

Nov. 30, 1954

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2,695,643

VEGETABLE SHREDDER DISK

Filed Nov. 13, 1951

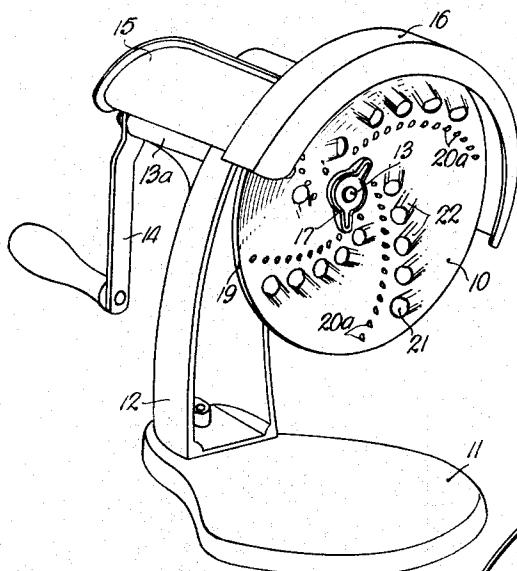


Fig. 1.

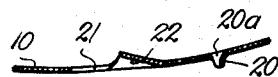


Fig. 4.



Fig. 5.

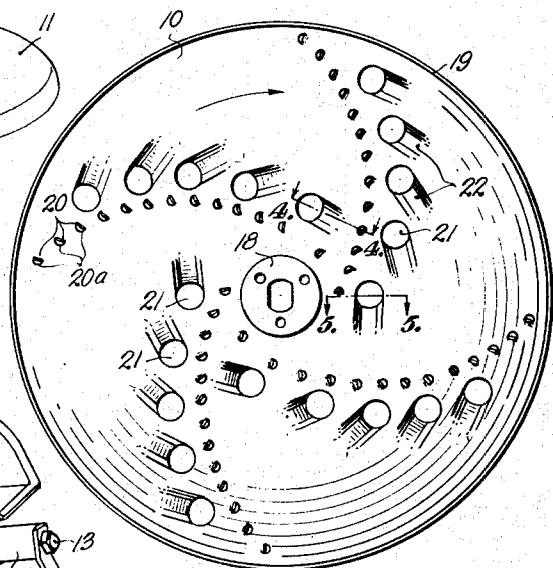


Fig. 3.

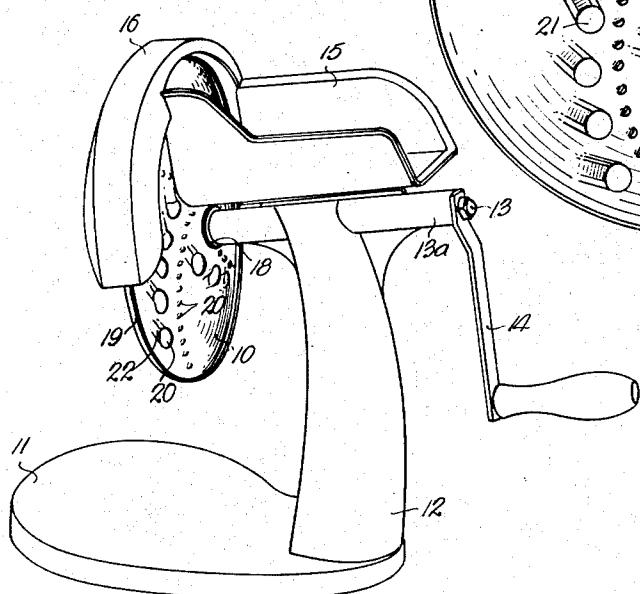


Fig. 2.

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2,695,643

Patented Nov. 30, 1954

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2,695,643

VEGETABLE SHREDDER DISK

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Application November 13, 1951, Serial No. 256,103

7 Claims. (Cl. 146—177)

This invention relates to food shredders and slicers and more particularly to shredders and slicers of the rotatable disk type used to shred vegetables, fruits and the like.

Among the faults of the conventional types of vegetable shredders is the fact that the shredded material tends to clog the shredding elements. Other faults are that the shredding material is not effectively carried away from the face of the disk and the shredding elements present sharp protuberances such as are likely to scratch or lacerate the fingers of the operator.

One object, therefore, of this invention is to provide a shredding disk which more efficiently accomplishes the shredding and slicing operation.

Another object is to provide a shredding disk which more effectively removes the products of the shredding and slicing operation from the face of the disk.

A further object is to provide a shredding disk with protruding slicing elements offering a minimum of danger to the operator's fingers and with a minimal tendency to clog.

Other objects and features will appear in the course of the following description of the invention.

