(No Model.) 3 Sheets—Sheet 1.

W. H. B. STOUT.

COFFEE HULLER.

No. 482,909. Patented Sept. 20, 1892.

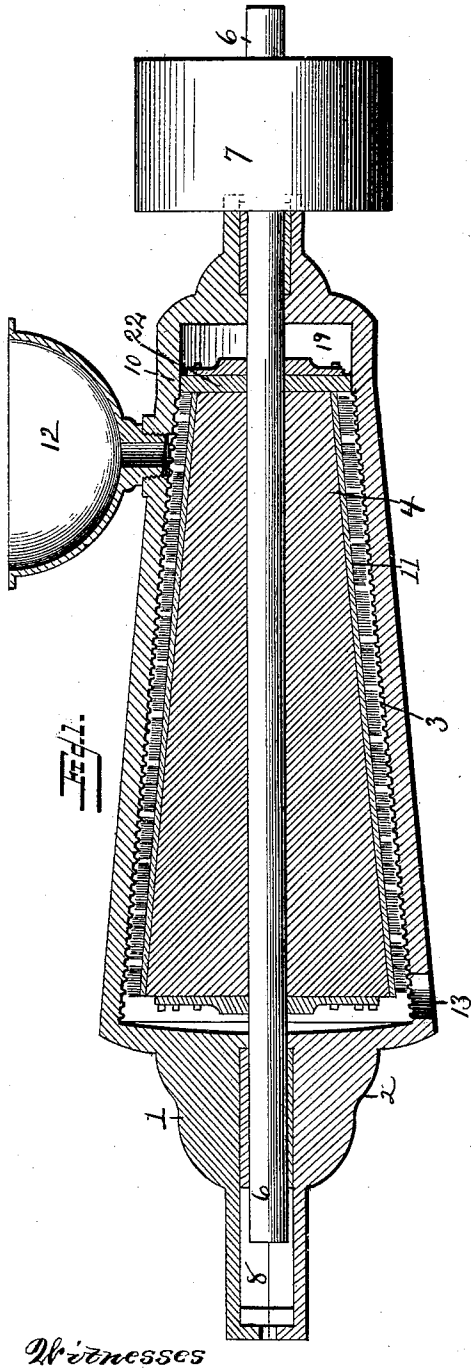

Fig. 1.

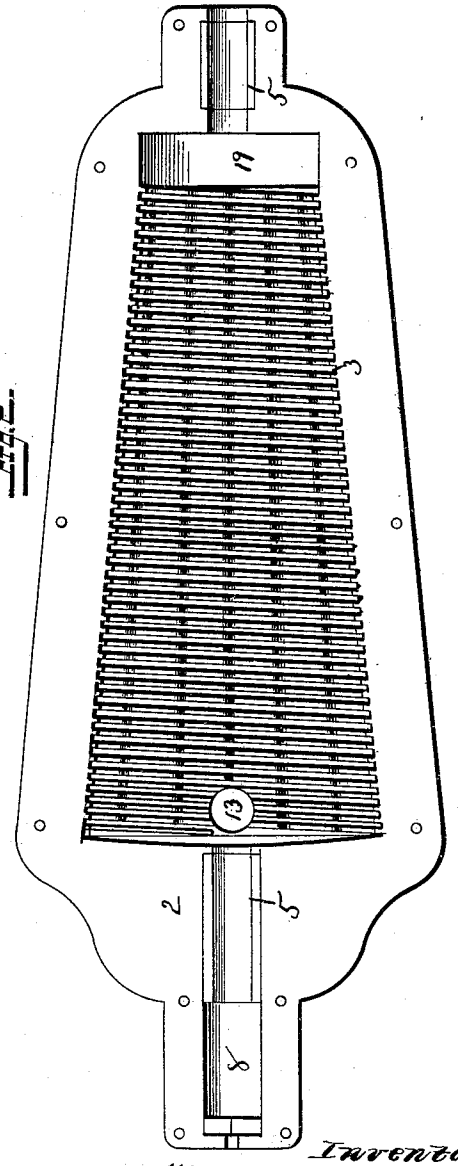

Fig. 2.

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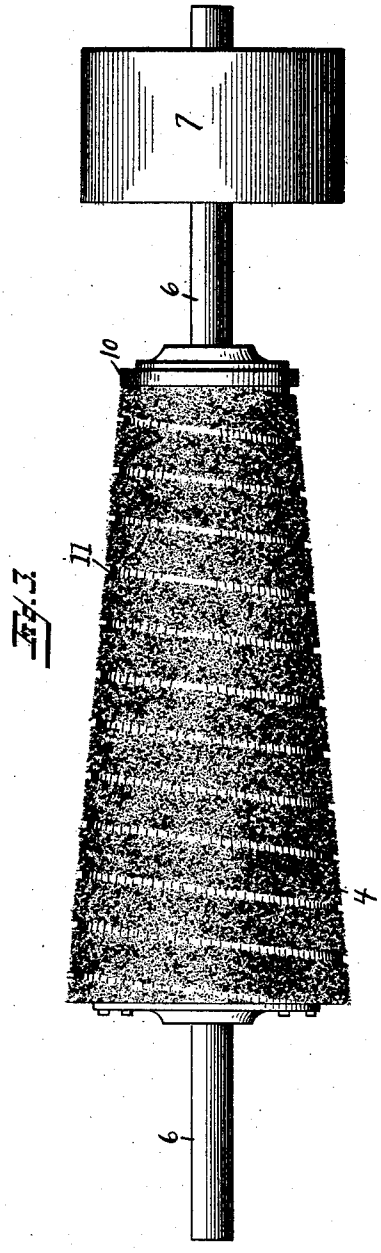

