M. ERLENBACH & H. KOHN.

RAISIN SEEDER.

APPLICATION FILED APR. 26, 1909.

963,702. Patented July 5, 1910.

3 SHEETS—SHEET 1.

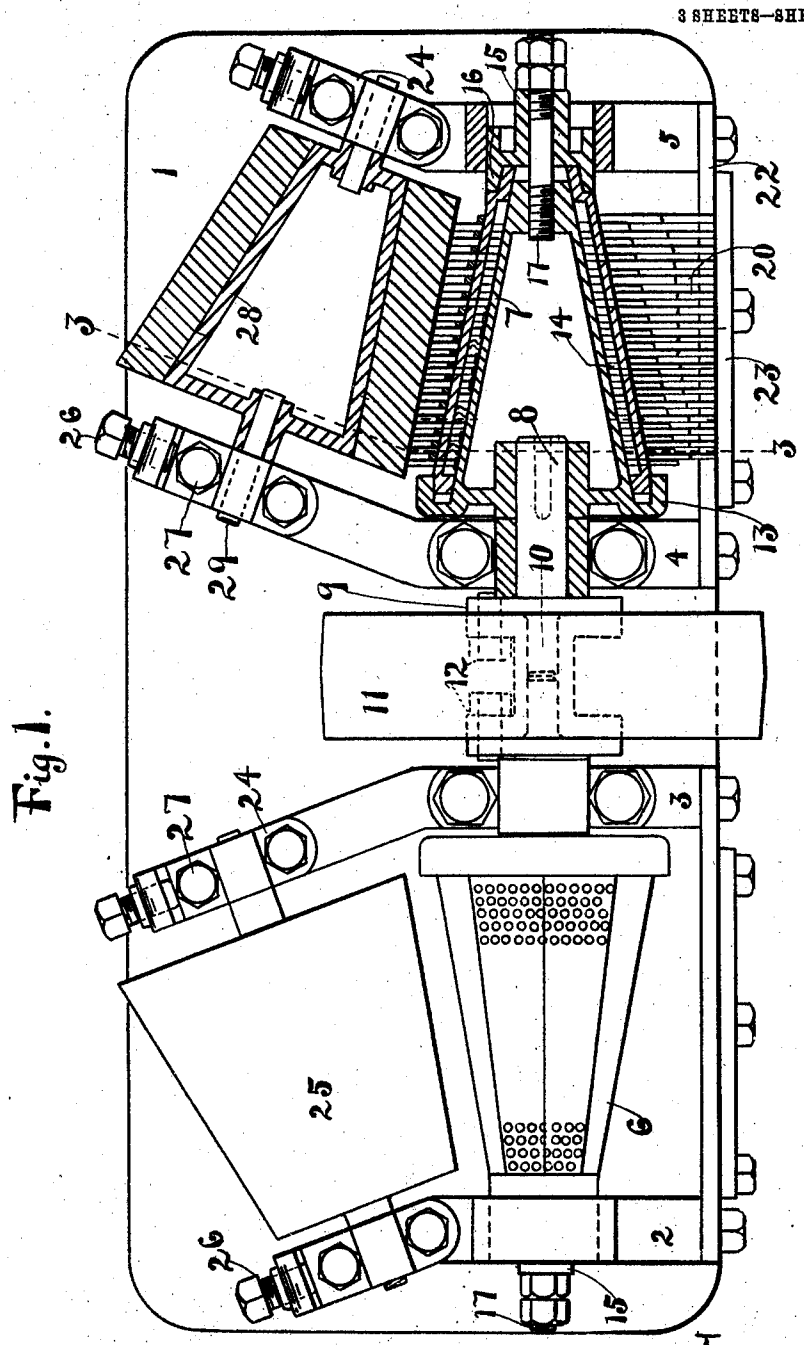

Fig. 1.

Witnesses
Ronald C. Griffin
J. Nicholson

Inventors
M. Erlenbach & H. Kohn
by Carlos P. Griffin
Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

