T. STROBRIDGE.

COFFEE-MILL.

No. 174,026. Patented Feb. 22, 1876.

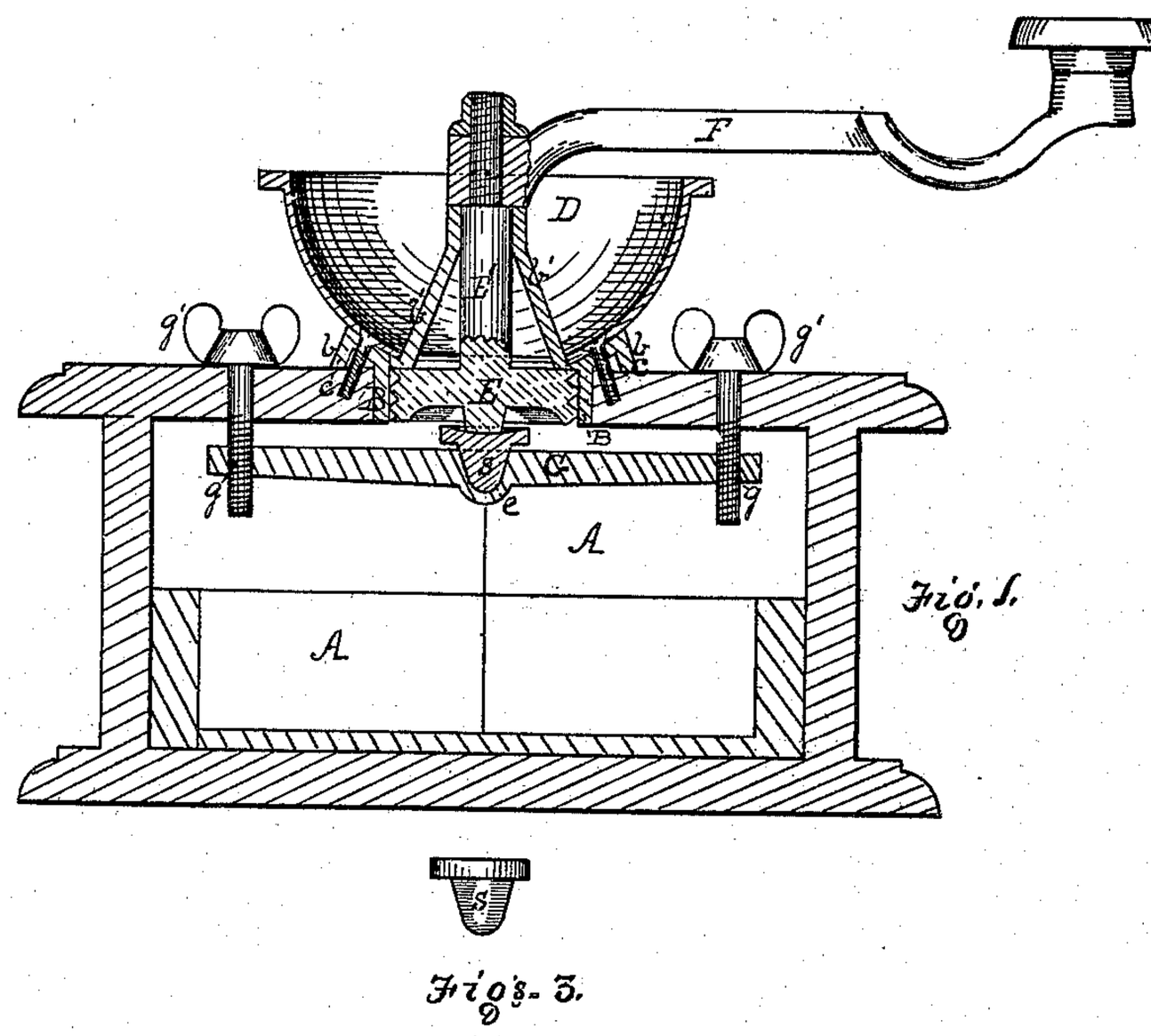
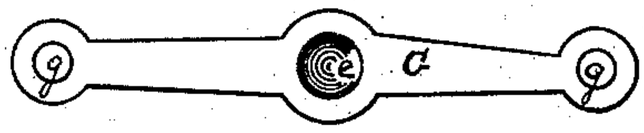


Fig. 1.

Figs. 3.



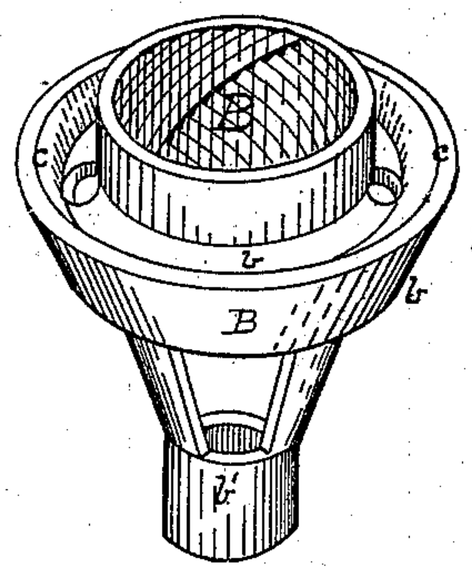


Fig. 2.

