H. PETRIE.

Coffee Mill.

No. 95,135. Patented Sept. 21, 1869.

Fig. 1.

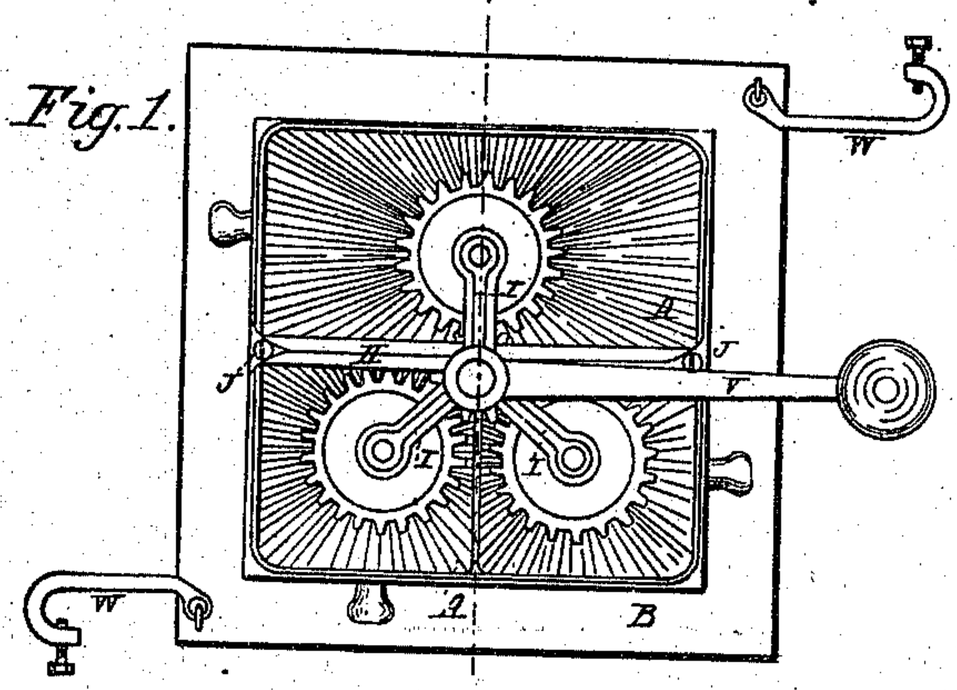


Fig. 2.

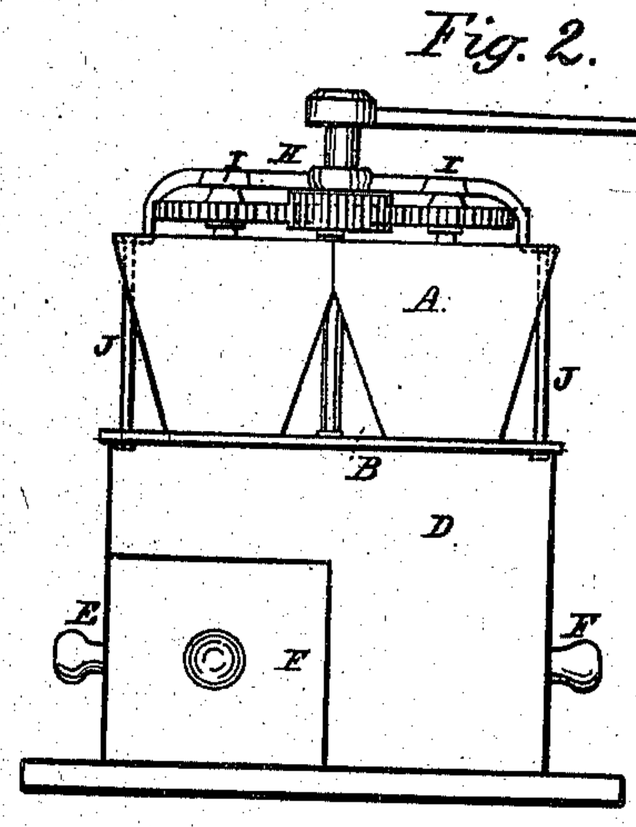
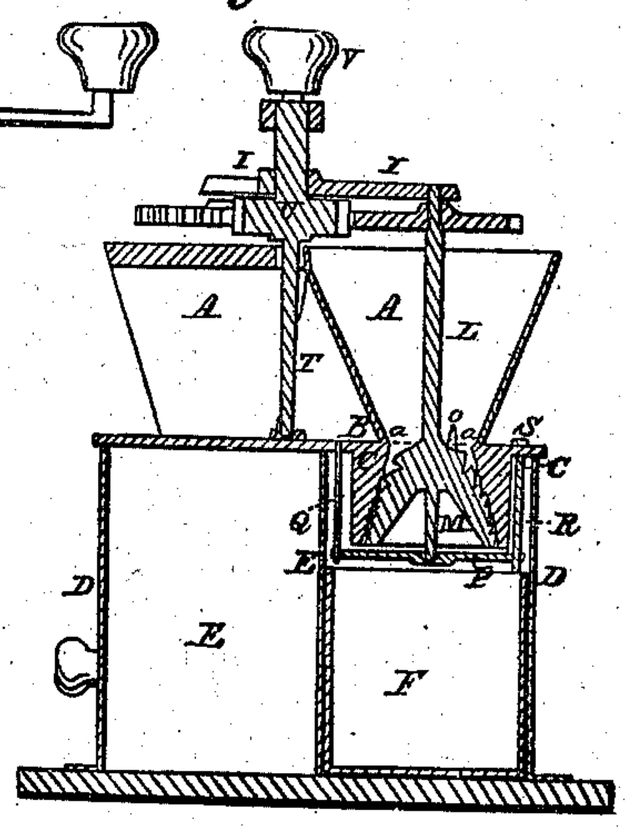


Fig. 3.