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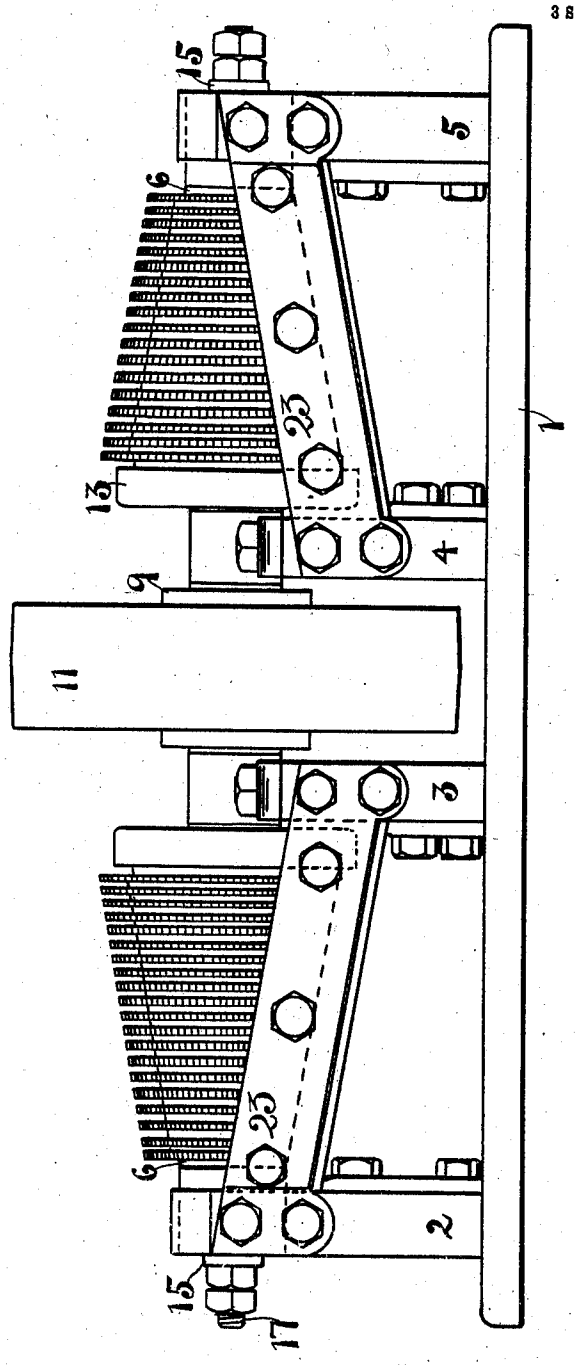
3 SHEETS—SHEET 2.

Fig. 2.



Witnesses
Ronald b. Griffin
J. Nichols

Inventors
M. Erlenbach & H. Kohn
by Carlos P. Griffin
Attorney

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3 SHEETS—SHEET 3.

Fig. 3.

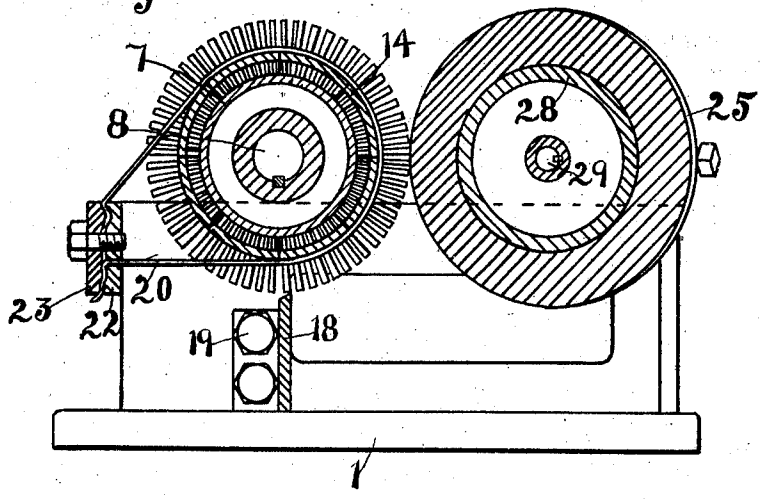


Fig. 4.