Witnesses.

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UNITED STATES PATENT OFFICE.

TURNER STROBRIDGE, OF NEW BRIGHTON, PENNSYLVANIA.

IMPROVEMENT IN COFFEE-MILLS.

Specification forming part of Letters Patent No. **174,026,** dated February 22, 1876; application filed December 22, 1875.

To all whom it may concern:

Be it known that I, TURNER STROBRIDGE, of New Brighton, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Coffee and Similar Mills; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a vertical section of a mill embodying my invention. Fig. 2 is a detached view of the grinding-shell; and Fig. 3 is a view of the bearing or tightening bar and its detachable step.

Like letters refer to like parts wherever they occur.

My invention relates to that class of mills employed for grinding coffee, spices, &c.; and it consists, first, in forming the upper portion of the grinding-shell with a downwardly-projecting flange for completing the base of the hopper and giving a finish to the mill between the hopper and box; secondly, in tapping a thread in the end of the bearing-bar and combining with the bar a thumb-screw or similar device, so that the grinding-nut may be adjusted by means of the bar and from the exterior of the box; thirdly, in providing a stepping-piece for the grinding nut or spindle thereof, to obviate the wear of the bearing or stepping bar and spindle.

I will now proceed to describe my invention so that others skilled in the art may make and use the same.

In the drawing, A indicates the box upon which is secured the mill, the top of the box being cut for that purpose. B is the grinding-shell, having a flange, *b*, or similar means for securing it to box A, and *b'* the arch for centering and steadying the shank of the grinding-nut. The flange *b*, after extending out so as to form an annular seat for the hopper, and to give space for the passage of binding-screws which secure the hopper and shell to box A, is turned downward, as at *c*, so as to rest upon the top of the box, and as it extends from the hopper to the box it hides the binding-screws and gives a finished appearance to the mill. D indicates the hopper, which rests on the curved seat formed by the flange *b* or the upper edge of the grinding-shell B.

E is the grinding-nut, provided with the usual shank E', which passes through the arch *b'*, and F is the crank, secured to shank E' in any suitable manner.

Instead of the tightening-nut commonly employed for adjusting the grinding-nut, I make use of a bearing or tightening bar, G, in the ends of which are the holes *g*, tapped or threaded, so that the end of the bearing-bar forms the nut of a thumb-screw or bolt, the head of which projects above the cover of box A, as at *g'*. By these devices the grinding-nut may be tightened from the exterior of the box, and the screws, acting on the bar itself, will raise it equally in a horizontal position without liability of the bar rocking or becoming cranked.

In order to be able to tap the ends of the tightening-bar G, the bar must be of a softer metal than the grinding-nut, which is of chilled cast-iron, and, as a consequence, were the spindle of the grinding-nut stepped directly on the bar, the wear of the parts would destroy the adjusting devices. To obviate this, I form the bar G with a depression, *e*, for the reception of a stepping piece or button, *s*, of the same material as the grinding-nut, and step the spindle of the grinding-nut directly on this intermediate piece instead of on the bar.

The downwardly-projecting flange *c* may project directly from the upper edge of the correspondingly-elongated grinding-shell B, if preferred, instead of being a continuation of flange *b*, as shown in the drawing, in which case the hopper would rest on the upper edge of the grinding-shell, instead of upon the seat formed by the upper face of flange *b*. The stepping or adjusting bar may be pivoted at one side, if preferred.

The advantages arising from my invention are: First, that by forming the downwardly-projecting flange upon the grinding-shell, I avoid the difficulties that have to be encountered in casting the hopper and its base in one, and the multiplication of parts and trouble of fitting and setting up consequent upon casting a collar or base-ring separate from the hopper and grinding-shell. I also produce a

grinding shell which may be used with Britannia or other than cast hoppers. Secondly, by tapping a thread in the end of the bearing or stepping bar and employing the threaded bolt or thumb-screw, I avoid the difficulty of adjusting the bar within the box, in fitting up and tightening the mill; and, finally, by the separate stepping-piece or button, I overcome unequal wear of the spindle and bearing-bar, and render the mill more durable.

Having thus described my invention, what claim, and I desire to secure by Letters Patent, is—

1. The grinding-shell provided with the downwardly-projecting flange *b*, substantially as and for the purpose specified.

2. In combination with the grinding-nut and washer or step-piece, a bearing or adjusting bar tapped at the end, and a thumb-screw or threaded bolt, substantially as and for the purpose specified.

3. In combination with the grinding-nut and bearing or adjustable bar, the step-piece or detachable button, substantially as and for the purpose specified.

In testimony whereof I, the said TURNER STROBRIDGE, have hereunto set my hand.

TURNER STROBRIDGE.

Witnesses:
GEO. GRAHAM,
G. W. GLASS.