(No Model.)

# L. DRUDE.

## COFFEE MILL.

No. 405,019. Patented June 11, 1889.

Fig. 1.

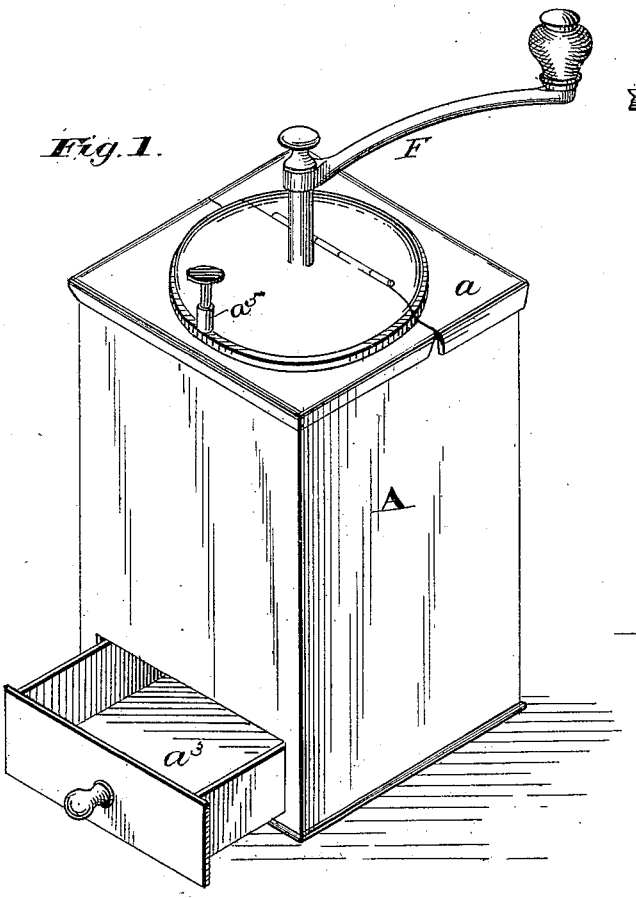



Fig. 2.

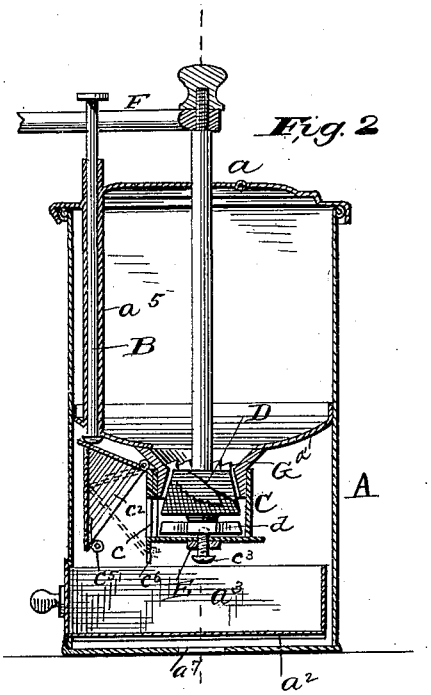



Fig. 3.

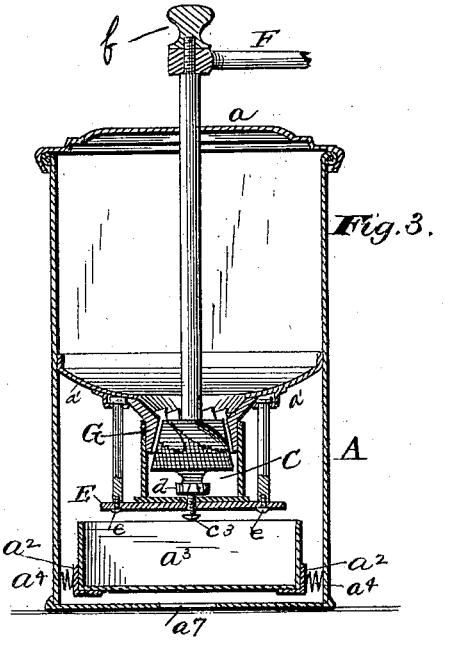



Fig. 4.

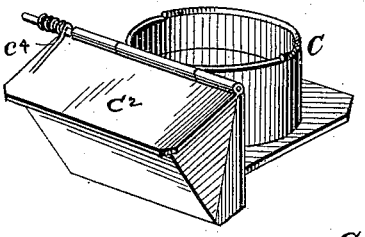
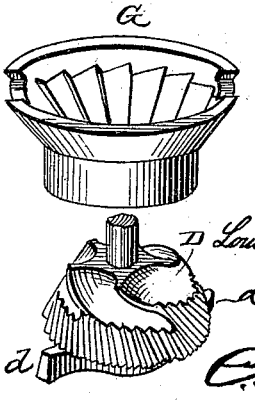



Fig. 5.




