(No Model.)

J. H. BEAMER.

MACHINE FOR CLEANING AND POLISHING FRUIT.

No. 534,247. Patented Feb. 19, 1895.

Fig. 1.

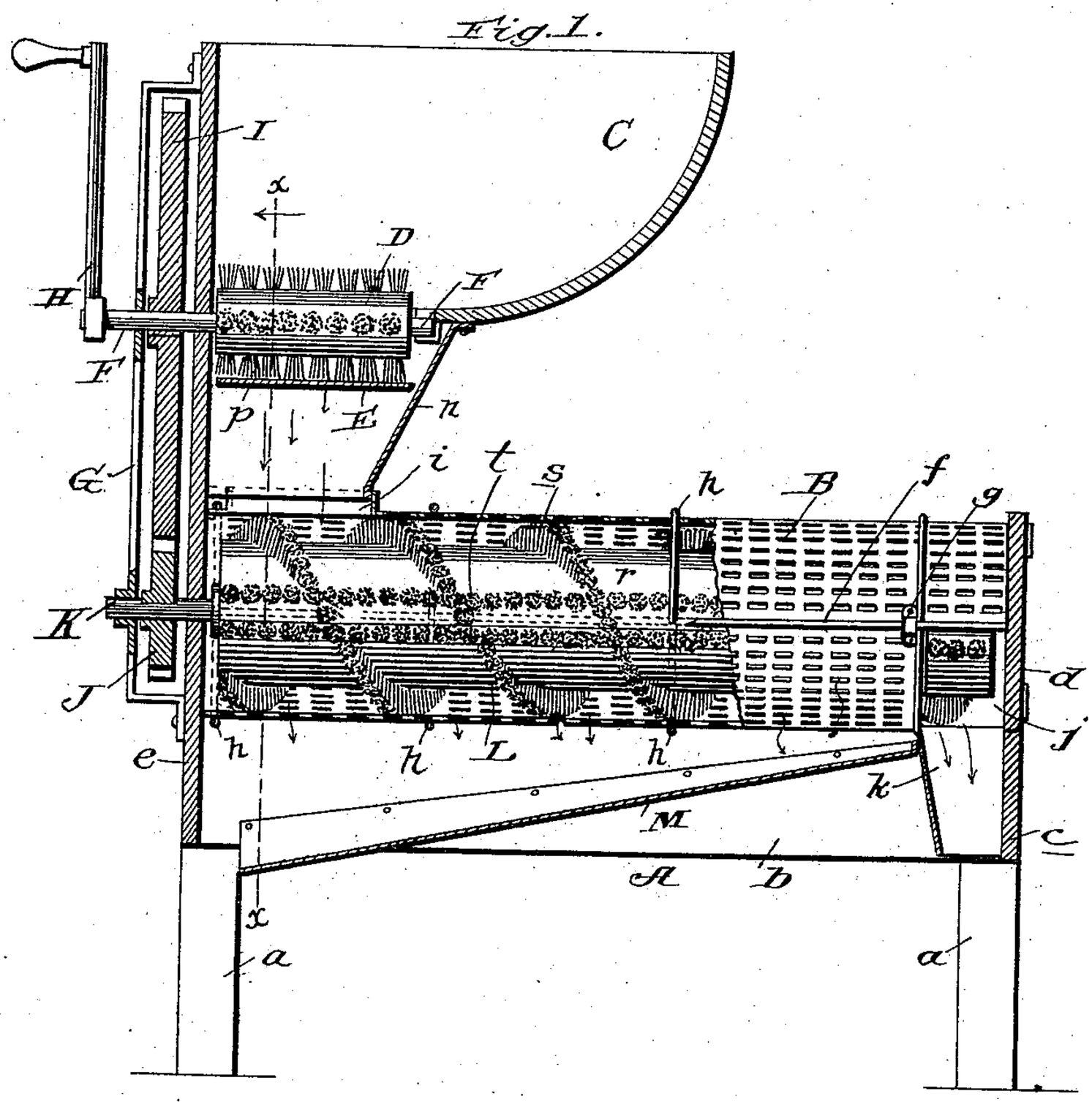


Fig. 2.

