

No. 608,108.

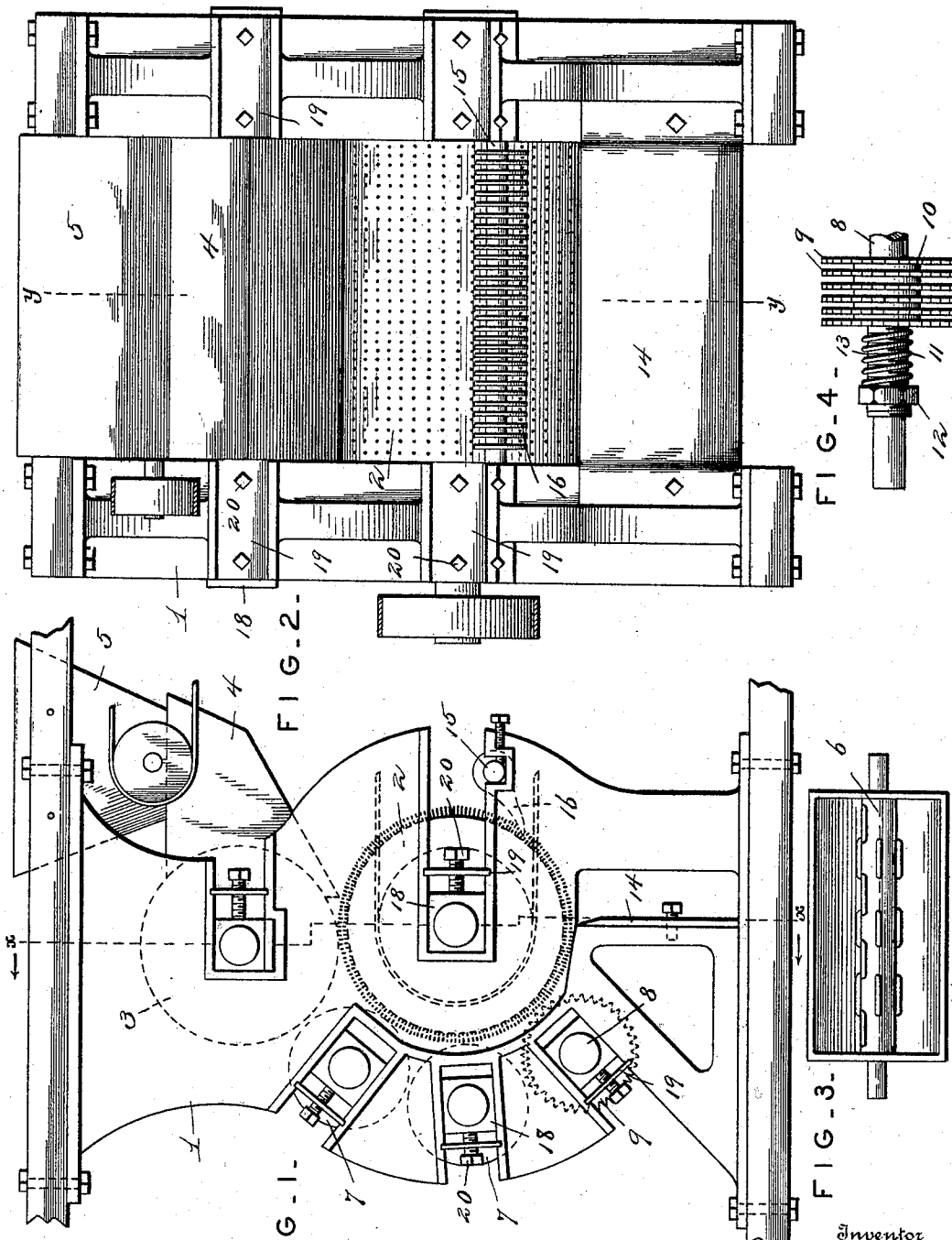
Patented July 26, 1898.

C. S. COX.
RAISIN SEEDER.

(No Model.)

(Application filed Oct. 2, 1897.)

