No. 659,579. Patented Oct. 9, 1900.

F. H. CHASE.

RAISIN SEEDER.

(Application filed July 1, 1898.)

(No Model.) 2 Sheets—Sheet 1.

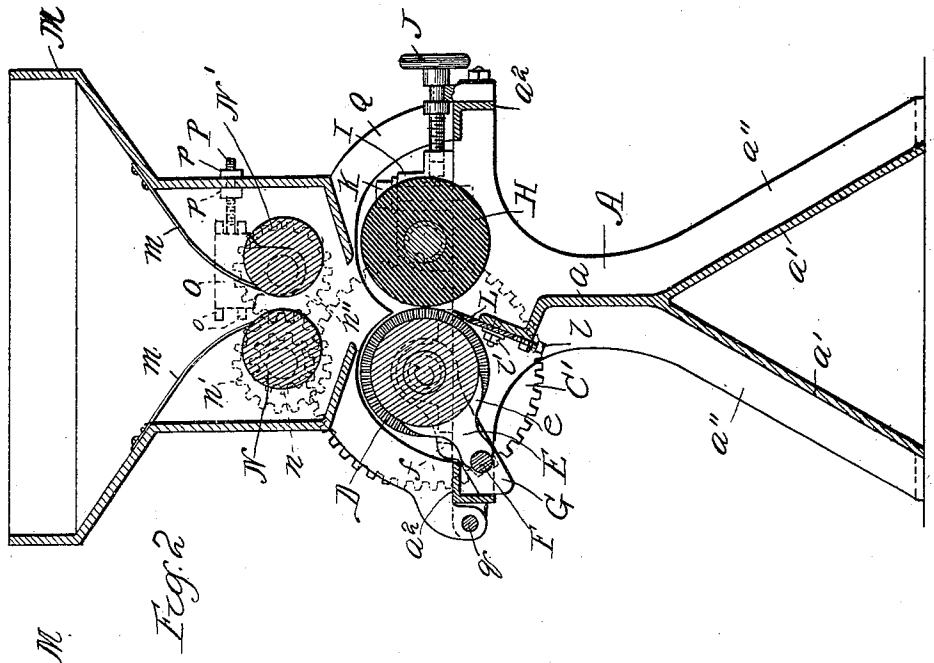


Fig. 2.

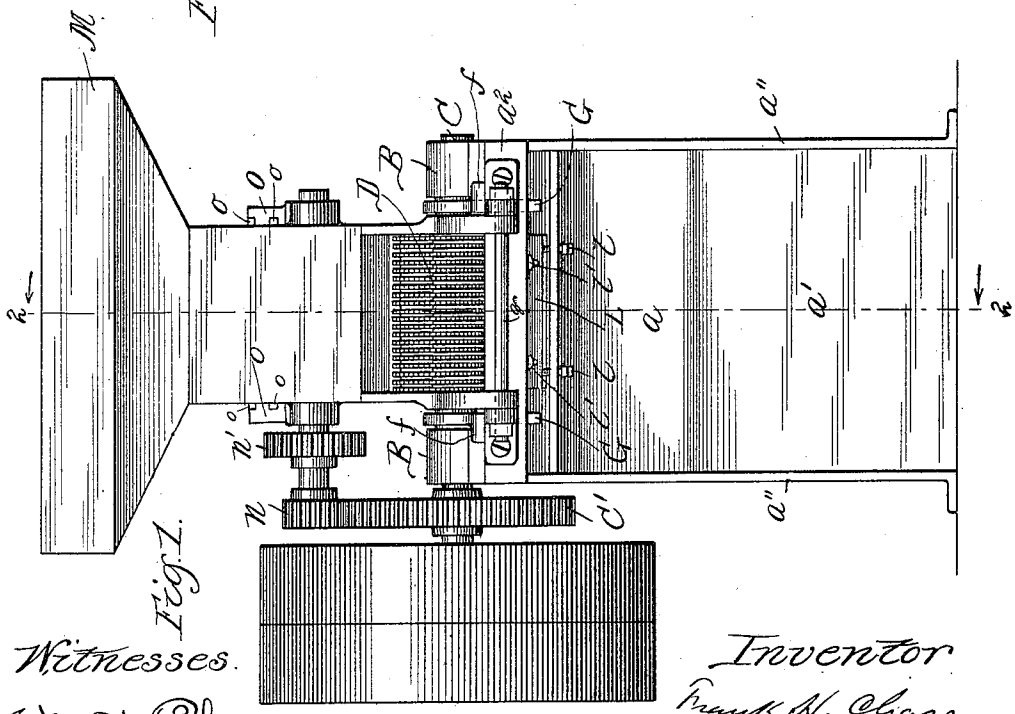


Fig. 1.

