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H. W. WATSON

1,890,103

SLICER

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FIG-1.

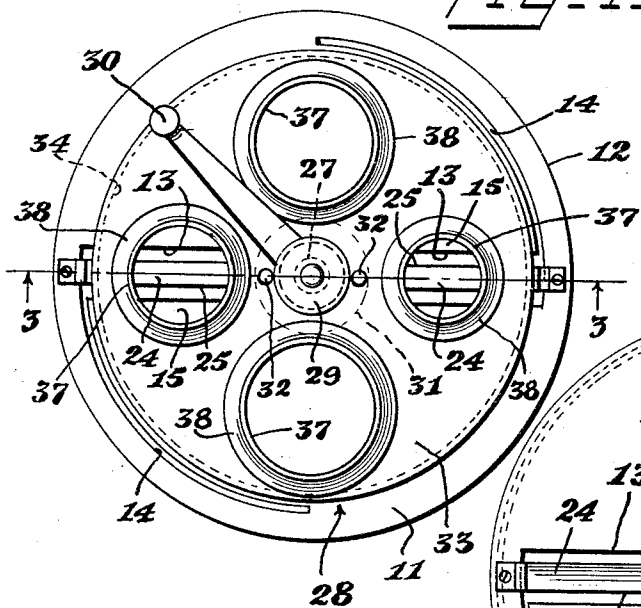


FIG-2.

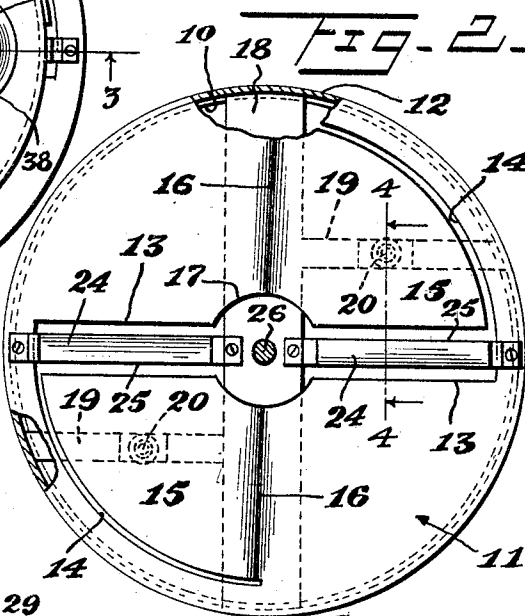


FIG-3.

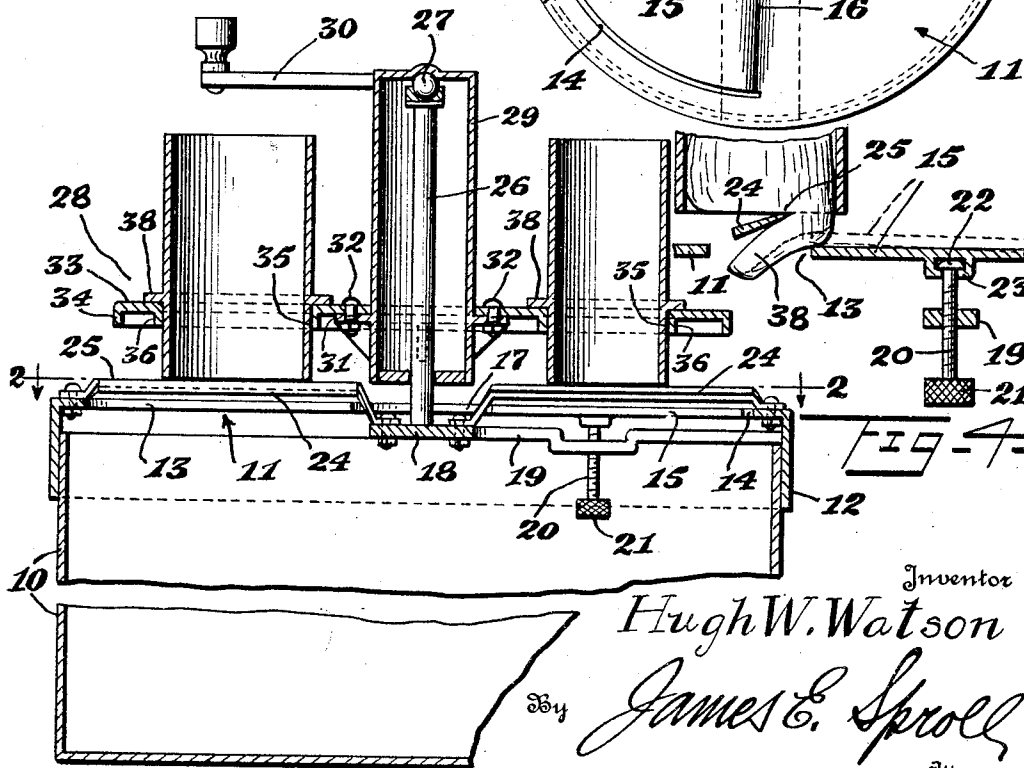


FIG-4.