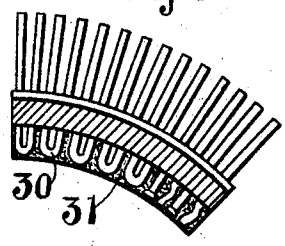
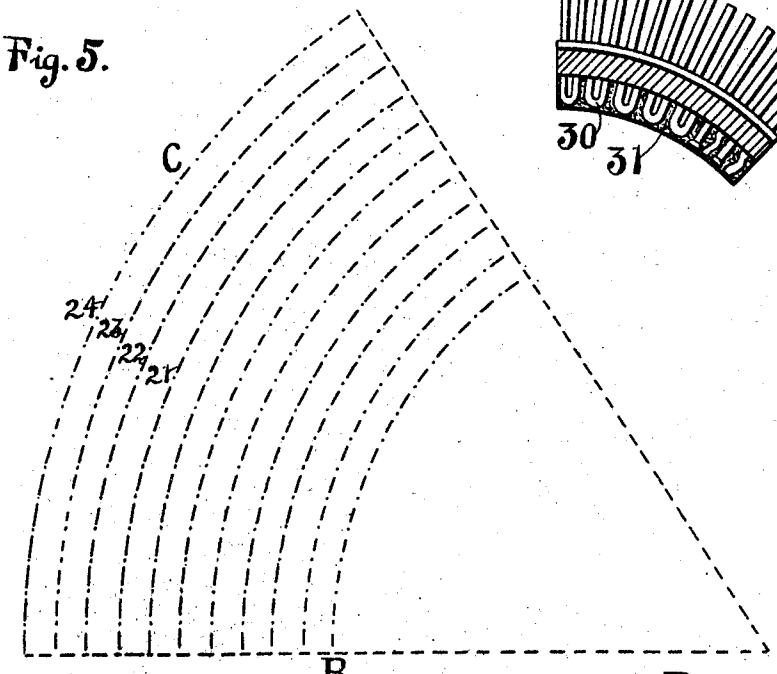


Fig. 5.



Witnesses
Ronald b. Griffin

Inventors
M. Erlenbach & H. Kohn
by Carlos P. Griffin
Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MARTIN ERLENBACH AND HEINRICH KOHN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNORS OF ONE-HALF TO W. R. HENNIES, OF SAN FRANCISCO, CALIFORNIA.

RAISIN-SEEDER.

963,702. Specification of Letters Patent. Patented July 5, 1910.

Application filed April 26, 1909. Serial No. 492,424.

To all whom it may concern:

Be it known that we, MARTIN ERLENBACH and HEINRICH KOHN, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Raisin-Seeder, of which the following is a specification in such full and clear terms as will enable those skilled in the art to construct and use the same.

This invention relates to a seeder for raisins, prunes and other fruits and its object is to provide means whereby the pin roll may be easily repaired where hard objects, such as rocks, or nails have been accidentally passed through the rolls.

Another object of the invention is to so shape the rolls as to make possible the proper tightening of the pin holding sections on the roll body.

A further object of the invention is to provide means whereby two sets of rollers may be driven on the same stand, one set being taken out of gear with the drive pulley by the removal of a pin.

Other objects of the invention will appear as the description proceeds.

In the drawings in which the same numeral of reference is applied to the same portion throughout, Figure 1 is a plan view, partly in horizontal section of the complete machine, Fig. 2 is a front elevation of the machine looking toward the pin rollers, Fig. 3 is a sectional view on the dotted line 3—3 of Fig. 1, Fig. 4 is a view showing the construction of one of the pin holding sections and showing three modified forms of pins used, Fig. 5 is a diagram of a system of placing the pins in the pin plates whereby each of the pins is spaced the proper distance from each other pin.

The numeral 1 is applied to the base of the machine, said base having the upstanding bearings 2, 3, 4 and 5 on which the rollers are journaled, the bearings for both of the pin rolls 6 being in the same line. Each pin roll comprises a frustoconical shell 7, the largest ends of the shell being placed near the center of the machine, and being secured on a pin 8 which has a flange 9 thereon, said pin being provided with the portion 10, shown in dotted lines and which projects into the hub of the pulley 11, the object being to support the pulley adjacent the rollers and in the proper position to be connected therewith by means of a set bolt 12 passing through a portion of the hub of the pulley and into the flange 9.

Near the largest end of the pin roller there is a flange 13 which is adapted to hold all the pin sections 14 in their proper places, said flange being annular and extending around the roll. The pin sections 14 comprise a shell which is concentric with the roll surface, but spaced therefrom such a distance as will allow a shell of Babbitt metal to be inserted between the roll surface and the pin section to secure the pins in said section. There are such a number of the sections as seems desirable, a large number being used in order that as small a number of pins may be rendered unfit for use when a stone passes through the machine as possible, each section being separately renewable. The opposite ends of the pin sections are held in place by means of a boss 15 which has a flange 16 facing in the opposite direction to the flange on the large end of the pin roll. The pin sections are all placed on the pin roll body, the ends being inserted under the flanges at either end of the roll, the screw 17 is then inserted in the boss 15 and into the small end of the pin roll, and on being tightened the boss is forced tightly over the pin sections and the same are pressed down into close contact with the outer surface of the pin roller, the boss then becomes the bearing for the small end of the pin roller, a pair of nuts on the end of the bolt acting to hold the same in a fixed position without loosening.