WITNESSES

F. L. Ourand

R. F. Saunders

Louis Drude INVENTOR

C. A. Peterson, Attorney

# UNITED STATES PATENT OFFICE.

LOUIS DRUDE, OF NEW YORK, N. Y.

## COFFEE-MILL.

SPECIFICATION forming part of Letters Patent No. 405,019, dated June 11, 1889.

Application filed February 5, 1889. Serial No. 298,732. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS DRUDE, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Coffee-Mills; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to improvements in coffee-mills; and the objects of my improvements are, first, to provide a coffee-bean conservatory or box combined with a mill; second, to provide a device in connection with the mill whereby a certain amount of coffee can be ground and automatically discharged at the same time, and the crank of the mill will be stopped owing to the vertical movement of a rod. I attain these objects by a certain combination and arrangement of parts, which will be fully described in this specification and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my invention complete. Fig. 2 is a vertical sectional view of same. Fig. 3 is a transverse sectional view with the discharge-box closed, in which the grinding-cone of the mill is incased. Fig. 4 is a perspective view of the discharge-box and automatic cap $c^2$. Fig. 5 is a detailed view of the parts that compose the grinding-cone.

A designates the outside casing of my device, which may be constructed in any shape and composed of any desirable material, tin being preferable for cheapness, ease of construction, &c. Upon the top of the casing there is a semi-air-tight lid $a$, which opens into the conservatory in which the coffee is kept. This conservatory is partitioned off by means of the platform or partition $a'$. In the center of the top there is an orifice, through which passes the top part of the stem of the grinding-cone D.

The bottom portion of the casing contains two horizontal pieces $a^2$, upon which the coffee-drawer $a^3$ rests and slides in and out. The pieces $a^2$ are inwardly-inclined and braced at their inner ends by means of the spiral springs $a^4$, which serve to securely hold the drawer $a^3$ in position and prevent it from dropping out when moving my invention. Near the edge of the outside casing A there is located a casing $a^5$, which extends downward and through the partition $a'$. In this casing $a^5$ the vertical rod B works. In the bottom of the casing A there is an orifice $a^7$, for the purpose of inserting a screw-driver (when the drawer $a^3$ is withdrawn) to tighten the screw $c^3$, which regulates the burr of the mill, causing it to grind fine or coarse, as desired. The vertical rod B is operated by means of a spiral spring $c^4$, which will be more fully explained hereinafter.

C represents the discharge-box, in which the grinding-cone D and shell are incased. Said box is constructed, as shown in Figs. 2 and 4, with the aperture $c$ and the automatic cap or adjunct $c^2$. Said cap may be made to hold any amount of coffee, as desired, from one ounce up. It is hinged at the top and operated by means of the spiral spring $c^4$. Upon the lower edge of this cap there is another spiral catch $c^5$, (that fits into the niche $c^6$,) which serves to hold the cap when closed. The box C is held in its normal position by the bar E across the bottom. This bar is held in position by the screws $e$ $e$, which screw into the partition $a'$.

F is the crank, which is attached to the stem of the grinding-cone D after removing the cap $f$.

G is a detailed view of the shell of the grinding-cone. The sweeps or arms $d$, Fig. 5, on the shaft below the grinding-cone D, in their revolutions force the coffee through the aperture $c$ into the cap $c^2$. When this cap becomes filled, the coffee is pressed into it with sufficient force by said portions $d$, causing the catch $c^5$ to slip out of the niche $c^6$. This forces upward (owing to the action of the spiral spring $c^4$) the cap $c^3$, which in like manner forces up the vertical rod B.

By removing the bottom of the casing A, (which is adjustable,) the mill can be taken to pieces simply by removing the crank F and taking out the screws $e$ $e$.

The operation of my invention is as follows: The coffee-beans are placed in the conserva-

tory, and when needed the crank is turned and the coffee is ground, passing into the discharge-box C, thence through the aperture $c$ into the adjunct or cap $c^2$. When the cap $c^2$ becomes filled with the ground coffee, its pressure causes the spiral catch $c^5$ to slip out of the niche $c^6$, and the cap flies upward with considerable force, (owing to the action of the spiral spring $c^4$,) pushing upward the vertical rod B sufficiently to prevent the crank F from turning, as shown in Fig. 2. If it is desired to grind more coffee than the mill is set for, you simply press down the vertical rod B, which closes the cap $c^2$, by pressing the spiral catch $c^5$ into the niche $c^6$. The crank may then be turned and the quantity in like manner duplicated as many times as desired.

What I claim is—

In a coffee box and mill, the combination of the outside casing, the drawer for holding the ground coffee in the lower part of said casing, the vertical rod inclosed in the inner casing, the grinding shell and cone, said cone having the crank attached to its upper end, the discharge-box, the sweeps $d$, the hinged upwardly-moving cap $c^2$, on which the lower end of the vertical rod rests, and the spiral spring $c^4$, whereby the quantity of coffee ground is regulated, substantially as described and set forth.

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

LOUIS DRUDE.

Witnesses:
LOIES GELB,
NATHAN BAUML.