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SLICER

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This invention relates to improvements in slicers and relates more particularly to the type of slicers especially designed and intended for slicing vegetables, fruits and the like and aims primarily to provide a slicer adaptable for cutting thin or thick slices as desired; that is capable of handling and uniformly slicing large quantities of material in a short period of time; and that is easily maintained in a thoroughly sanitary condition.

Contemplated by the present invention is a slicer embodying a receptacle for receiving the sliced materials and the juices of the same; a base plate, which also functions as a cover for said receptacle, having oppositely disposed resilient quadrant-shaped portions formed therein; a series of slicing knives detachably secured to said baseplate; adjustable means to raise and lower said resilient quadrant-shaped portions relative to the cutting edges of said knives, whereby slices of the desired thickness are obtained; a head rotatably mounted upon said baseplate having a series of tubular hoppers for the material to be sliced, said hoppers having a circular path of travel over the slicing knives with a shearing or scissor-like action between their lower ends and the cutting edges of said knives, whereby tilting or canting of the materials being sliced is effectually obviated; and means to rotate said head; all of which are to be correlated in the broad aim of enhancing the efficiency of the slicer for general use.

The above, and additional objects which will hereinafter be more specifically treated, are attained by such means as are shown in the accompanying drawing, described in the following specification and then more clearly pointed out in the claims, which are appended hereto and form a part of this application.

With reference to the drawing in which there is illustrated one embodiment of the invention, and throughout the several views of which like characters of reference designate similar parts:

Figure 1 is a top plan view of a slicer comprehended by the present invention.

Fig. 2 is a horizontal section taken through line 2—2 of Fig. 3, certain parts thereof being broken away for clarity of illustration.

Fig. 3 is a vertical medial section taken through line 3—3 of Fig. 1, and

Fig. 4 is an enlarged fragmentary vertical section taken through line 4—4 of Fig. 2.

Beginning now the more detailed description of the invention by reference to the drawing, the numeral 10 designates a receptacle, such as a jar or dish, for receiving the sliced materials and the juices of the same.

The numeral 11 designates generally the baseplate of my slicer, preferably fabricated in circular formation from relatively thin sheet metal and during slicing operations is adapted to seat upon and function as a coverplate for the receptacle 10, said base plate for this purpose being provided upon its periphery with a depending annular flange 12 embracing and snugly fitting the upper open end of said receptacle, substantially in the manner illustrated in Fig. 3.

Formed within the baseplate 11 is a diametral slot 13, at the outer ends and from opposite sides of which extend quarter-circular slots or slits 14, which latter are cut in concentric and contiguous relation to the baseplate perimeter, as shown more clearly in Fig. 2, to thereby form and provide resilient quadrant-shaped portions or sectors 15 adapted to flex substantially along radii 16. The sides of the diametral slot 13 midway its length are arcuately cut to provide an enlarged central opening 17 in the baseplate 11, to thereby effect and secure more rapid and uniform flexing of the quadrant-shaped portions 15.

Fixedly secured at its ends to the inner walls of the annular flange 12 in perpendicular relation to the diametral slot 13 is a diametrically disposed bar 18, from the opposite sides of which extend in perpendicular relation thereto relatively narrow bars 19, said bars being disposed upon opposite sides of the diametral slot 13 and in parallel relation thereto, substantially as illustrated in Fig. 2. The bars 19 are rigidly connected at their inner ends to the bar 18 and are similarly connected at their outer ends to the annular flange 12. Threadedly engaged in the bars 19, at points intermediate their length are adjusting screws 20 provided at

their lower ends with knurled knobs 21 and at their upper ends with heads 22 adapted to seat in sockets 23 formed upon the underside of the quadrant-shaped portions 15, all as more clearly illustrated in Fig. 4.

5 Detachably secured at their inner ends to the bar 18 and similarly secured at their outer ends to the upper face of the baseplate 11 adjacent the perimeter thereof are slicing knives 24, which latter are centrally and symmetrically disposed relative to the diametral slot 13 with their cutting portions upwardly inclined in opposite directions with respect to each other and having their leading or cutting edges 25 normally disposed above the plane of the upper faces of the quadrant-shaped portions 15, as will be evident and apparent by referring to Fig. 4.

15 Rigidly secured to the upper face of the bar 18 in concentric or axial relation to the baseplate 11 is an upwardly extending shaft or post 26, provided upon its upper end with a ball bearing 27.

20 Mounted upon the shaft 26 is a rotatable head designated generally by the numeral 28, comprising a central tubular casing 29 supported by and depending from the ball bearing 27 and provided with an operating crank handle 30 at its upper end and adjacent its lower end with a peripheral or annular flange 31, upon which rests and to which is rigidly secured, as by screws 32, a disk or plate 33 having a depending reinforcing flange 34 at its perimeter. The disk 33 is provided with a plurality of openings 35, the edges of which have downwardly extending flanges 36 for a purpose hereinafter set forth. In the present instance the openings 35, are four in number and are of varying sizes with their axes in the same circular plane, said plane being preferably located at a point substantially midway the length of the slicing knives 24.