The pins are spaced a given distance apart, this distance being such as has been found to be the proper one for the retention of the seeds at the ends of the pins, and to snap the seeds out of the pins, the bar 18 is used, said bar being secured to the upstanding bearings which carry the roll by means of bolts 19. In order that the meats of the raisins may be pulled out of the pins and dropped a set of wires 20 is used, said set of wires being passed around the conical toothed roll and secured at their ends on a bar 22, a plate 23 being used to hold the wire ends tightly to the bar 22.

On the rear of the bearings supporting the pin rollers there are bearings 24 for the rubber rollers 25, said bearings being adjustable by means of the set bolts 26, and held

in a fixed relation to the supports by means of set bolts 27. The rubber rollers are formed with a frustoconical shell 28, at the ends of which are placed the trunnions 29, and the roller is covered with a thick layer of rubber of such a consistency as to force the raisins into the pins while the seeds will stick on the ends of the pins and be held thereby.

Since it is very important to have all the pins the same distance from each other, both along the circumference and along the horizontal dimension of the frustoconical rollers it becomes necessary to devise some means whereby when the conical roller is used all the pins can be so placed as to be the proper distance from all the other pins in both directions. The manner of locating the pin holes and determining the slope of the cone used is illustrated in the diagram. Since each pin must be a given distance from each other pin it will be apparent that all the circumferential lines which contain pins must be of a length which will be capable of division into an integral number of spaces of the given pin distance. In the diagram, for example, which has been divided into larger parts than are used in actual practice, the number of spaces at the widest part is twenty-four, thus giving twenty four pins. The next smallest circle gives 23 pins, the next 22 pins and so on down to as small a number as seems desirable. The slope of the cone, of which the diagram shown in Fig. 5 is a development produced in a well known manner, is determined by making the radius R of the same length as the total length of the circumference C, then there will be possible the same number of pins in vertical planes as the total number on the largest arc C, and if the number of pins is decreased one on each smaller arc the number will decrease to one at the point of the cone, which will make all the pins the same horizontal distance from all other pins, as well as the same distance along the circumference. However, it is not desirable to use so much of the cone as would be indicated by running the number of pins down to one, so only a small portion of the full cone development is used. It will also be clear that should it be desired to decrease the number of pins by two at each vertical plane, which corresponds to each arc on the diagram that it could be done in the same manner, but in this case it would be necessary to make the radius R only one half the length of the one used, since in that case it would be necessary for the number of pins to be reduced to one while moving only one half the former distance toward the point of the cone.

The pins may be either common headed nails which have been cut off square, or they may be waved as shown in Fig. 4, or they may be staple like as illustrated in the same figure at 30, but in any case they are held in their places in the sectional shell by having Babbitt metal 31 poured into the space between the shell and the body of the roller.

Having thus described our invention what we claim as new and desire to secure by Letters Patent of the United States is as follows:

1. In a raisin seeder, a pair of frustoconical rolls one of which is provided with a pin surface and other with a rubber surface, the rolls being in contact with each other, a knife adapted to snap raisin seeds out of the spaces between the ends of the pins, a series of wires passing around the pin roller between the series of pins, the ends of said wires being fixed along an incline whereby the point of delivery of the seeded raisins is along substantially the same vertical plane for the entire length of the roller.

2. In a raisin seeder, a pair of frustoconical pin rolls, pin sections carried by said pin rolls, a bearing boss at the small end of the pin roll adapted to act as a bearing and tightener for the pin sections, a second pair of similar rolls placed with the large ends adjacent the large ends of the first pair of rolls one roll in each set having alined axes, and means to drive one or both of the sets of rolls from a single pulley.

3. In a raisin seeder, a pair of frustoconical seeding rolls one of which is provided with removable pin holding sections and the other with a rubber surface in contact with the ends of the pins, said pin holding sections being held tightly in contact with the roll by having their large end passed into a groove at the large end of the roll and into a groove in a movable bearing boss at the small end of the roll.

4. In a raisin seeding roll, a frame, a frustoconical shell having an annular groove at its large end, a movable boss adapted to act as a journal at the small end and having a groove oppositely placed to the groove at the large end of the roll, a plurality of pin sections held in place on the roll by means of the boss at the small end and the groove at the large end; and wires passing around the pin roll and secured to the frame along an incline whereby the raisins will be doffed from the pin roll along a vertical plane substantially parallel with the axis of said roll.

In testimony whereof we have set our hands this 17" day of April A. D. 1909, in the presence of the two subscribed witnesses.

MARTIN ERLENBACH.
HEINRICH KOHN.

Witnesses:
JOHN R. TYRRELL,
C. P. GRIFFIN.