(No Model.) 2 Sheets—Sheet 1.

W. P. CLIFFORD.

MACHINE FOR POLISHING AND GLAZING COFFEE, &c.

No. 455,246. Patented June 30, 1891.

Fig. 1.

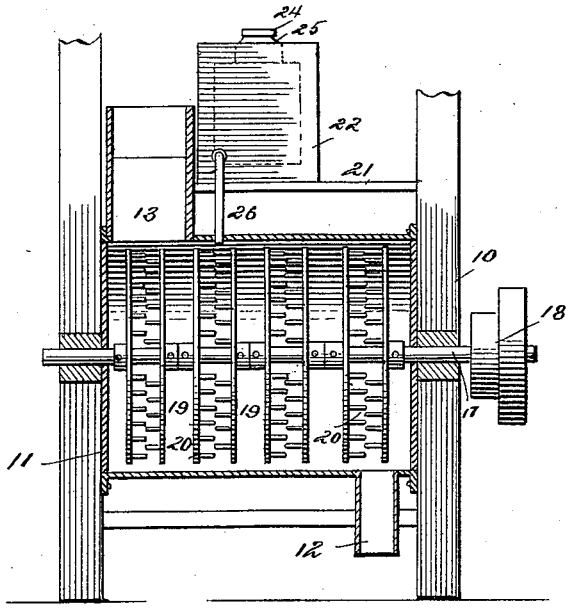
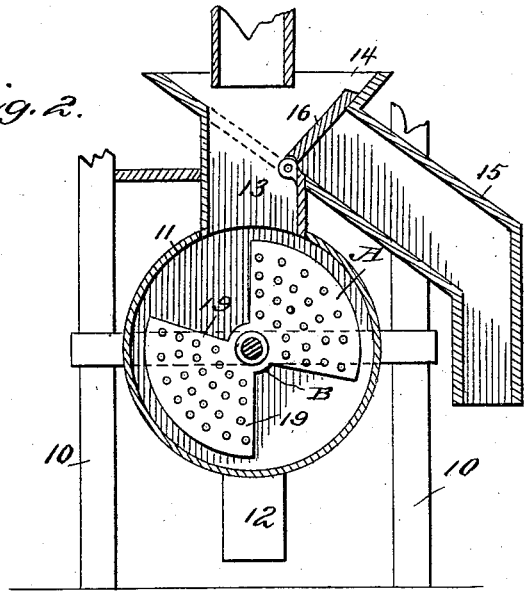


Fig. 2.



WITNESSES:

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C. Sedgwick

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(No Model.) 2 Sheets—Sheet 2.

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No. 455,246. Patented June 30, 1891.

Fig. 3.

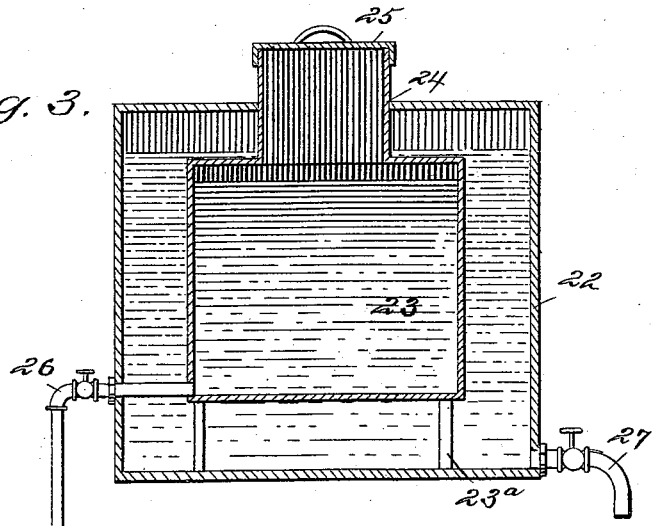
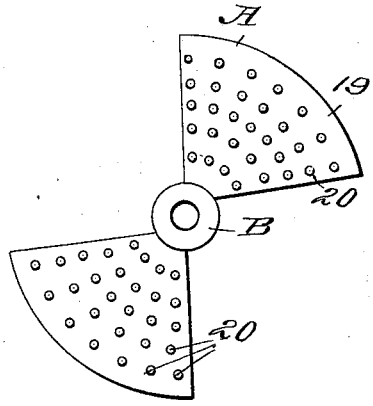


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM P. CLIFFORD, OF OSKALOOSA, IOWA, ASSIGNOR TO HIMSELF AND SYLVESTER P. CAMPBELL; ELLEN E. CAMPBELL ADMINISTRATRIX OF SAID SYLVESTER P. CAMPBELL, DECEASED.

MACHINE FOR POLISHING AND GLAZING COFFEE, &c.

SPECIFICATION forming part of Letters Patent No. 455,246, dated June 30, 1891.

Application filed August 8, 1889. Serial No. 320,134. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. CLIFFORD, of Oskaloosa, in the county of Mahaska and State of Iowa, have invented a new and useful Improvement in Machines for Polishing and Glazing Coffee, &c., of which the following is a full, clear, and exact description.

