mounted in the upper part thereof, of a drawer sliding into said box, a coffee-receptacle above the bottom of said drawer, and oblique arms having their ends pivoted, respectively, to the drawer and

to the cup at a point always above the lower pivot.

3. The box and the grinding mechanism mounted in the upper part thereof, combined with the drawer, the swinging cup, the oblique arms pivoted at opposite ends to the cup and the drawer, and the stop or projection fixed to the rear wall of the box in the path of said cup, substantially as set forth.

4. The combination, with the spindle and its fixed bearing, of the block sliding but not rotating upon the spindle, the rib upon the block, the feathered and flanged nut working upon the spindle, the sleeve inclosing said nut and engaging it and provided with teeth detachably engaging said rib, and the crank screwing upon the upper end of the spindle and preventing the raising of said sleeve.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES MORGAN.

Witnesses:

HENRY C. HYDE,

ALBERT BAUMGARTEN.