(No Model.)

R. L. WEBB.

COFFEE MILL.

No. 251,011. Patented Dec. 13, 1881.

fig. 1

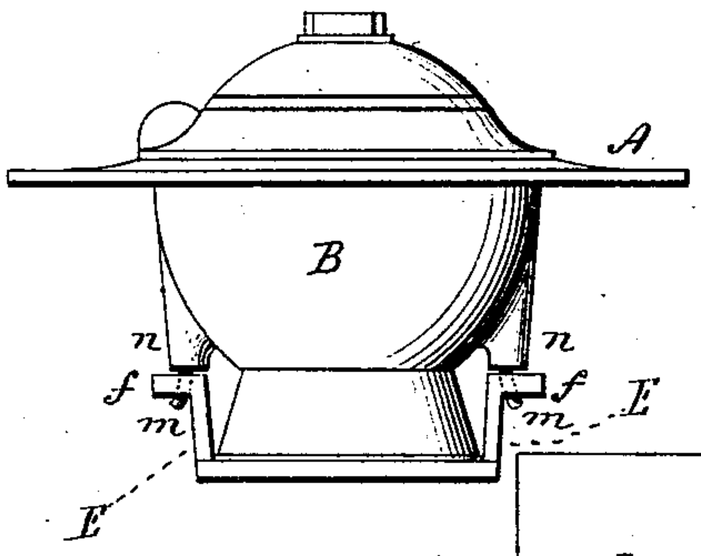


fig 2

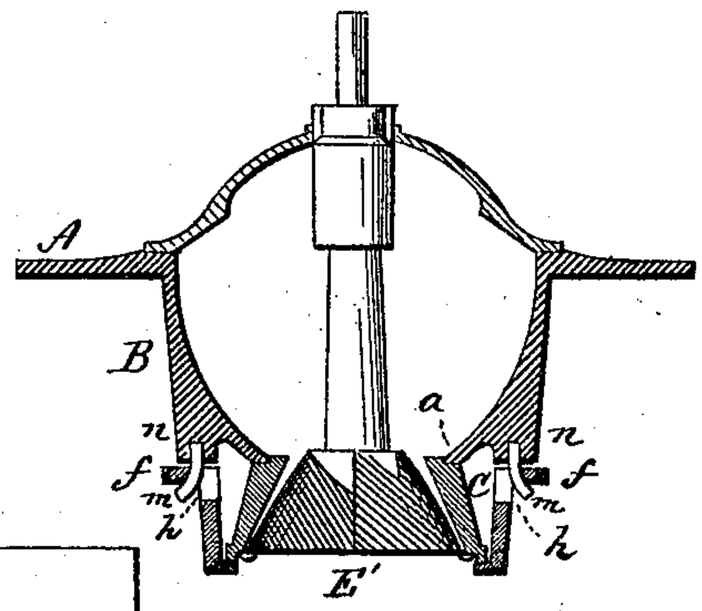


fig. 3

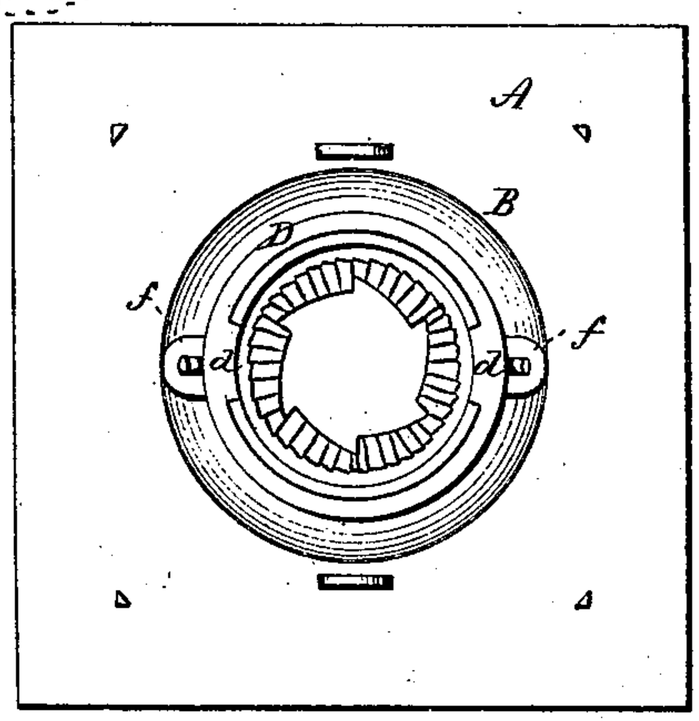


fig. 4

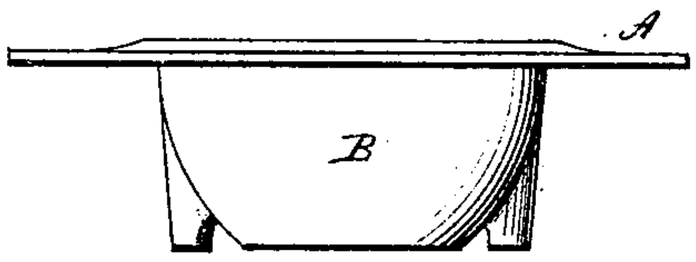


fig. 5

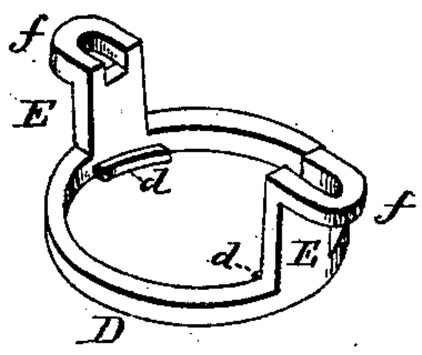
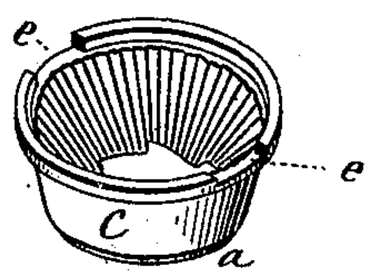


fig. 6



Witnesses.
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UNITED STATES PATENT OFFICE.

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COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 251,011, dated December 13, 1881.

Application filed July 30, 1881. (No model.)

To all whom it may concern:

Be it known that I, RODOLPHUS L. WEBB, of New Britain, in the county of Hartford and State of Connecticut, have invented a new Improvement in Coffee-Mills; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the mill removed from the box; Fig. 2, vertical central section of the same; Fig. 3, under side view, looking up; Figs. 4, 5, and 6, the three parts, hopper, yoke, and runner-shell.

This invention relates to an improvement in that class of grinding-mills used for grinding coffee and like purposes, and commonly called "box-mills," and to such as have the hopper sunk below the surface of the top of the box, the object of the invention being to detachably and firmly secure the running shell to the hopper; and it consists in the construction as hereinafter described, and particularly recited in the claims.

A represents the top, and B the hopper, here represented as made in one and the same piece, and preferably from cast metal, in substantially the usual manner. At its lower end the hopper is fitted to receive the upper end of the runner-shell C, preferably by having a groove on the upper end of the shell to fit a corresponding shoulder on the lower end of the hopper, as seen in Fig. 2. The shoulder, however, is not essential, as the runner may simply butt against the lower end of the hopper.

D is the yoke, which consists of a ring arranged to set upon the lower edge of the runner-shell. Upon the inside of the ring are one or more lugs or projections, *d*, which fit corresponding recesses, *e*, in the edge of the runner-shell; or it may be projections on the runner-shell to enter corresponding recesses in the ring, it only being essential that the ring and runner-shell shall be engaged the one with the other, so as to prevent the rotation of one without the other.

