

(No Model.)

2 Sheets—Sheet 1.

S. B. BLISS.
RAISIN SEEDER.

No. 572,858.

Patented Dec. 8, 1896.

FIG. 1.

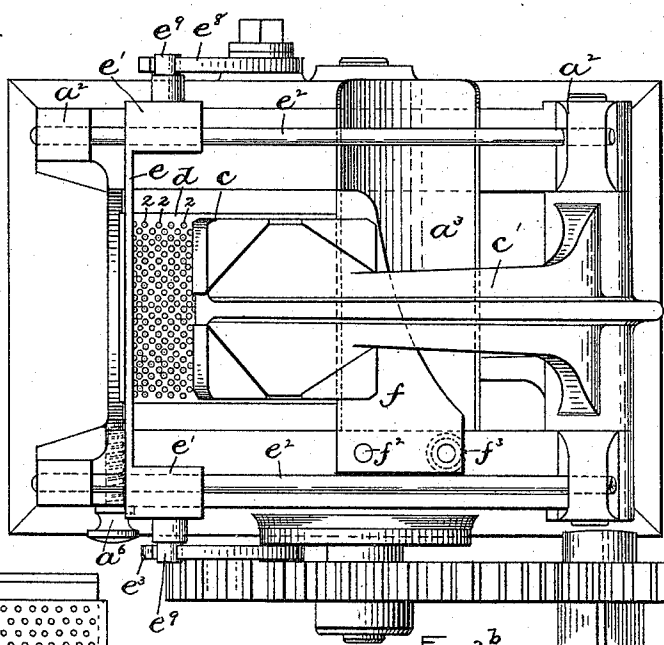


FIG. 2^a.

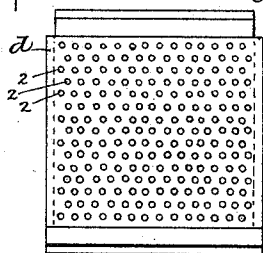


FIG. 2^b.

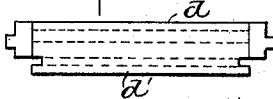


FIG. 2^c.

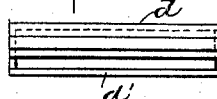
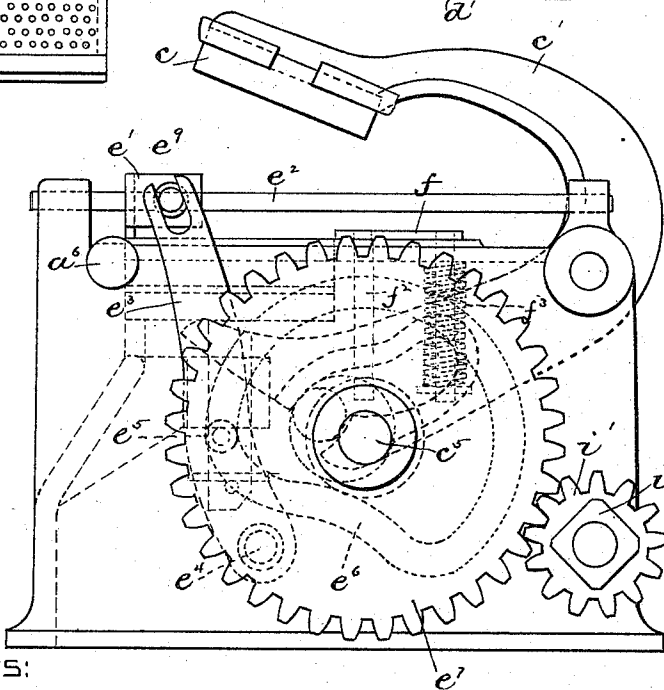


FIG. 2.



WITNESSES:

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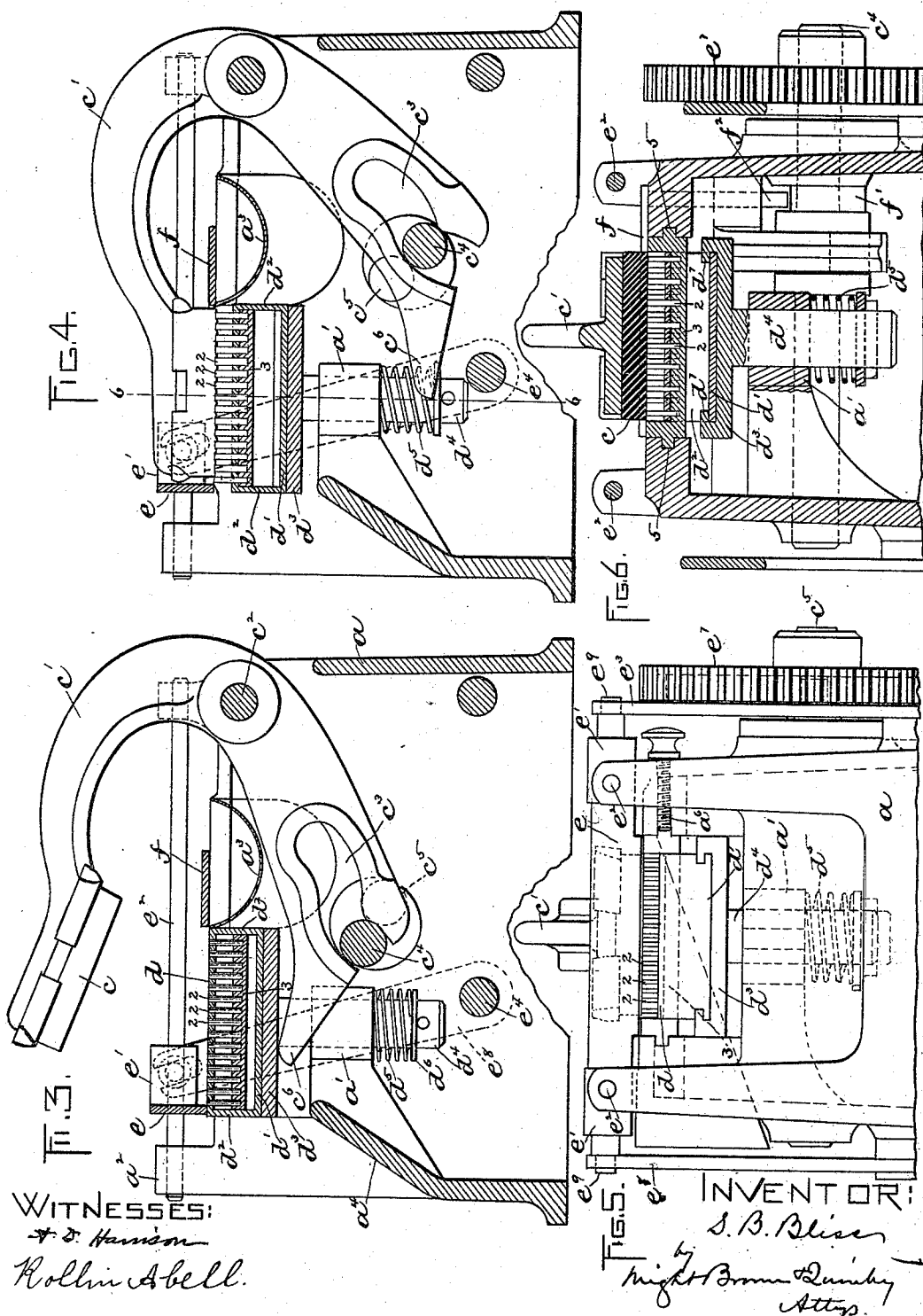
(No Model.)

2 Sheets—Sheet 2

S. B. BLISS.
RAISIN SEEDER.

No. 572,858.

Patented Dec. 8, 1896.



UNITED STATES PATENT OFFICE.

SAMUEL B. BLISS, OF PASADENA, CALIFORNIA.

RAISIN-SEEDER.

SPECIFICATION forming part of Letters Patent No. 572,858, dated December 8, 1896.

Application filed June 10, 1895. Serial No. 552,213. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL B. BLISS, of Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Raisin-Seeder, of which the following is a specification.

This invention relates to raisin-seeding machines of the character set forth in Letters Patent No. 509,649, granted to me November 28, 1893, said patent showing a bed having interstices or openings into which the meat or pulp of the raisins may be pressed, but which will not admit the seeds, a yielding presser to press the meat or pulp of the raisins into the interstices of the bed, means for ejecting the pulp from the interstices of the bed, and a scraper which is movable across the bed and alternately sweeps off the seeds which have been detained on the surface of the bed and the pulp which has been first forced downwardly into the interstices of the bed and then raised therefrom by the ejecting means.

The present invention has for its object to provide certain improvements in the construction of a machine of this class, said improvements comprising a bed composed of a plurality of independent wires adapted to impale the pulp of the raisins, each tooth being surrounded by a pulp-receiving space.

My improvements also comprise an ejecting device, preferably composed of a perforated plate movable upon said pins.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top plan view of my improved machine. Fig. 2 represents an end view of the same. Fig. 2^a represents a top view of the impaling-bed and ejector removed from the machine. Figs. 2^b and 2^c represent edge views of said bed and ejector, as shown in Fig. 2^a. Figs. 3 and 4 represent longitudinal sections of the machine, showing it at different stages of the operation. Fig. 5 represents a front elevation of the machine. Fig. 6 represents a section on line 6 6 of Fig. 4.