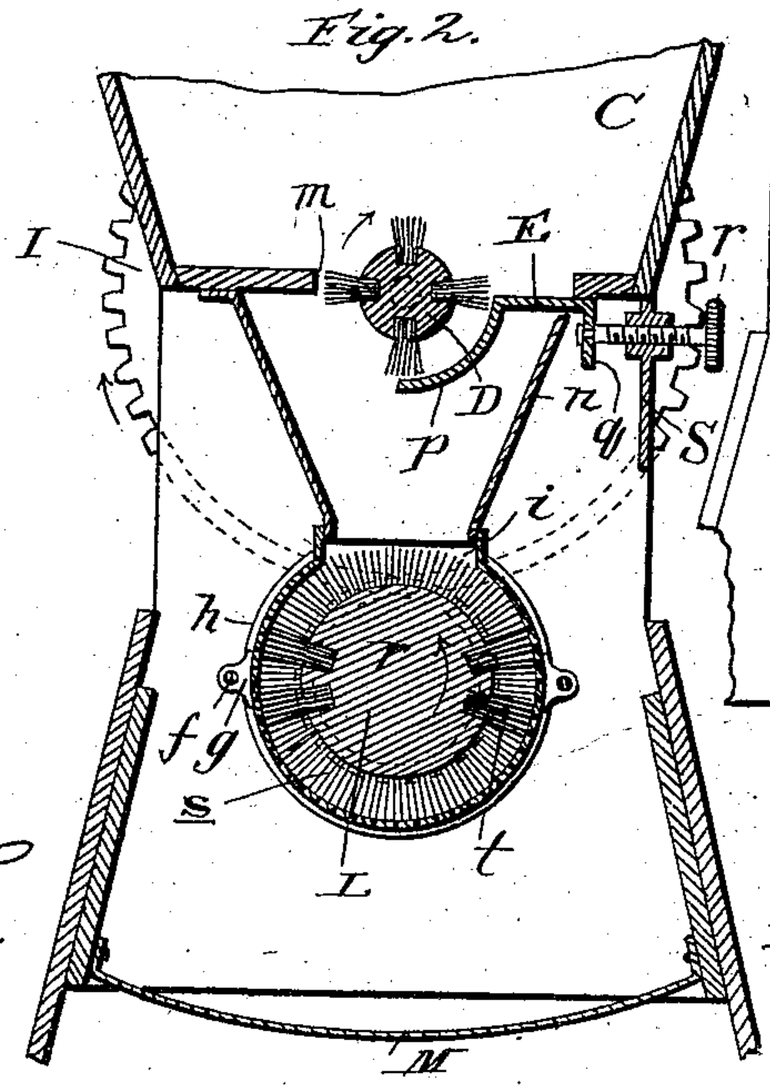
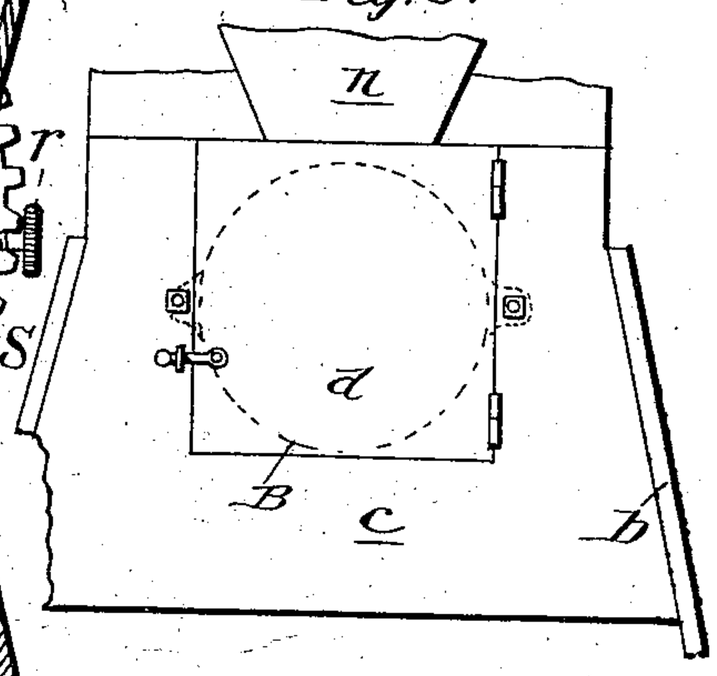


Fig. 3.



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UNITED STATES PATENT OFFICE.

JARED HENRY BEAMER, OF BRAMPTON, CANADA, ASSIGNOR OF ONE-HALF TO WILLIAM P. RYAN, OF SAME PLACE.

MACHINE FOR CLEANING AND POLISHING FRUIT.

SPECIFICATION forming part of Letters Patent No. 534,247, dated February 19, 1895.

Application filed October 17, 1894. Serial No. 526,187. (No model.)

To all whom it may concern:

Be it known that I, JARED HENRY BEAMER, a citizen of the Dominion of Canada, residing at Brampton, in the county of Peel and Province of Ontario, Canada, have invented certain new and useful Improvements in Machines for Cleaning Fruit; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in machines for cleaning and polishing fruit, such as currants, raisins, prunes and the like; and it has for one of its objects to provide a simple, efficient and easily operated fruit cleaning machine and one embodying a horizontal or approximately horizontal foraminous cylinder and a rotary brush; the said brush being adapted in addition to thoroughly cleaning the fruit, to feed or move the same through the cylinder so as to obviate the necessity of inclining said cylinder.

Other objects and advantages of the invention will be fully understood from the following description and claim when taken in connection with the annexed drawings, in which—

Figure 1, is a view, partly in side elevation and partly in longitudinal section, of my improved machine. Fig. 2, is a detail, vertical, transverse section taken in the plane indicated by the line *x*, *x*, of Fig. 1, and Fig. 3, is a detail elevation of the discharge end of the machine illustrating the door through which the brush may be removed.