2 Sheets—Sheet 1.



Witnesses
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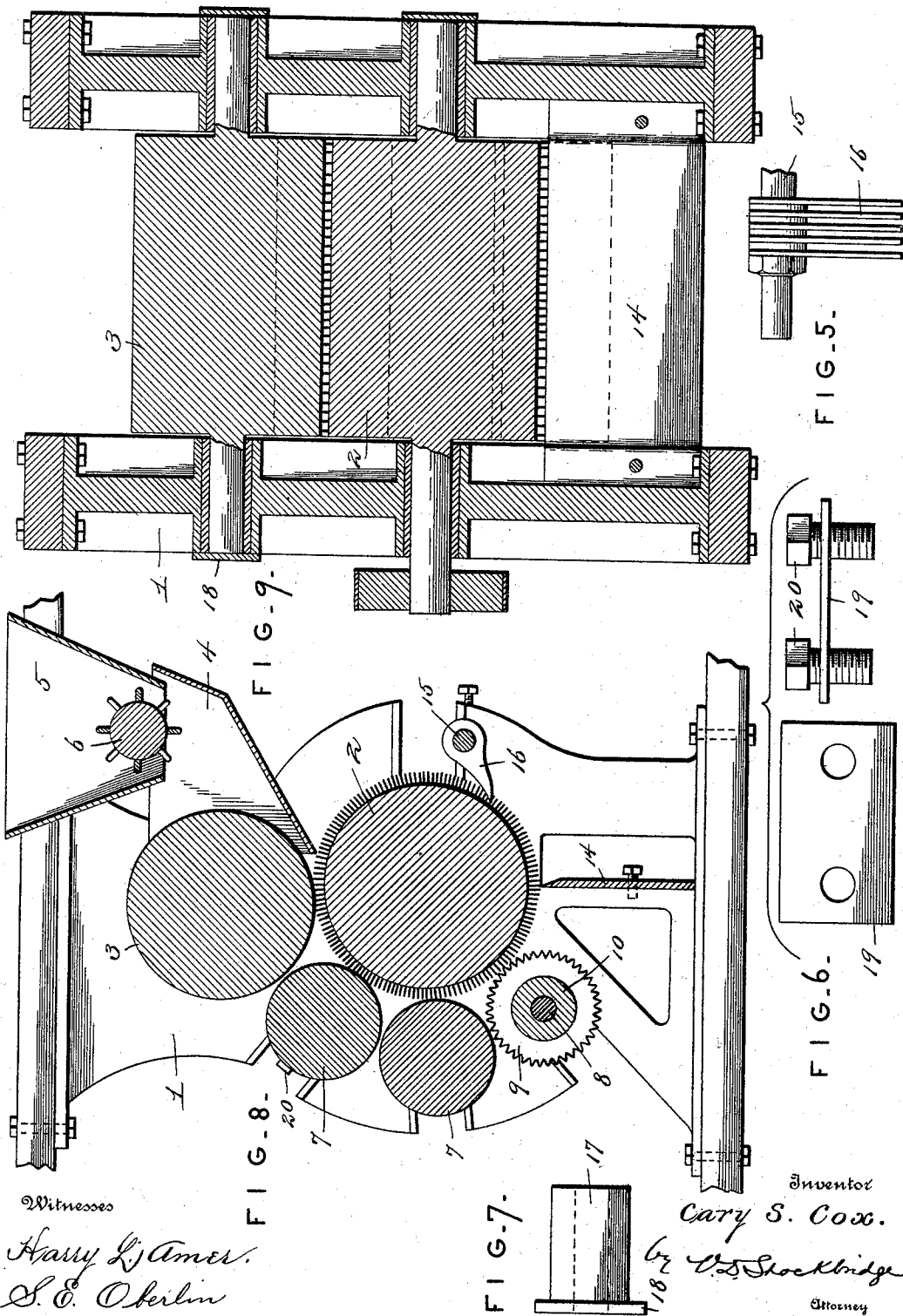
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UNITED STATES PATENT OFFICE.

CARY S. COX, OF FRESNO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO THE PHOENIX RAISIN SEEDING AND PACKING COMPANY, OF FRESNO COUNTY, CALIFORNIA.

RAISIN-SEEDER.

SPECIFICATION forming part of Letters Patent No. 608,108, dated July 26, 1898.

Application filed October 2, 1897. Serial No. 653,889. (No model.)

To all whom it may concern:

Be it known that I, CARY S. COX, residing at Fresno, in the county of Fresno and State of California, have invented certain new and useful Improvements in Raisin-Seeders; and I do hereby 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.

This invention relates to a machine or apparatus for seeding raisins; and it consists, essentially, of a pair of rolls operated to turn toward each other, and one of which is provided with impaling projections so closely arranged that while the pulp of the fruit is forced into the same the seeds, being hard and of too great size to enter the dividing-spaces, remain at the projecting ends or points thereof and are thus thrust through the skin of the fruit, which breaks to allow their exit, and are afterward removed by auxiliary devices which will be hereinafter fully set forth and forming the gist of this invention, the said impaling devices being acted upon by suitable strippers located at a proper point to release the raisins from the roll after they have been seeded.

The invention further consists in the details of construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

The present invention, as all others of this class, is based upon the principle established by the mechanisms shown and described in the patent to J. B. Crosby, No. 56,721, dated July 31, 1866, and in view of which other inventions have been invented by me, and it is intended that the present device add still further to the improvements.