The same letters and numerals of reference indicate the same parts in all the figures.

In the drawings, *a* represents the supporting-frame having a fixed pulp-impaling bed composed of a plurality of wire pins or teeth 2, thickly arranged on a base or supporting-plate 3, which may be secured to the frame

in any suitable way, preferably by means of ribs at the ends or sides of said plate and grooves 5 5, Fig. 6, in the supporting-frame receiving said ribs, the impaling-bed being thus detachable from the frame. The pins or teeth are of such size that they can readily penetrate the pulp of raisins pressed upon them, each being surrounded by a pulp-receiving space.

c represents the presser, which forces the raisins against the impaling-bed and having a plain or smooth surface free from projections or depressions, said presser being here shown as a block of elastic material, such as rubber or a compound thereof, of sufficient size to cover the impaling-bed. The presser is affixed to a lever *c'*, which is pivoted at *c*² to the supporting-frame *a* and is provided in its lower portion with a cam-shaped slot or recess *c*³, which receives a crank wrist-pin *c*⁴ on the driving-shaft *c*⁵, the arrangement of the lever *c'*, slot *c*³, and wrist-pin *c*⁴ being such that the rotation of the shaft oscillates the lever *c'* and thus alternately depresses the presser *c* into contact with the impaling-bed and raises it from said bed. I do not, however, limit myself to this construction of the presser, as it may be of any suitable construction and may be operated by any suitable means. When the presser is depressed, it forces the pulp of a raisin placed upon said bed downwardly into the spaces surrounding the pins 2, said pins being so close together that the seeds cannot enter the spaces, but remain at the upper ends of the pins and are forced into the yielding material of the presser.

d represents an ejector or stripper, which is preferably a plate provided with numerous orifices corresponding in form and arrangement to the pins 2, the said plate being movable vertically upon said pins and acting to eject the pulp from between the pins, as hereinafter described. I do not limit myself, however, to this construction, and may make the ejector or stripper in the form of a series of tongues movable between the ranks of pins, or it may be of any other suitable construction.

The ejector is supported by means of a plate *d'*, having at its ends or sides ears *d*², which project upwardly and are rigidly affixed to

the ends of the ejector, said ears being located at opposite ends of the pin-supporting plate 3. The plate d' rests upon a base-plate or carrier d^3 , which is formed on or affixed to a stud d^4 , the latter being vertically movable in a socket formed in a guiding arm or bracket a' , affixed to the supporting-frame a . The carrier d^3 is provided with guides or ears d' , Fig. 6, which engage the edges of the plate d' , said plate being removable from the carrier by sliding it between said ears. This construction enables the impaling-bed and the ejector to be removed together from the machine, in order that they may be readily and conveniently cleaned, the guides 5 5 permitting the ready removal of the impaling-bed from the frame, while the guides d' d' on the carrier permit the removal of the ejector with the impaling-bed. When the machine is in use, the said parts are locked in the frame and prevented from being withdrawn therefrom by means of a movable detent, which, as here shown, is a screw a^6 , located in a socket in the supporting-frame and arranged to bear against the outer end of one of the side pieces of the impaling-bed, as shown in Figs. 1 and 5, thus preventing the withdrawal of the impaling-bed and ejector from the machine. When said screw is turned outwardly, the bed and ejector may be readily withdrawn. The carrier d^3 and the ejector supported thereby are normally pressed downwardly by means of a spring d^5 , interposed between the under side of the guide a' and a collar d^6 , affixed to the stud d^4 . The lever c' is provided with a projection or toe c^6 , which bears on the under side of the ejector-carrier d^3 and is arranged so that when the lever is moved to raise the presser the said toe c^6 will raise the carrier d^3 and the ejector, thus causing the latter to eject from between the pins 2 the raisin-pulp that has been forced therebetween by the presser.

e represents a scraper, which is a metal bar affixed at its ends to slides e' , which are fitted to slide upon horizontal guide-rods e^2 , secured to ears a^3 on the supporting-frame.

The scraper e is arranged to move back and forth across the impaling-bed, the lower ends being substantially flush with the upper ends of the pins 2, so that when the scraper is moved horizontally it will detach and sweep from the ends of the pins the seeds or the pulp, as the case may be, the scraper removing the seeds when moving in one direction and the pulp when moving in the opposite direction, this result being due to the fact that after the scraper has moved across the ends of the pins to sweep off the seeds and deposit them in a chute a^3 , provided for their reception while the ejector is depressed, the ejector is raised and forces the pulp above the upper ends of the pins, so that when the scraper moves in the opposite direction it sweeps off the pulp and causes it to drop onto an incline a^4 on the supporting-frame.