Referring by letter to said drawings:—A, indicates the main frame of my improved machine which may be of any suitable construction, but which preferably comprises the legs *a*, the side walls *b*, the end wall *c*, having the door *d*, and the comparatively high end wall *e*, and B, indicates the foraminous horizontal cylinder which is supported in the main frame by longitudinal rods *f*, which are arranged in lugs *g*, on its opposite sides and extend through the end walls *c*, *e*, of the main frame, as illustrated. This cylinder B, is preferably made of zinc suitably perforated and provided at intervals in its length with strengthening bands *h*, and it is provided in its upper side adjacent to its forward end with the preferably flanged receiving opening *i*, and also has its lower side cut away at its rear end to form a discharge opening *j*, which is preferably surrounded by a depending spout *k*, as better shown in Fig. 1, of the drawings.

C, indicates the feed hopper which is preferably connected to the frame wall *e*, and is arranged above the cylinder B. This hopper C, has an opening *m*, in its bottom and a depending spout *n*, which takes into the receiving opening *i*, of the cylinder B, and in the said opening *m*, of the hopper, is arranged a rotary brush D, which is designed and adapted to facilitate the passage of the fruit to the cylinder B. The opening *m*, is much larger than the diameter of the brush D, which is arranged adjacent to one side thereof, as shown, in order to afford play for the adjustable feed regulating plate E, better shown in Fig. 2. This plate E, which is designed to vary the size of the opening *m*, in order to suit fruits of different sizes, is interposed between one of the walls of the spout *n*, and the bottom of the hopper and has a concave portion *p*, at its inner end to conform to the brush and a flange *q*, at its outer end to receive the screw *r*, which screw takes through a suitable bearing *s*, depending from the hopper and is designed and adapted to adjust and adjustably fix the plate E, for the purpose above stated.

The shaft F, of the brush D, extends through the frame wall *e*, and through a bracket bearing G, connected thereto, and it is provided with a crank H, through the medium of which it may be conveniently turned and with a gear wheel I, which latter meshes with and is designed to transmit motion to a gear wheel J, on the shaft K, of the cleaning brush L. This cleaning brush L, is arranged and adapted to turn in the cylinder B, and it comprises the body *r*, which is preferably of a circular form in cross-section, the spirally arranged tufts of bristles *s*, which are designed, in addition to brushing and cleaning the fruit, to move the same along the cylinder toward the discharge end thereof, and the straight, longitudinal rows of bristles *t*, on opposite sides of the body which are adapted to brush any fruit that may pass around the

inside of the cylinder between the spirally arranged tufts of bristles *s*, so as to render it impossible for any fruit to pass through the cylinder without being thoroughly brushed and cleaned.

M, indicates an inclined chute which is connected to the main frame A, below the cylinder B, and is designed and adapted to catch the dirt, dust, and stems, as they fall from the cylinder and convey the same to a suitable receptacle place to receive them.

In operating my improved mechanism after the feed regulating plate E, is adjusted to suit the size of the fruit to be cleaned, the fruit is placed in the hopper C, and the crank H, is turned so as to rotate the feed-facilitating brush D, and the cleaning brush L, when the fruit will be caused to pass through the bottom of the hopper and the spout *n*, into the cylinder B, where it will be engaged by the rows of bristles *s*, *t*, of the brush L, and brushed against the inside of the cylinder and caused to move toward the rear end thereof from whence it will drop through the opening *j*, and spout *k*, into a receptacle placed to receive it. The dust and dirt removed from the fruit is forced by the action of the brush, through the perforations of the cylinder and falling upon the chute M, is conveyed to a receptacle placed to receive it. For this reason the machine is not likely to become clogged with dirt, but if it does become clogged, the brush L, may be readily removed through the door *d*, and cleaned and the cylinder may then be also readily cleaned.

It will be seen from the foregoing description that my improved machine is very cheap, simple and efficient and that while the brush L, is designed and adapted to move the fruit along the cylinder so as to obviate the necessity of inclining the cylinder, it requires no greater effort to rotate it than does the brush in an inclined cylinder.

Having described my invention, what I claim is—

A fruit cleaning machine comprising the main frame having the door *d*, at one end, the horizontal foraminous or perforated cylinder arranged in the main frame, the rotary cleaning brush arranged in said cylinder in alignment with the door *d* and having spirally arranged rows of bristles *s*, and straight longitudinal rows of bristles *t*, the hopper arranged above the cylinder and having an opening *m*, in its bottom and also having the depending spout *n*, communicating with the interior of the cylinder, the rotary feed-facilitating brush arranged in the opening *m*, in the hopper bottom, the feed regulating plate arranged at the bottom of the hopper and having the concave portion at its inner end, and an angular portion *q*, at its outer end, a screw for adjusting and adjustably fixing said plate, taking through an aperture in the angular branch thereof and suitable means for rotating the feed-facilitating brush and the cleaning brush, substantially as and for the purpose set forth.

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

JARED HENRY BEAMER.

Witnesses:
W. F. SCOTT,
R. HAGGERT,