Fig. 1.

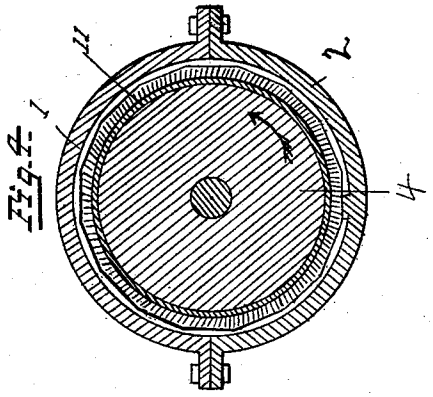

Fig. 2.

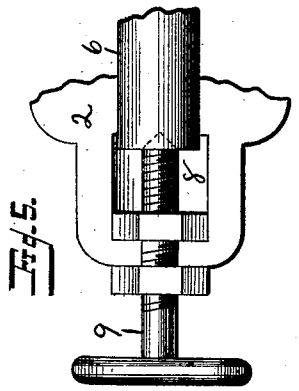

Fig. 5.

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No. 482,909. Patented Sept. 20, 1892.

Fig. 7.

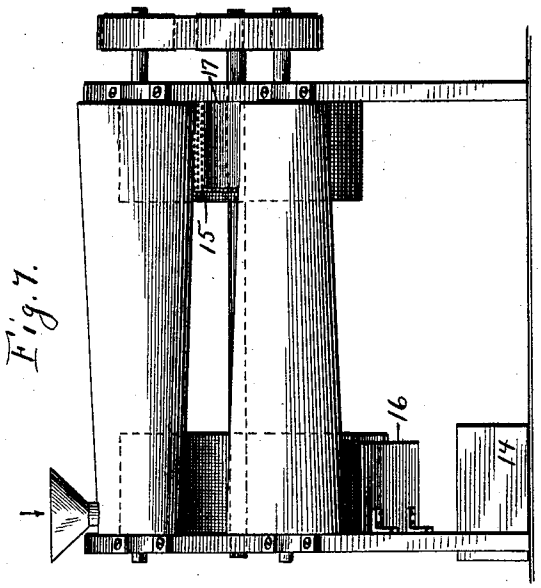
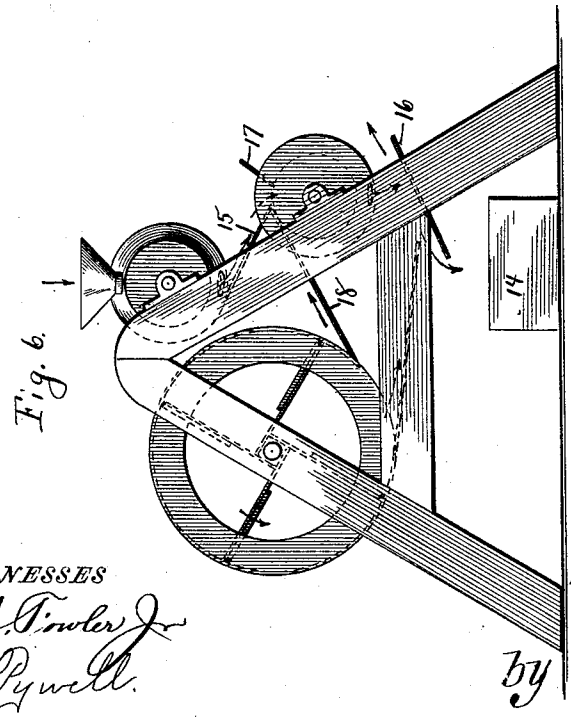


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. B. STOUT, OF CHICAGO, ILLINOIS.

COFFEE-HULLER.

SPECIFICATION forming part of Letters Patent No. 482,909, dated September 20, 1892.

Application filed December 30, 1891. Serial No. 416,574. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. B. STOUT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new, useful, and valuable Improvement in Coffee-Hullers, of which the following is a full, clear, and exact description.