It is the object of the present invention, therefore, to render devices of the character specified more positive and satisfactory in their operation through the medium of attachments which will facilitate the thorough seeding of the raisins and conveniently separate the seeds from the pulp, the parts being simple and effective in their construction and operation, strong and durable, easily and readily operated, and comparatively inexpensive in cost of manufacture.

In the accompanying drawings, Figure 1 is a side elevation of a machine embodying the invention, showing parts in dotted lines. Fig. 2 is a front view of the machine. Fig. 3 is a detail view of the hopper used in connection with the device. Fig. 4 is a detail view of the seed-loosener. Fig. 5 is a detail view of the stripper. Fig. 6 shows detail views, in edge and front elevations, of plates used to secure adjustment of the bearings. Fig. 7 is a detail view of one of the bearings. Fig. 8 is a vertical longitudinal section on the line *y y*, Fig. 2. Fig. 9 is a transverse section on the line *x x* of Fig. 1.

Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in these several views, the numeral 1 designates an adjustable metal frame constructed with openings and supports for the adjustment and proper positioning of the several rolls and incidental devices, which will be presently more particularly referred to. In the center of the frame is mounted an impaling or perforating roll 2, having peripheral projections arranged closely together and circumscribing the entire roll. Engaging the said impaling or perforating roll is an upper rubber frictional roll 3, both of said rolls being driven toward each other, and at their point of engagement or near the same the lower end of a chute 4 is directed, which leads from the bottom of a hopper 5, positioned at the upper portion of the machine and having therein a feed-roller 6, from which at regular intervals feeding projections extend of a length sufficient to draw the raisins around toward the bottom outlet of the hopper. Coacting with the impaling or perforating roll 2 are adjacent holding-rolls 7, adjustably mounted, and below the lowermost holding-roll 7 is a seed-loosener comprising a shaft 8, on which are a series of serrated disks 9, spaced apart from each other a suitable distance by intermediate washers 10. These serrated disks are loose on the shaft 8 and have an independent movement. Surrounding the shaft 8 is a coil-spring 11, which exerts a tension on the disks and is adjustable through a nut 12 to increase or decrease the said tension, the said nut being movable on a screw-threaded surface 13.

These seed-loosening disks strike and are carried around by the impaling or perforating roll 2 and clear out the seeds by a dragging movement and cause them to fall away from the impaling or perforating roll. To further cleanse and remove the seeds, a knife 14 is positioned in advance of the seed-loosener and is gaged to aline with the plane of the outer terminating ends of the devices carried by the impaling or perforating roll. Above the said knife 14 a shaft 15 is mounted in the frame 1 and carries a series of strippers 16, which bear against the roll 2 between the peripheral projections thereon and strip the latter of the seeded pulp.

The bearings of the shafts are made adjustable by means of sleeves 17, having outer rectangular heads 18 and made adjustable in the openings in the machine-frame, and in said openings, on opposite sides, metal plates 19 are mounted and carry set-screws 20, which engage the sleeves or boxes 17 and are used for adjusting the said sleeves, and consequently the rolls or rollers used therewith. These plates 19 slip in from either side in a groove, and while they hold the rolls in perfect adjustment they can at any time be removed by loosening the set-screws for the purpose of disconnecting the rolls for the purpose of cleaning or repairing the same. If the seed-loosener does not completely remove the seed from the pulp, the knife in advance of the same will fully complete this operation, and it will be understood that the serrated disks not only break the skin of the fruit and pull away the seeds that may have been forced out by engagement with the projections of the impaling or perforating roll 2, but also attack the pulp in such manner as to loosen up the seed which may still remain therein.

In their operation the seed-looseners operate between the projections of the said impaling or perforating roll, and by an independent motion cause the seed to be pushed

to the outer terminations of the said projections and to be taken off by the knife.

It is obviously apparent that many minor changes in the details of construction, proportions, and dimensions of the several parts might be made and substituted for those shown and described without in the least departing from the nature or spirit of the invention.

Having thus described the invention, what is claimed as new is—

1. In a machine of the character described, the combination of an impaling or perforating roll, adjustable rolls coacting therewith, a seed-loosener comprising a shaft supporting a series of independently-movable serrated disks, a knife in advance of said seed-loosener, and stationary strippers for removing the pulp from the impaling or perforating roll, substantially as described.

2. In a machine of the character described, the combination of an impaling or perforating roll having peripheral projections, a hopper with a feed-roll, a chute leading from said hopper to the impaling or perforating roll, a roll above the impaling or perforating roll and coacting therewith, adjustable side rolls also coacting with the impaling or perforating rolls, a seed-loosener consisting of a shaft supporting a series of serrated disks having independent movement on said shaft, a spring engaging said disks and having an adjusting-nut bearing thereon for regulating the movement of the disks, a knife in advance of said seed-loosener, and strippers to engage the impaling or perforating roll, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CARY S. COX.

Witnesses:

L. L. GRAY,
H. P. BLACK.