J. H. BROOKMIRE.

APPARATUS FOR CLEANING AND POLISHING COFFEE.

No. 192,224. Patented June 19, 1877.

Fig 1.

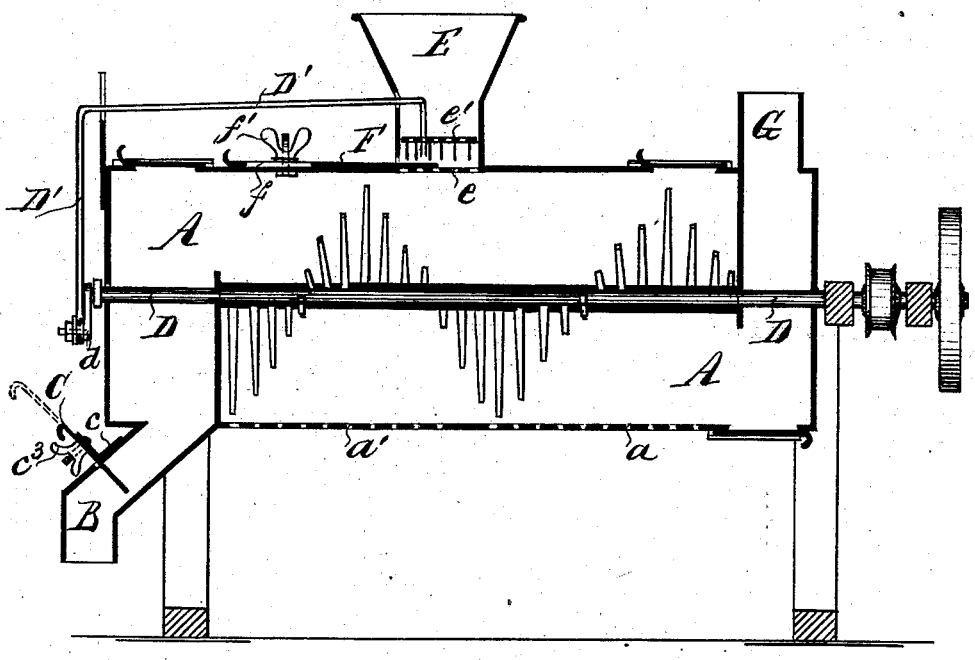


Fig 2.

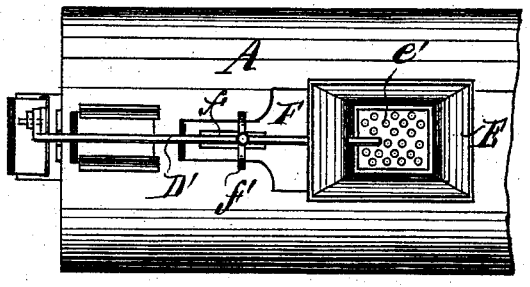
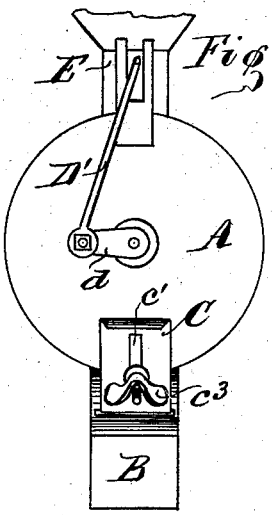


Fig 3.



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UNITED STATES PATENT OFFICE.

JAMES H. BROOKMIRE, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN APPARATUS FOR CLEANING AND POLISHING COFFEE.

Specification forming part of Letters Patent No. **192,224**, dated June 19, 1877; application filed April 6, 1877.

To all whom it may concern:

Be it known that I, JAMES H. BROOKMIRE, of St. Louis, in the county of St. Louis and State of Missouri, have invented an Improved Apparatus for Treating and Polishing Coffee, of which the following is a specification:

This invention relates to improvements in the process of treating and polishing coffee, as described and shown in my respective Letters Patents of the United States, issued to me and bearing dates December 6, 1870, No. 109,865, and October 15, 1872, No. 132,136.

In the use of my former patents the necessity is incurred of repassing the treated coffee (viz., that which has been cleaned) through the apparatus again for the purpose of polishing said treated coffee. This, as is apparent, incurred extra time, labor, and expense.

In the present invention the necessity spoken of is obviated by subjecting the coffee to the required cleaning and polishing action in one and the same process.

My invention consists, first, in providing the bottom of feed-hopper containing the polish with an adjustable slide to control the feeding of said polish; secondly, in combining, with relation to the hopper containing the polish and the revolving shaft, a crank-rod and rake attachment, so as to prevent the polish from choking the perforations, and facilitating the feeding of said polish to the coffee subject to treatment; thirdly, this invention relates to a novel combination of the parts to achieve the advantages, all of which will hereinafter more fully appear.