The scraper e is operated by means of an

arm e^3 at one side of the supporting-frame, said arm being affixed to a shaft e^4 , passing through the supporting-frame and journaled therein, a trundle-roll e^5 on said arm entering a cam-groove e^6 in a gear e^7 on the driving-shaft, and another arm, e^8 , affixed to the opposite end of the shaft e^4 . The arms e^3 and e^8 are provided with slots at their upper ends, which receive studs e^9 e^9 , projecting from the slides e' . The rotation of the gear e^7 causes the cam e^6 to oscillate the arm e^3 , the movements of the latter being transmitted, through the shaft e^4 , to the arm e^8 , the two arms jointly causing a back-and-forth motion of the scraper.

f represents a vertically-movable scraper which is located at one end of the impaling-bed and is alternately raised and depressed, so that it removes from the scraper any seeds that may adhere thereto after the scraper is moved across the pins to sweep the seeds therefrom.

The scraper f is raised by means of a cam f' , Fig. 6, on the shaft c^4 , a stud f^2 , affixed to the blade f and passing downwardly through a socket in the supporting-frame, its lower end being arranged to bear upon the cam when the latter rises, so that the cam raises the scraper, and a spring f^3 , (shown in dotted lines in Fig. 2,) said spring being arranged to depress the scraper f when it is released by the cam f' .

The described parts are timed to operate as follows: When the presser descends upon the impaling-bed, the ejector also descends, so that when the presser comes in contact with the pins the ejector is depressed, as shown in Fig. 4, leaving the spaces surrounding the pins for the reception of the pulp, which is forced downwardly between the pins by the presser, the seeds remaining at the upper ends of the pins. At this time the scraper is at the left-hand end of the impaling-bed, as shown in Figs. 1, 2, 3, and 4. When the presser rises and before the ejector rises, the scraper e moves across the impaling-bed, sweeping the seeds into the chute a^3 . While the scraper e is at the right-hand end of the impaling-bed the ejector d rises and ejects the pulp from between the pins, leaving it at the upper ends of the pins, so that when the scraper e returns to the position shown at the left-hand end of the impaling-bed it sweeps the pulp from the pins and ejector and causes it to fall upon the incline a^4 .

The driving-shaft c^5 may be impelled by hand through a crank engaged with a square shoulder i on a pinion i' , which is journaled on the supporting-frame and meshes with the gear e^7 on the driving-shaft, or it may be impelled by power applied in any suitable way.

I claim—

1. A raisin-seeder comprising a horizontal pulp-impaling bed composed of a plurality of closely-set vertical pins, an elastic presser movable toward and from the bed, an ejector movable in the spaces between the pins, the

said presser being adapted to force raisin-pulp into the spaces between the pins and leave the seeds on the ends of the pins, a spring for normally holding the ejector downward, means for positively raising the ejector, and a scraper movable across the ends of the pins.

2. A raisin-seeder comprising a fixed horizontal pulp-impaling bed composed of a plurality of closely-set vertical pins, a movable elastic presser having a smooth or plain surface, an ejector mounted on a vertically-movable stud and movable in the spaces between the pins, a spring for pressing the stud downward, means for positively raising the stud, a sliding scraper adapted to remove seeds from the tops of the pins, and means for removing seeds from said scraper.

3. A raisin-seeder comprising a supporting-frame, an impaling-bed composed of a base-plate with a plurality of projecting wires or teeth and detachably engaged with the supporting-frame, a stud d^4 vertically movable in a socket in the frame, a carrier d^3 on the stud and having guides d^7 , a plate d' fitting said guides, and an ejector supported by said plate d' , substantially as described.

4. A raisin-seeder comprising a supporting-frame having horizontal guide-rods e^2 , the impaling-bed composed of a base part and a plu-

rality of pins, wires, or teeth, the stripping or ejecting plate movable on or between the said wires, pins, or teeth, a presser having an elastic exterior for properly impaling the raisin on the impaling-bed, a scraper for removing the fruit and seeds from the face of the impaling-bed and having slides e' fitted to said guide-rods, and a second scraper for removing adhering matter from the first-mentioned scraper.

5. A raisin-seeder comprising a supporting-frame, a carrier fitted to move on said frame, a perforated stripper-plate detachably engaged with said carrier, an impaling-bed composed of a base-plate and a plurality of wires projecting upwardly therefrom through the perforations in the stripper-plate, said base-plate being detachably engaged with the supporting-frame, and a movable locking device whereby the stripper-plate and impaling-bed may be detachably secured to the frame.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of May, A. D. 1895.

SAMUEL B. BLISS.

Witnesses:

ROBERT STRONG,
MERRILL WHITON.