My invention relates to an improved machine for polishing and glazing coffee, or any material requiring such manipulation, and has for its object to provide a machine of simple, durable construction, and which may be used in connection with a coffee cleaner and grader or independently thereof, as may be desired.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a central vertical section through the machine. Fig. 2 is a transverse section. Fig. 3 is a vertical section through the tank containing the glazing material, and Fig. 4 is a detail view of the polishing or glazing blades.

In a suitable frame 10 a cylinder 11 is transversely secured, provided near one end at the bottom with an outlet chute or tube 12 and at the upper diagonally-opposite end with a hopper 13, through which hopper the material is fed into the cylinder. The hopper 13 is formed with a flaring upper end 14, as illustrated in Fig. 2, and to one side of the flaring portion of the hopper an offtake flue or pipe 15 is usually attached connected with the hopper, and at the junction of the lower wall of the flue or pipe with the hopper, within the latter, a gate 16 is pivoted at one end, the opposite or upper end being preferably beveled, as illustrated in said Fig. 2. This offtake flue or pipe is attached to the machine when it is used in connection with a cleaning and grading machine, and the object thereof is to conduct the coffee delivered from the grading and cleaning machine to the hopper and from the said hopper without being passed down into the cylinder for polishing or glazing. This is effected by opening the gate 16, whereby it assumes the position illustrated in dotted lines in Fig. 2, which is diagonally across the body of the hopper, and completely cutting off communication between the latter and the cylinder, compelling the coffee as delivered to the hopper to pass out therefrom into the offtake flue or pipe 15. Normally, however, or when the coffee is to be delivered to the cylinder 11 of the machine, the gate 16 shuts off communication between the hopper and the offtake flue or tube 15.

A shaft 17 is passed through the cylinder 11 and journaled in the frame 10, one outer end of which shaft is provided with a pulley or pulleys 18. Upon the shaft within the cylinder a series of polishing-arms 19 is secured. (Illustrated in detail in Fig. 4.) The arms consist of two metallic segmental plates A, radiating from a hub B, the arms being attached to the shaft by passing a set-screw or similar device through the hub to a contact with the former. The arms are arranged in pairs upon the shaft, as illustrated in Fig. 1, and from the opposed faces of each segmental plate of the arms a series of pins 20 is projected, the pins upon the opposed plates being so located that they will essentially interlock.

Upon a platform 21, attached to the frame above the cylinder 11, a tank 22 is secured, and within the tank 22 a second tank 23 is located, the inner tank being provided at the bottom with legs 23^a, or the said inner tank may be supported above the bottom of the other tank by any other suitable means. The inner tank is provided with a neck 24, which extends upward and outward through an opening in the outer tank, and the outer end of the neck 24 is covered by a suitable form of lid 25, as illustrated in Fig. 3. A pipe 26 is passed through the outer tank to a connection with the inner tank at or near the bottom, which pipe is provided with a valve and carried downward through the cylinder over, for instance, the second set of polishing-arms. The outer tank is provided with an opening

in the top, through which it is filled, and with a faucet 27 at one side near the bottom, by which it may be emptied. The inner tank is adapted to hold a glazing material of any description and the outer tank is purposed to contain hot water, whereby the glazing material is constantly kept in liquid form.

The preferred glazing material employed consists of a mixture of white of eggs, sugar, mustard-seed oil, water, and stearine in proper proportions.

In operation the coffee, being fed into the hopper 13, passes down upon the first set of arms, and in passing between the pins of the said arms as the shaft 17 is rotated the coffee is very effectually cleaned and polished, and as the coffee in process of rotation is delivered from the first set of arms to the second set it is there covered with the glazing material, the process of polishing is continued, and the glaze equally distributed over the surface of the coffee by the contact of the latter with the pins 20 of the arms until the said coffee passes out through the outlet 12.

Any number of sets of arms may be employed without departing from the spirit of the invention, and equivalent construction may be substituted for the construction shown and described.

I contemplate introducing a single steam or hot-air pipe or coil in the tank to maintain the water at an even temperature, and thereby preserve the glazing material in a liquid state under all conditions of the weather.

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

1. In a machine for polishing and glazing coffee and other equivalent articles, the combination, with a cylinder, a shaft held to revolve therein, a series of opposing arms secured to said shaft, comprising segmental plates radiating from hubs, and a series of pins extending from the opposed faces of the plates of each set of arms at a right angle thereto, of a tank adapted to contain a glazing material, a warming-jacket surrounding said tank, and a pipe leading from the tank into the cylinder, substantially as specified.

2. In a machine for polishing and glazing coffee, the combination, with a cylinder, a shaft held to revolve therein, a series of arms secured to said shaft, arranged in pairs and comprising a series of plates radiating from a hub, and a series of pins extending horizontally from the opposed faces of the plates of each set of arms, of a tank adapted to contain water, supported above the cylinder, a second tank held within the water-tank, adapted to contain a glazing material, and a tube connected with the glazing-tank passing through the water-tank and the cylinder over a set of polishing-arms, substantially as and for the purpose specified.

WILLIAM P. CLIFFORD.

Witnesses:
AUGUSTUS G. HAMMOND,
W. R. SANDHAM.