(No Model.)

C. TOBIAS.

COFFEE MILL.

No. 345,742. Patented July 20, 1886.

Fig. 1.

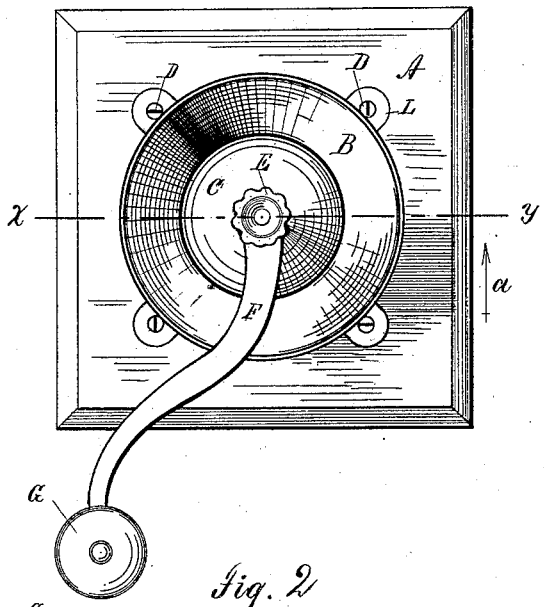


Fig. 2.

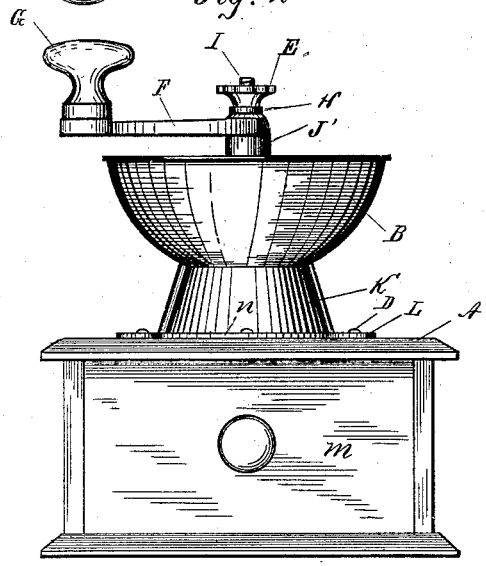


Fig. 3.

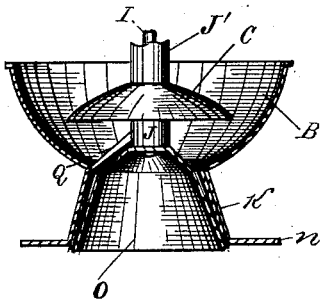


Fig. 4.

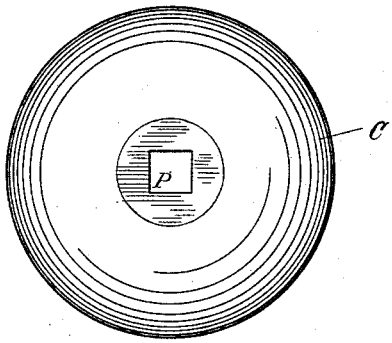
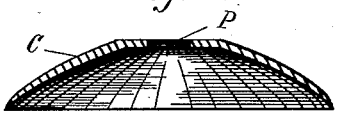


Fig. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CYRUS TOBIAS, OF FREEPORT, ILLINOIS.

COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 345,742, dated July 20, 1886.

Application filed June 8, 1885. Serial No. 168,041. (No model.)

To all whom it may concern:

Be it known that I, CYRUS TOBIAS, 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.

My invention relates to improvements in coffee-mills, and is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a plan of a coffee-mill embodying my improvement; Fig. 2, a front elevation thereof; Fig. 3, a view, partly in central vertical section and partly in elevation, of the working parts of the mill; Fig. 4, a plan of the shield C, whose use is hereinafter explained; Fig. 5, a central vertical section thereof.

In these views, A is the ordinary coffee-mill box, and *m* a drawer sliding through an opening in one of the sides thereof.

n is a base-plate resting on and fastened to the top of the box, and K is a frusto-conical shell formed integrally with the base-plate, and formed with grinding-teeth on its inner surface, or provided with a detachable grinding-shell fastened within it.

A hopper, B, is formed integrally with the shell K, or rigidly fastened thereto, and a vertical tubular bearing, J, is connected with the shell or hopper, or both, by means of integrally-formed radiating arms Q.

A grinding-cone, O, is suspended within the shell by means of a bolt, I, screw-threaded at its upper end, and squared for a sufficient distance below the threaded portion to receive the internally-squared hub, J′, of a crank, F.

A regulating-nut, E, engages the screw-threaded portion of the bolt, and serves as a means of raising or lowering the cone O.

Below the hub J′ and above the bearing J is a concavo-convex shield, C, having a square central opening, P, which conforms to the shape of the bolt I and turns with the bolt and the crank F. The concave face of the shield is downward, and the size thereof is such that its margin is outside of the line of junction of the upper margins of the shell and cone; or, in other words, the shield is a circle of greater diameter than that of the top of the frusto-conical shell. The office of the shield is to intercept any grains of coffee or spice thrown upward by the burrs in the process of grinding and prevent their escape from the hopper. It is evident that the tendency of any substance flying from the grinding-surfaces will be upward and generally inward, and the shield may thus be large enough to stop any such flying grains without in any way retarding the feed of coffee to the cone and shell.

It is not necessary that the relative proportions of the parts be the same as shown in the drawings; but I have found by experiment that the shield, as shown, is large enough to perform the work for which it is designed, and at the same time leaves ample space for the passage of coffee between it and the hopper.

I have shown and described the shield as having a square opening at the center, conforming to the square center bolt, I, whereby the shield is made to turn with the bolt and the crank F. This is evidently immaterial, however, since the operation of the shield is the same, whether it rotates or is stationary. I do not limit the shield, therefore, by fixing any particular and invariable form of connection with the center of the mill.

I am aware that certain grinding-mills heretofore patented have been provided with vertically-adjustable feed-regulating plates, somewhat similar in form to the shield shown herein; but in all the patented machines referred to the construction and arrangement of the operative parts was materially different from that of the improved coffee-mill constituting my invention.

Having now described and explained my invention, what I claim as new, and desire to secure by Letters Patent, is—

The coffee-mill shown and described, comprising a suitable box, the base-plate *n*, fastened to the box, and having the shell K, formed integrally with it, the hopper B, resting on the said shell, and having the bearing J, formed integrally with it, the bolt I, journaled in the bearing J, the cone O, suspended

on the bolt and within the shell, the concavo-convex shield C, above the bearing J, and held in place by the bolt I, and the crank F, fastened to the bolt above the shield, substantially as shown and described, and for the purpose set forth.

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

CYRUS TOBIAS.

Witnesses:
U. M. MAYER,
J. A. CRAIN.