Witnesses.
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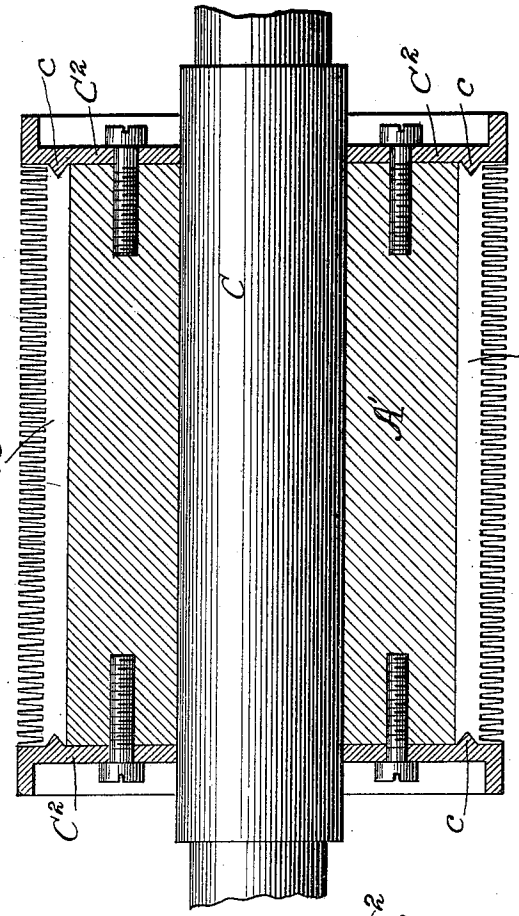


Fig. 4.

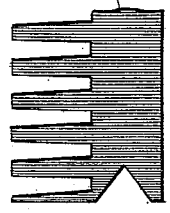


Fig. 6.

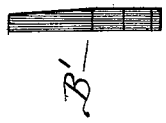


Fig. 5.

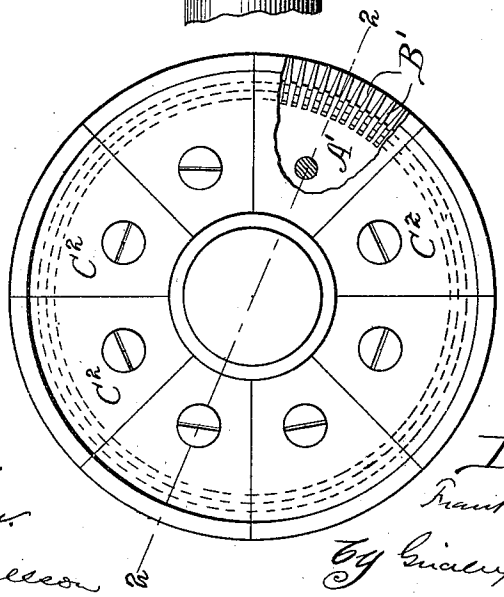


Fig. 3.

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UNITED STATES PATENT OFFICE.

FRANK H. CHASE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ENTERPRISE MANUFACTURING COMPANY OF PENNSYLVANIA, OF PHILADELPHIA, PENNSYLVANIA.

RAISIN-SEEDER.

SPECIFICATION forming part of Letters Patent No. 659,579, dated October 9, 1900.

Application filed July 1, 1898. Serial No. 684,977. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. CHASE, a citizen of the United States, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Raisin-Seeders, of which the following is a specification.

The present invention relates in part to the means for feeding the raisins to the seeding device, in part to the construction of the pulp-receiver, in part to the means for ejecting the pulp from the pulp-receiver, and in part to the general construction and arrangement of the several parts of the machine.

