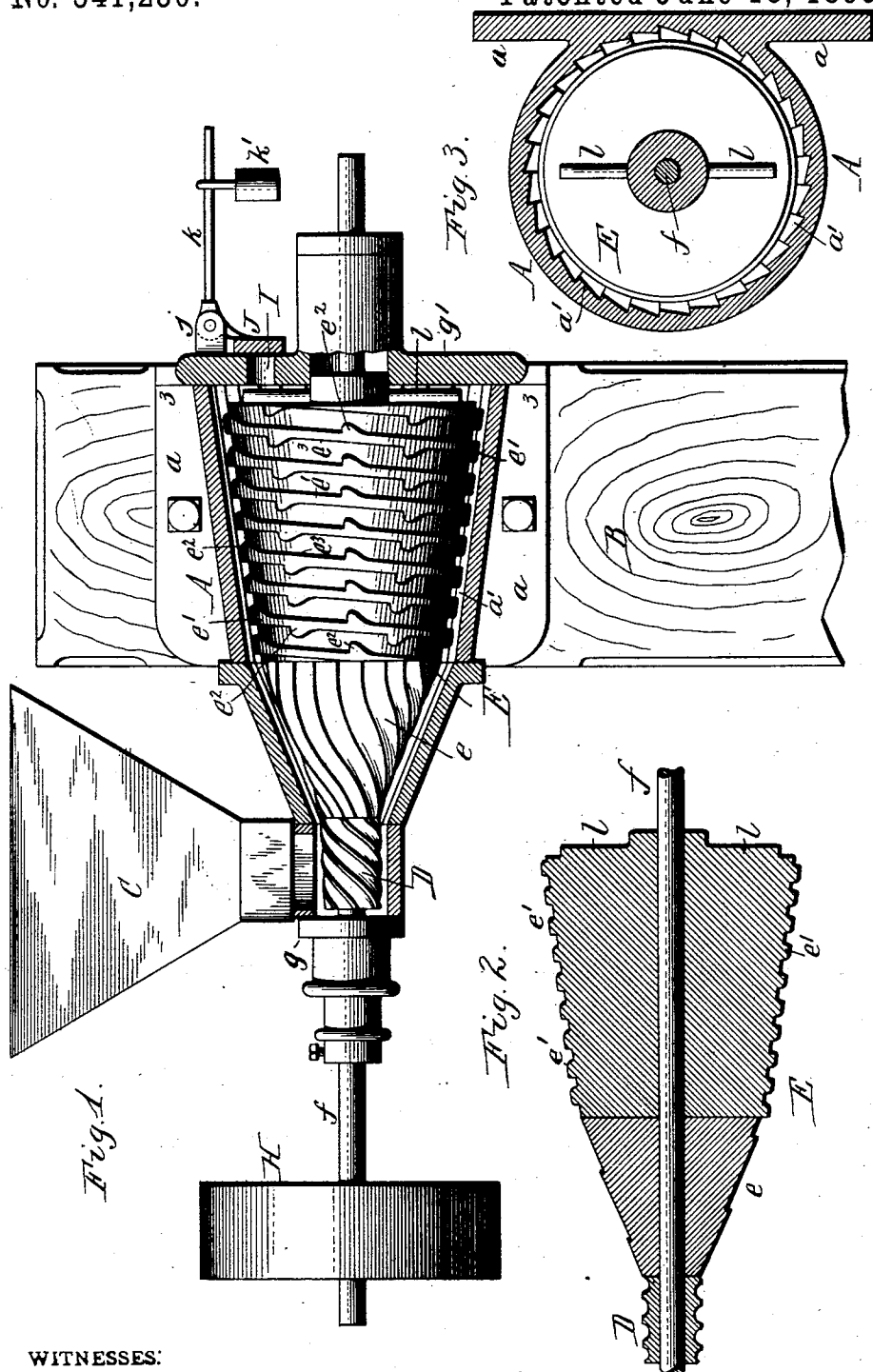


(No Model.)

J. REIMERS.
COFFEE HULLER.

No. 541,250.

Patented June 18, 1895.



WITNESSES:

Chas. F. Burkhardt.
Theo. L. Popp.

Joseph Reimers INVENTOR.
By Wilhelm Popp. ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH REIMERS, OF BUFFALO, NEW YORK ASSIGNOR TO FRED. C. M. LAUTZ, OF SAME PLACE.

COFFEE-HULLER.

SPECIFICATION forming part of Letters Patent No. 541,250, dated June 18, 1895.

Application filed April 10, 1895. Serial No. 545,133. (No model.)

To all whom it may concern.

Be it known that I, JOSEPH REIMERS, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented a new and useful Improvement in Coffee-Hullers, of which the following is a specification.

This invention relates to that class of coffee hullers which comprise essentially a casing provided on its inner surface with teeth or corrugations forming a concave, and a rotary hulling drum or cone arranged in the casing and having spiral ribs which co-operate with the concave.