In the drawings which form a part of the specification and wherein like numerals are employed to designate like parts of the various views,

Fig. 1 is a perspective rear view of a conventional shredder with a disk embodying the invention mounted thereon,

Fig. 2 is a perspective side view of the shredding apparatus in Fig. 1,

Fig. 3 is an enlarged detail of the shredding disk,

Fig. 4 is a view taken along the line 4—4 of Fig. 3 in the direction of the arrows,

Fig. 5 is a view taken along the line 5—5 of Fig. 3 in the direction of the arrows.

This invention as hereinafter described comprises a convex metal shredding and slicing disk 10 ordinarily attached to a conventional shredding device such as shown in the drawing. The shredding device has a base 11, a supporting post 12, a rotatable shaft 13 mounted in bearing 13a, a handle 14, a feeding trough 15, and a guard 16. A butterfly nut 17 screwed to the shaft end holds the disk on the shaft 13 thus making it removable for cleaning.

As to the construction of the disk, there is a central reinforced portion 18 by which it is attached to the shaft 14 and a peripheral flanged rim 19 bent over on the convex side. Punched out of the convex face of the disk are a plurality of shredding ears 20, the holes 20a resulting from the punching out process trailing the ears as the disk rotates. This construction produces an effective slicing and shredding surface with little tendency to clog with shredded material and with less likelihood of scratching or lacerating the operator's fingers.

The ears 20 may be arranged in straight or curvilinear rows extending from the central portion to the rim. The curvilinear arrangement provides less frictional drag during the shredding operation than when the ears are arranged in radial rows. Where the ears are arranged in curvilinear lines, the faces of the ears are formed to lie substantially in radial planes. The ears 20 constitute the primary shredding elements in the convex face of the disk.

A row of complementary discharge holes 21, larger than the ear holes 20a, is formed in the disk trailing each row of shredding ears as the disk rotates. These complementary discharge holes 21 are arranged in straight or curvilinear rows from the central portion 18 to the rim 19 following the arrangement of the shredding ear rows.

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The drawing shows the shredding ears 20 and the complementary discharge holes arranged in curvilinear rows. The complementary discharge holes 21 constitute the primary drainage elements of the disk, permitting fluids and material from the shredding operation to pass through the disk where they fall into a collecting receptacle, not shown.

An indented channel 22 may be formed preceding each complementary discharge hole 21 in the direction of rotation. When the shredding ears 20 and the discharge holes 21 are arranged in curvilinear rows, the course of each indented channel 22 follows substantially the path of rotation of the disk. Channels 22 facilitate the gathering and removal of the shredded material.

To perform the shredding operation, the vegetable or food stuff to be shredded is placed in the trough 15 and pushed against the face of the disk 10. The handle 14 is then rotated in a clockwise direction turning the disk. The shredding ears 20 contact the food and cut and shred it. As the disk continues to turn, the shredded material passes the ears and is gathered into the indented channels 22 thence through the discharge holes 21 where it falls into a receptacle placed on the base 11.

From the foregoing it will be seen there has been provided a shredding disk which effectively accomplishes the shredding operation, and one which efficiently removes the products of the shredding operation from the shredding disk. There also has been provided an improved shredding disk with protruding grating elements on its face which have little tendency to clog and less tendency to lacerate the operator's fingers.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth together with other advantages which are obvious and which are inherent to the structure.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim:

1. A shredding disk of the type described having a circular shape and a convex shredding surface, rows of shredding ears formed on the disk and extending from the central portion to the rim thereof, said disk characterized by the fact that the holes provided in the forming of the ears trail the ears as the disk rotates.

2. A shredding disk of the type described having a circular shape and a convex shredding surface, rows of shredding ears formed on the disk and extending from the central portion to the rim thereof, a row of complementary discharge holes larger than the holes formed by the ears trailing each row of shredding ears as the disk rotates, said disk characterized by the fact that the holes provided in the forming of the ears trail the ears as the disk rotates.

3. A shredding disk as in claim 2 in which the shredding ears and the trailing complementary discharge holes are arranged in curvilinear rows extending from the central portion to the rim of the disk.

4. A shredding disk as in claim 2 in which the shredding ears and the trailing complementary discharge holes are arranged in curvilinear rows extending from the central portion to the rim of the disk with the faces of the ears lying substantially in radial planes.

5. A shredding disk as in claim 2 in which each trailing complementary discharge hole is preceded in the direction of rotation by an indented channel.

6. A shredding disk as in claim 2 in which the shredding ears and the trailing complementary discharge holes are arranged in curvilinear rows extending from the central portion to the rim of the disk and each trailing complementary hole is preceded in the direction of rotation by an indented channel.

7. A shredding disk as in claim 2 in which the shredding ears and the trailing complementary discharge holes are arranged in curvilinear rows extending from the central

portion to the rim of the disk and each trailing complementary discharge hole is preceded in the direction of rotation by an indented channel, the course of said channel following substantially the path of rotation of the disk.

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