The invention consists in the features of novelty that are herein fully described.

In the accompanying drawings, Figure 1 is a side elevation of a raisin-seeder embodying the invention. Fig. 2 is a vertical section thereof on the line 2 2, Fig. 1. Fig. 3 is an end elevation, on a larger scale, of the pulp-receiver with a portion broken away. Fig. 4 is a section thereof on the line 4 4, Fig. 3. Fig. 5 is an end view, on a still larger scale, of one of the toothed strips of the pulp-receiver. Fig. 6 is a side elevation of a fragment thereof.

A represents the base or main portion of the frame of the machine. It consists of a centrally-disposed web a, below which are downwardly-diverging webs a', which in vertical section present the form of an inverted V, these webs being bound by flanges a'' and the latter being surmounted by a rectangular frame a^2. Upon this base are mounted journal-boxes B, in which is journaled the shaft C of the pulp-receiver D. This pulp-receiver takes the form of a cylinder armed with numerous radial pins disposed at such distance apart that the seeds of the fruit cannot enter between them. As shown more clearly in Figs. 3 to 6, inclusive, the pulp-receiver is constructed of a backing A', which preferably takes the form of a cylinder, of brass or other suitable material, having a number of grooves disposed radially and longitudinally, a toothed strip B' fitting in each of the grooves, and a number of sector-shaped plates C^2 secured to the ends of the cylinder and having ribs c, which engage corresponding notches in the ends of the strips, the ends of the cylinder being also notched between the grooves to receive the ribs. The toothed strips are made of sheet metal, and the teeth are beveled on one side, so that when the several strips are assembled and secured in place the front faces of the teeth will have a backward rake or pitch to facilitate ejecting the pulp.

In the space between each circumferential row of pins and the next is disposed the crescent-shaped portion of a pulp-ejector blade E, which preferably consists of a piece of metal the crescent-shaped end of which is curved to conform to the cylinder which it straddles and the other end of which has an open notch curved to conform to a shaft F, which it straddles and which is supported by a pair of hangers G, mounted upon the shaft C. The working surfaces of the ejector-blades are curved, as shown at e, and preferably each of them has two working surfaces, so that should one become disabled or broken the blade may be reversed and the other used.

H is the impaling device. Preferably it consists of an elastic roller mounted upon a shaft which is journaled in boxes I, slidably mounted upon the frame, set-screws J being provided for adjusting the position of the impaling-roll with relation to the pulp-receiver and locking-screws K being provided for securing the boxes in place when adjusted. As indicated in Fig. 2, these locking-screws pass through slots in the boxes and are tapped into the frame of the machine.

For the purpose of dislodging the seeds from the surface of the pulp-receiver a blade or scraper L is secured to an extension of the web a, and this blade is adjustable by means of set-screws l, occupying threaded openings in lugs on the frame, clamping-bolts and nuts l' being provided for locking the scraper in place when once adjusted.

M represents the hopper, into which the fruit to be seeded is dumped. The hopper is provided with a false bottom consisting of two flexible sheets or plates m, which are preferably made of sheet metal. At their lower margins these flexible plates rest upon a pair of cylindrical feed-rolls N N', respec-

tively. The feed-roll N is journaled eccentrically, and to its shaft is secured a pinion n, meshing with a larger pinion C', which latter is mounted upon the shaft C. Upon the shaft of this feed-roll is secured also a pinion n', which meshes with a corresponding pinion n'', secured to the shaft of the feed-roll N'. By this means the shaft of the feed-roll N derives its movement from the shaft of the pulp-receiver and the shaft of the feed-roll N' derives its movement from the shaft of the feed-roll N. The feed-rolls are rotated in such direction that their adjacent faces always move upward. Both of the feed-rolls are journaled eccentrically, and they are so disposed with relation to their respective axes of motion that the longest or any other given radii of both project in the same direction from their respective axes of motion. As a result of this disposition of the feed-rolls the distance apart of their adjacent faces remains constant throughout their operation, but the position of the space between them is being constantly shifted in a horizontal direction. The flexible sheets m, forming the false bottom of the hopper, partake of the movement of the eccentrically-mounted feed-rolls, and as a result of this the fruit is considerably agitated. Actual practice has demonstrated that the liability of choking is entirely overcome and the feeding of the fruit to the seeding devices is quite as uniform as it need be.