My invention has for its objects to more effectually utilize the hulling surfaces of the drum and casing, so as to increase the capacity of the machine, and to retard the discharge of the coffee from the machine, by simple means, so as to subject the same for a longer period to the action of the hulling surfaces.

In the accompanying drawings, Figure 1 is a sectional elevation of my improved coffee-huller. Fig. 2 is a longitudinal section of the hulling-drum removed from the casing. Fig. 3 is a transverse section of the machine in line 3 3, Fig. 1.

Like letters of reference refer to like parts in the several figures.

A represents the casing having the usual conical or tapering form and provided with flanges *a*, whereby it is secured to a post B or other support. The casing is provided on its inner surface with the usual hulling teeth or corrugations *a'* extending lengthwise of the case.

C represents the feed hopper connected with the small end of the casing, and D the usual spiral conveyer arranged in the casing underneath the throat of the feed hopper.

E is the hulling drum, *f* the shaft upon which the drum and the conveyer D are mounted and which turns in bearings arranged on the front and rear heads *g g'* of the casing, and H is the driving pulley.

The front or small portion of the hulling drum is preferably provided with the usual spiral ribs or corrugations *e* which receive the coffee-beans from the conveyer D and whereby the same are subjected to a preliminary hull-

ing action. The rear or large portion of the drum is provided with a spiral rib or flange *e'* which extends around the surface of the drum in numerous convolutions from the rear ends of the preliminary ribs or corrugations *e* to the large end of the drum. The pitch of the rib-convolutions is comparatively small and the convolutions are arranged at a sufficient distance apart to permit the coffee-beans to move through the spiral channel or groove formed between the same. Each convolution is formed on opposite sides with teeth or projections *e²* which extend laterally into the spaces between the convolutions, so as to carry the coffee-beans around the interior of the surrounding casing or concave, the front faces of the projections being made abrupt, as shown, to more effectually propel the material. These teeth or projections are arranged alternately on opposite sides of each rib-convolution and preferably at regular intervals, and the spaces or faces *e³* between the projections are arranged opposite the projections of the adjacent convolutions and are preferably plain, as shown in Fig. 1. The contracted spaces between the projections and the opposing faces of the adjacent convolutions are of sufficient width to allow the coffee-beans to pass through the same.

The coffee-beans, upon reaching the large portion of the casing, enter the spaces between the spiral rib-convolutions and are carried around the interior of the casing or concave by the teeth or projections of the rib, thus utilizing all portions of the hulling surfaces of the drum and the concave, instead of the bottom portions thereof only, as is the case when the drum is provided from end to end with smooth spiral ribs, such as the preliminary hulling ribs *e*. A material increase in the capacity of the machine is thus effected. The projections *e²* of the rib-convolutions also serve to turn the coffee beans in propelling them around the concave, whereby all portions of the beans are subjected to the hulling action of the concave. By arranging the projections of each convolution opposite the spaces between the projections of the adjacent convolutions, a number of coffee-beans cannot become wedged or crushed between the rib-convolutions, and the beans are al-

lowed to roll over the outer edge of the projections after being partly carried around the concave and to pass thence into the path of the next succeeding projections. The spiral rib, while carrying the material around the casing, also conveys the same toward the tail end of the machine.

I is an elevated discharge opening formed in the tail head of the casing, near the top of the latter, and J is an automatic valve applied to said opening and serving to check or retard the escape of the coffee from the casing, whereby the hulling action is rendered more effective.

In the construction shown in the drawings, the automatic valve is pivoted at its upper portion to lugs or ears *j* projecting from the rear head of the casing, so as to be capable of swinging toward and from the discharge opening, and the valve is provided with an overhanging arm *k* upon which is hung a weight *k'*. When the pressure of the material within the casing overcomes the resistance of the valve, the latter opens and allows a portion of the material to escape, when it closes automatically and remains closed until the pressure is again sufficient to open it.

The drum is preferably provided at its large end with radial ribs *l* whereby the ma-

terial in the bottom of the casing is elevated to the discharge opening I.

I claim as my invention—

1. The combination with the inclosing case, of a hulling drum arranged therein and having a spiral rib extending around the same and provided with propelling teeth or projections, the projections of each convolution of said rib being arranged opposite the spaces between the projections of the adjacent convolution, substantially as set forth.

2. The combination with the inclosing case and the hulling drum having a spiral rib extending around the same and provided on opposite sides with teeth or projections having abrupt faces adapted to propel the coffee beans around the interior of the casing, and between said projections with plain faces, the projections of each convolution of said spiral rib standing opposite the plain faces of the adjacent convolution or convolutions, substantially as set forth.

Witness my hand this 30th day of March, 1895.

JOSEPH REIMERS.

Witnesses:

JNO. J. BONNER,

WALTER J. SHEPARD.