Of the drawing, Figure 1 is a sectional elevation. Fig. 2 is a part top plan. Fig. 3 is a front elevation.

A is the cylinder in which the coffee is treated. The bottom of the cylinder has the perforations *a a'*, those to the right of center being more specially for the escape of the dust, dirt, chaff, &c., while those to the left are for the discharge of the polish.

B is the discharge-chute. This I provide with a slide, C, which is made to extend into the chute to close (as if it were a partition) the discharge-opening.

c is a fixed bearing and guide for the slide. (See Fig. 1.) The slide C can be raised or lowered—hence its elongated slot c^1. (See Fig. 3.) The set-screw c^3 holds the slide in adjusted position. (See Figs. 1, 3.) By this means the chute B can be closed or opened, or only partially opened, as the case may be, to accomplish the important result, viz., to suit the discharge of the coffee according to the treatment it requires in the cylinder, and specially so regarding its polishing.

D is the revolving shaft. This carries the beaters. I utilize the revolution of this shaft for the further purpose to agitate, stir, and facilitate the feeding of the polish by the following means: *d* is a crank-rod secured to one end of the shaft. (See Figs. 1, 3.) To the end of the crank is secured a rod, D', bent and passed over the top of the cylinder, as shown in Fig. 1. The top end of the rod D' is passed inside the hopper E and bent downward so as nearly to reach the bottom of said hopper. (See Fig. 1.) The bottom of the hopper E has perforations *e*, (see Fig. 1,) through which the polish passes to reach the cylinder.

e' is a raker, (consisting of a perforated bottom, having teeth projecting from its lower face,) said rake being secured to the crank-rod, so as to be operated by same. The holes in the raker permit the polish to pass through it, and its teeth rake over the perforated bottom of the hopper, thus preventing the polish from choking or closing said perforations. The action of the crank-rod, as is apparent, imparts a reciprocating action to the raker *e'*, so that the same keeps the polish moving and feeding into the cylinder.

It is important to control the feeding of the polish to suit the requirements of the cleaned coffee. This I do by providing the bottom of the hopper E with an adjustable slide, F. (See Figs. 1, 2.) The slide F has in its shank an elongated slot, *f*, and is secured to the top of cylinder by a set-screw, *f'*. The slide proper passes through a corresponding slot in the side of the feed-hopper. By moving the slide to the right or left the polish can be shut off from or let into the cylinder—*i. e.*, its feeding can be such as is required to polish the coffee.

It will here be noticed that both slides C and F are related to each other, for the discharge of the coffee takes place subject to the process of cleaning and polishing. The passage and discharge of the coffee is regulated

by the slide C in accordance with the feeding of the polish, which is regulated by the slide F. In this wise the coffee, according as its nature requires, can be subjected to a cleaning, scouring, and polishing action before its final discharge out of the cylinder.

The said improvements, being thus constructed and arranged, operate as follows: The coffee to be cleaned is fed into the hopper G, and passes into the cylinder, where it is subjected immediately to the action of the beaters or pins. The dirt, dust, and impurities pass out of the perforations *a*, and these, for this purpose, are made more numerous than is required for those of *a'*. By the time the coffee has been forced along and brought in line of the hopper E and the polish, said coffee has been sufficiently cleaned, scoured, and freed from its impurities, and in ready condition to be polished. The polish fed into the hopper E at this stage of the passage of the cleaned coffee is caused by the revolving beaters to cover each grain and kernel, and, these being continually stirred and moved among the polish, are fed forward to the discharge-chute. The raker in the hopper and polish rakes some into cylinder, the feed-opening having been regulated by the slide F, likewise the discharge having been properly regulated by setting the slide C in position. I am thus enabled, at one and the same time, in the same apparatus, to free, clean, and scour the entered coffee from its impurities, and also, before its discharge, polish said treated coffee, and thus achieve the advantages of a great saving in time, expense, and labor, which, as before stated, was the object of this invention.

What I claim is—

1. The adjustable hand-slide F, in combination with hopper E, having perforated bottom *e*, as and for the purpose set forth.

2. The crank *d*, rod D', and raker *e'*, in combination with hopper E and power-shaft D, to operate as and for the purpose set forth.

3. The combination of the adjustable hand-slide F, the hopper E, having perforated bottom *e*, the adjustable hand-slide C, the discharge-chute B, said parts being arranged with relation to cylinder A, as shown, and by means whereof the discharge of the entered coffee can be regulated so as to be subjected at same time to required polishing action, and as set forth.

In testimony of said invention I have hereunto set my hand.

JAMES H. BROOKMIRE.

Witnesses:

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