From the ring, arms E extend upward and terminate in ears *f*, through which is an opening, *h*. These ears correspond to lugs *n* on the side of the hopper, and into the lower end of each of the lugs *n* a piece of wire, *m*, is inserted, preferably in the process of casting, so that they become a fixed part of the lugs, and extend therefrom, so as to pass through the openings *h* in the ears, and then be bent so as to engage the ears and bind the yoke firmly to the hopper, which also, in its turn, secures the runner-shell to its place on the hopper. This ring-shaped yoke, while it firmly secures the runner-shell in its place and prevents its revolution with the runner E′, permits the runner to be introduced to its place or removed therefrom, which cannot be done when the yoke extends across the runner-shell, as in well-known constructions.

The wire pins *m*, which are of soft or annealed metal, and necessarily made so if to be introduced in the process of manufacture, may be straightened, so as to easily permit the removal of the yoke and runner-shell, if occasion requires. In the manufacture of mills such separation of the runner-shell from the hopper is essential, because many times in assembling the parts the runner-shell or hopper is found to be defective, and if the attachment be permanent, then both parts are lost, whereas by the easy detachment only the defective part would be lost. In mills where the yoke extends across beneath the runner-shell the runner is necessarily introduced before the yoke is applied. The runner thus introduced interferes materially with the process of securing the yoke. By the ring-shaped yoke this difficulty is entirely avoided, and adds little or nothing to the cost of manufacture.

Instead of pins to attach the yoke to the hopper, screws may be employed; but I prefer the wire pins, as they avoid the expense of screws and tapping the lugs.

I claim—

1. In a coffee-mill, the combination of the hopper, detachable runner-shell, and the ring-shaped yoke, the said yoke constructed with lugs to engage the said runner-shell and secured to the hopper outside the runner-shell, substantially as described, whereby the runner-shell is held in place at the bottom of the hopper.

2. In a coffee-mill, the combination of the

hopper, detachable runner-shell, and ring-shaped yoke, the said yoke constructed with lugs to engage the runner-shell, the hopper provided with pins extending downward, and the yoke provided with openings corresponding to said pins, and through which said pins extend, substantially as described, as a means for securing the yoke and runner-shell to the hopper, substantially as described.

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