In order to adjust and regulate the width of the space between the feed-rolls for the purpose of handling fruit of different sizes, one of the feed-rolls is made adjustable relatively to the other. This is accomplished by journaling the shaft of the adjustable roll in boxes O, which are slidably supported by guides o and by providing an adjusting-screw P, which projects through a web on the hopper and receives upon opposite sides of the web, respectively, a pair of lock-nuts p.

In order that access may be had to the seeding devices for the purpose of removing them or repairing them or cleaning them, the hopper and the feeding devices are supported by a frame-section Q, which is hinged to the main frame A at q, so that the entire frame-section and the devices carried by it may be swung or moved from their position over the seeding devices, leaving the latter exposed. When so exposed, either the impaling-roll H or the pulp-receiver D may be removed. By reason of the fact that the ejectors E are supported by the shaft F, which in turn is supported by the hangers G, mounted upon the shaft of the pulp-receiver when the pulp-receiver is removed, all of the pulp-ejectors are removed with it. In order to maintain the pulp-ejectors in proper positions—*i.e.*, the positions shown in the drawings—the hangers G are provided with shoulders f, which engage the portion a^2 of the frame.

In the foregoing description I have stated that the invention relates to an improvement in raisin-seeders; but manifestly a machine embodying its several features or any of them may be used for seeding fruit other than raisins. Furthermore, the feeding device, which forms a part of the invention, may be used in any machine which requires means for feeding at a regulated rate the material upon which it is intended to act. For example, it may be used in mills for grinding or otherwise treating grain and in other machines of similar nature.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a feeding device, the combination of a pair of cylindrical feed-rolls journaled eccentrically and disposed side by side but out of contact with each other, so as to provide a feed-passage of predetermined width between the two rolls and with radii of equal length projecting in the same direction from their respective axes of motion, and means for revolving the rolls, whereby the feed-passage is caused to vibrate horizontally, substantially as set forth.

2. In a feeding device, the combination of a pair of eccentrically-journaled feed-rolls disposed side by side but out of contact with each other, so as to provide a feed-passage of predetermined width and with radii of equal length projecting in the same direction from their respective axes of motion, and means for revolving them so that their adjacent faces move upward, whereby the feed-passage is caused to vibrate horizontally, substantially as set forth.

3. In a feeding device, the combination of a pair of cylindrical feed-rolls journaled eccentrically and disposed side by side but out of contact with each other, so as to provide a feed-passage of predetermined width, means for revolving them so that their adjacent faces move upward, whereby the feed-passage is caused to vibrate horizontally, and a hopper having a bottom formed in movable sections bearing upon the feed-rolls so as to partake of their movement, substantially as set forth.

4. In a feeding device, the combination of a pair of cylindrical feed-rolls journaled eccentrically and disposed side by side but out of contact with each other, so as to provide a feed-passage of predetermined width, means for revolving them whereby the feed-passage is caused to vibrate horizontally, and a hopper having a bottom formed of sheets of flexible material resting upon the feed-rolls so as to partake of their movement, substantially as set forth.

5. In a raisin-seeder the combination with a pulp-receiver consisting of a cylinder having circumferential grooves, of pulp-ejectors occupying the grooves, a shaft by which the pulp-ejectors are supported, said ejectors being notched at one end to straddle the shaft, and at the other end to straddle the cylinder, and hangers supporting the shaft and in turn supported by the shaft of the pulp-receiver substantially as set forth.

6. In a raisin-seeder, the combination of a cylinder provided with grooves disposed longitudinally, metallic strips occupying the grooves, and having teeth presented outwardly, means for confining the strips in the grooves, so that the teeth fall in circumferential rows, means for impaling the pulp upon the teeth, the interstices between the teeth being insufficient to admit the seeds, and means occupying the spaces between the circumferential rows of teeth for ejecting the pulp, substantially as set forth.

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Witnesses:
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L. M. HOPKINS.