25 Removably seated and extending through the openings 35 are tubular hoppers or cylinders 37, the latter being provided with peripheral or annular flanges 38 at points intermediate their length, which flanges are adapted to rest upon the upper face of the disk 33, as more clearly indicated in Fig. 3, while the flanges 36 of the openings 35 serve and function to steady the hoppers 37 therein. It is to be here noted and observed that the hoppers 37 extend downwardly through the disk 33 a sufficient distance to secure a shearing or scissor-like action between the lower ends of the hoppers 37 and the leading or cutting edges 25 of the slicing knives 24, this in order to prevent canting or tilting of the vegetables or fruits in the hoppers while the same are being sliced.

30 In operation the quadrant-shaped portions 15 are adjusted relative to the cutting edges 25 of the slicing knives 24 by the adjusting screws 20, to thereby secure slices of the de-

sired thickness, following which the slicer is positioned upon the receptacle 10. The materials to be sliced, such as vegetables or fruits, are then placed in the hoppers 37, whereupon the head 28 is rotated by the crank handle 30, to carry the materials into engagement with the cutting edges 25 of the knives 24, so that the same will be sliced, as indicated at 38 in Fig. 4, and drop through the slot 13 into the receptacle 10, which after slicing operations are completed contains both the sliced materials and the juices of the same, thus eliminating waste.

35 In the present disclosure I have illustrated and described my slicer as being manually operated, but I desire to have it understood that the same may also be operated by any suitable power means, actual experience having shown that my small manually operable slicer is better adapted for home use, while my power operated slicer is more desirable for hotel and restaurant use, it being here noted that the manually operable slicer requires but a minimum amount of manual exertion for its operation.

40 Manifestly, therefore, the slicer of the present invention is extremely simple, compact, durable and economical in construction; is efficient, positive and reliable in use; is easily and quickly cleaned; is rapidly and readily adjustable for cutting uniform slices of the desired thickness; is adaptable for cutting vegetables, fruits and the like of various sizes; and can be manufactured at a comparatively low cost.

45 While I have herein shown and described my invention with sufficient detail to enable those skilled in the art to understand the mode of construction and the principles involved, it is to be understood that there is no intentional limitation herein to the specific form and precise details of construction of the invention herein shown and described, except as expressly defined by the appended claims, and that various modifications of said construction may be resorted to without departing from the invention or the benefits derivable therefrom. I also desire to have it understood that certain features of the invention herein disclosed may be employed in and with other combinations than those herein shown.

50 Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:—

55 1. A slicer comprising a circular baseplate having a diametral slot formed therein and having concentrically disposed slits extending from the ends of said slot to form diametrically opposed resilient quadrant-shaped portions thereon, an annular flange depending from the perimeter of said baseplate, a diametrically disposed bar rigidly secured at its ends to the inner walls of said flange in perpendicular relation to said diametral slot,

relatively narrow slicing knives disposed in medial alignment with said diametral slot having their inner ends detachably secured to said diametrically disposed bar and their

path of travel over said knives with their lower ends disposed in shearing relation to the latter.

In testimony whereof I affix my signature.

HUGH W. WATSON.

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outer ends similarly secured to the upper face of said baseplate adjacent its perimeter, a post rigidly secured at its inner end to said diametrically disposed bar and extending outwardly therefrom through the said baseplate in concentric relation to the latter, a head rotatably mounted upon said post, a plurality of open-ended tubular hoppers removably mounted within said head for the materials to be sliced, said hoppers having a circular path of travel over said knives with their lower ends disposed in shearing relation to the latter, means to rotate said head, and means for adjusting the quadrant-shaped portions relative to said knives.

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2. A slicer comprising a circular baseplate having a diametral slot formed therein and having concentric slits extending from opposite ends and sides of said slot to provide diametrically opposed resilient quadrant-shaped portions upon said baseplate, an annular flange depending from the perimeter of said baseplate, a diametrically disposed bar rigidly secured at its ends to the inner walls of said flange in perpendicular relation to said diametral slot, relatively narrow bars rigidly secured at their inner ends to opposite sides of said diametrically disposed bar and adapted to extend laterally therefrom in spaced parallel relation to said diametral slot and at their outer ends are rigidly secured to the inner walls of said depending annular flange, relatively narrow slicing knives disposed in medial alignment with said diametral slot with their cutting blades upwardly inclined in opposite directions relative to each other and having their cutting edges normally disposed above the plane of the upper faces of said quadrant-shaped portions, said knives having their inner ends detachably secured to said diametrically disposed bar and their outer ends similarly secured to the upper face of said baseplate adjacent the perimeter thereof, adjusting screws threadedly mounted in said relatively narrow bars and connected at their inner ends to the underside of said quadrant-shaped portions for adjusting the latter relative to the cutting edges of said knives, a post rigidly secured at its inner end to said diametrically disposed bar and adapted to extend outwardly therefrom through said baseplate in axial aligned relation thereto, a concentrically disposed tubular casing rotatably mounted upon said post, a crank handle rigidly secured to said casing, and a plate rigidly secured to said casing having a plurality of open-ended tubular hoppers mounted thereon for receiving the materials to be sliced, said hoppers having a circular

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