My invention has relation to coffee hullers and polishers; and it consists in the novel construction and arrangement of its parts.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of the huller, showing the manner in which the cone is located between the castings. Fig. 2 is a plan view of the lower casting, showing the spiral concave surface. Fig. 3 is an elevation of the cone. Fig. 4 is a cross-sectional view of the huller. Fig. 5 is a detail view of the end of the huller. Figs. 6 and 7 show how the hullers may be arranged in series in order that the coffee when hulled in the top one will fall into the one below and is polished. The figures also show a pair of fans, one located at each side of the frame. These fans are adapted to blow the hulls out of the coffee as it passes from the huller to the polisher, and also to blow out of the coffee whatever remains of the hulls as the coffee passes from the polisher to the hopper below.

My invention is described as follows: It consists of the castings 1 and 2, each provided on its inner side with a conical concave surface 3, and at the right-hand end said conical concave surface terminates in a cylindrical concave surface 19. These castings when placed together form a shell, and the concave surfaces coming together form a compartment, in which snugly fits the bristled cone 4. The castings are provided with proper bearings 5, which are adapted to carry the shaft 6 of the cone, and on the outer end of the shaft 6 is securely fastened the pulley 7. The cone is also securely fastened to the shaft. The conical concave surfaces of the castings are spirally grooved. Said grooves are about two inches in pitch, and they run from the large end of the castings to the cylindrical surface 19. In the left-hand ends of the castings there is a compartment 8. (See Figs. 1 and 2.) The end of the shaft enters this compartment, and in Fig. 5 is shown a screw 9, which engages the end of the shaft. At the small end of the cone 4 there is a solid circular disk 22, which extends up beyond the periphery of the cone, and this periphery is about on a line with the ends of the bristles. This disk is adapted to revolve on the smooth surface of the concave compartment 19, and fits snugly therein to prevent the coffee from entering the bearings of the castings. This disk is also intended to keep the bristles from engaging the concave sides of the castings, and thus save them unnecessary wear, and the screw 9 at the left hand of the castings is adapted to increase or diminish space between the bristles and the concave surface of the castings to suit the nature of the coffee.

The inner surfaces of the castings are so formed that when placed together they form a continuous spiral groove. The rib between said grooves has its outer periphery made in a series of flat surfaces, forming a polygonal surface.

The periphery of the cone 4 is covered by a flexible material 11, which may be either cloth, leather, rubber, or any analogous material, and in this material is set the wire bristles. This material is wound spirally around the periphery of the cone at about one and one-half inch pitch. (See Fig. 3.) At the small end of the huller is a hopper 12, in which the unhulled coffee is placed, and at the large end of the huller on the under side is the discharge-orifice 13.

My invention is operated as follows: The unhulled coffee is placed in the hopper 12. The cone is then revolved and the coffee descending from the hopper on the cone is carried around and around as the cone revolves, and at the same time the spiral groove in the concave surface of the castings and the bristles arranged spirally on the cone carries the coffee toward the large end of the huller. As the coffee travels around and around and enters the angles made by the flat surface of the grooved partitions coming in contact with each other, and while in this angle it is turned over longitudinally and the other side is exposed to the action of the bristles, and as the bristles on the cone have a different pitch from the grooves in the castings, the coffee is caused to revolve laterally. Thus in the passage of the coffee from the hopper to the dis-

charge 13 it is turned over and over continuously and is thoroughly scraped on all sides by the bristles, and as said bristles are fixed in the flexible material the action is not severe on the coffee, nor is it wearing on the huller, and in Fig. 4 it will be observed that the bristles are inclined away from the direction in which the cone revolves. This also tends to make the action on the coffee less severe.

As stated, Figs. 6 and 7 show a method in which two hullers may be arranged one above the other, and the upper one hulls the coffee and the lower one polishes it. There are also placed in the frame, one at each side, the fans, or there may be a single fan running entirely across from one end of the frame to the other. This fan is intended to blow the hulls and whatever chaff there may be out of the coffee as it passes from the huller to the polisher and to the bin 14. As the coffee comes out of the huller it falls on the perforated piece of sheet metal 15, from which it falls into the polisher and passes through and falls on the inclined plane 16, which carries it to the bin. The flange 17 is intended to keep the light grains of coffee from being blown away by the fan, the partitions 18 serving as a guide for the blast.

There are many ways in which the huller may be arranged in combination with the fan. Therefore I do not restrict myself to the above-described arrangement, it merely being shown and described by way of illustration.

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

1. In a huller, the two-part casing, each part being formed with grooves on its inner periphery, adapted to form a continuous spiral groove when the said parts are secured together, the ribs between said grooves having flat surfaces, whereby the ribs as an entirety are adapted to form a polygonal internal surface, substantially as shown and described.

2. In a huller, the combination, with the two-part casing, each part being formed with grooves on its inner periphery and adapted to form a continuous spiral groove when said parts are secured together, the ribs between the grooves having flat surfaces, whereby the same as an entirety form a polygonal surface, of a revoluble cone arranged between the parts of the casing and covered with flexible material bearing wire bristles and wound spirally around said cone, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. B. STOUT.

Witnesses:
J. D. GRAY,
A. E. GLASCOCK.