Witnesses.
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Inventor.
Henry Petrie

UNITED STATES PATENT OFFICE.

HENRY PETRIE, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN COFFEE AND SPICE MILLS.

Specification forming part of Letters Patent No. **95,135**, dated September 21, 1869.

To all whom it may concern:

Be it known that I, HENRY PETRIE, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Combined Coffee, Pepper, and Spice-Mills for Family Use; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and the letters and figures marked thereon, which form a part of this specification, and in which—

Figure 1 represents a top or plan view of my said mill; Fig. 2, a side elevation of the same; Fig. 3, a vertical sectional view at the line *x*, in Fig. 1.

The nature of my invention consists in the construction of the three hoppers, as hereinafter described, and in the construction of the bed-plate on which the hoppers rest, with the three openings and shells, or outside grinders, so as to make a firm, compact, combined mill, with three separate grinding-mills, all driven from the same drive-wheel.

To enable those skilled in the art to understand how to manufacture and use my invention, I will proceed to describe the same with particularity.

The same letters of reference refer to the corresponding parts in the different figures.

In the accompanying drawings, A represents three hoppers, all cast in one casting, so as to make a more solid and substantial mill than when made separate and fastened together, and is also less expensive to manufacture. One hopper, being intended for grinding coffee, is made as large as the other two, one of which is intended for grinding pepper and one for grinding spice.

B represents a bed-piece, which is cast with three cylinders, C, the inside of which are cast rough for grinding purposes, and conical, as shown in a sectional view of one of them in Fig. 3.

D is a box, made of tin or other suitable material, on which the bed-piece B rests, and it is divided into three compartments by the partitions E. There is a drawer, F, for each of these compartments, each drawer being put in from a different side of the box D. By this arrangement no side of the box is materially weakened by the introduction of the drawers through them. There is an arch-piece, H, cast with three arms, I I I, in which the grinder-shafts have their bearings. The ends of the arch H pass down to the edge of the hopper A, and are firmly secured thereto by the bolts J. Said bolts also pass down through the bed-piece B and firmly into the nuts attached to the box D, thereby fastening the hoppers, the bed-piece, and box D securely together. There is a rim, *a*, around the edge of the openings in the bed-piece B, above the cylinders C, and the lower edge of the hoppers A are beveled off so as to fit against said rims, as clearly shown in Fig. 3. These rims serve to keep the hoppers in place, and at the same time they make no impediment to the coffee or spice flowing down into the cylinder below.

K are grinding-cones, and they are cast with a rough surface for grinding. The creases therein are made coarse at the top and fine toward the bottom, so as to grind faster, and at the same time grind fine. The creases may be parallel or crossed, as desired.

The spindles L and M are cast with the core and also the agitator O, which extends up into the hopper and agitates the contents thereof, and causes it to feed regularly to the grinding-cone.

P is a cross-piece, one end of which rests in a loop formed by the wire Q suspended from the bed-piece B, the other end resting in a rod, R, which can be shortened by the nut S. The spindle M of the grinding-cone R has a step in the cross-piece P, and the step is raised and lowered, which regulates the cone K to make it grind fine or coarse, by raising or lowering the rod R, as above described. I cast the grinding-cones K with the base nearly as small as the top, so that no part of the grinding-surface is far from the perpendicular axial line drawn through the center, so that it will require less power to grind, and when I wish to increase the grinding-surface I simply cast a longer cone.

The main driving-shaft T of the mill has a bearing in the arch H, and a step on the bed-piece B; or it may pass through the bed-piece B, having a bearing therein.

The small drive-wheel U is cast with the shaft T, and the crank V is screwed on the end of the shaft. The drive-wheel U engages with the three cog-wheels of the shafts L L L, so that by turning the crank V the three mills are put in operation. The drive-wheel U is

made small, and the cog-wheels on the shafts L large, so as to gain power with less motion of the grinders.

W are hooks, secured to opposite corners of the mill, to secure the mill to the table when in use. By placing the mill upon the corner of the table, the hooks can be hooked to the edge thereof, and secure it firmly in place. A thumb-screw may be put in one of the hooks to hold it to the table.

There may be a rim cast on the under side of the bed-piece B, near its edge, for the top edge of the box D to rest against, so that it will be held more securely in place.

Having thus fully described the construction and use of my invention, I will now specify what I claim and desire to secure by Letters Patent—

1. The hoppers A A A, cast in one piece, substantially as herein described.

2. In combination with the hoppers A A A, when cast in one piece, the bed-plate B, and grinding-cylinders C, substantially as herein described.

3. The box E, and drawers F, in combination with the bed-plate B, and grinding-cylinders C, substantially as herein described.

HENRY PETRIE.

Witnesses:
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