

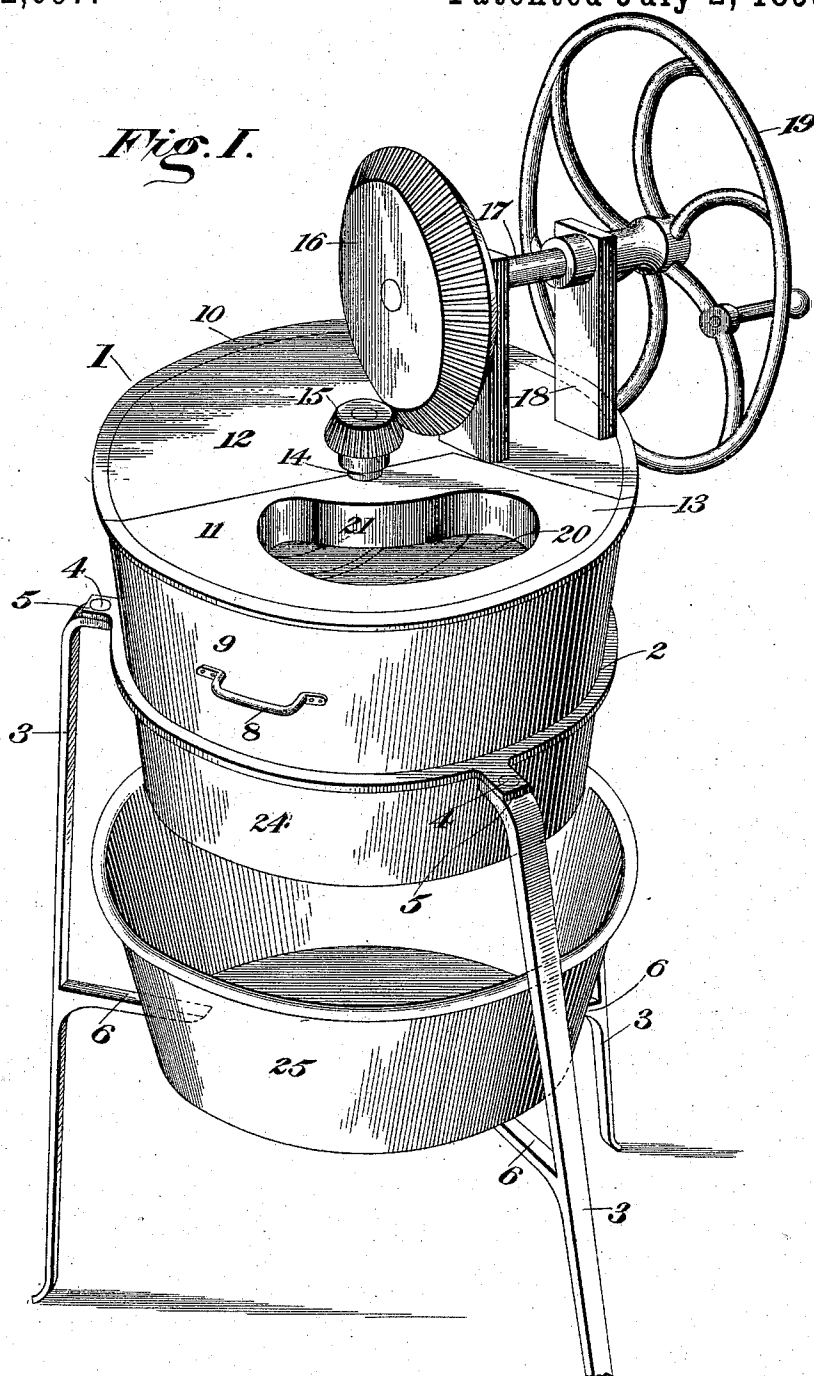
(No Model.)

3 Sheets—Sheet 1.

J. NETREFA.
SLICING AND PARING MACHINE.

No. 542,097.

Patented July 2, 1895.



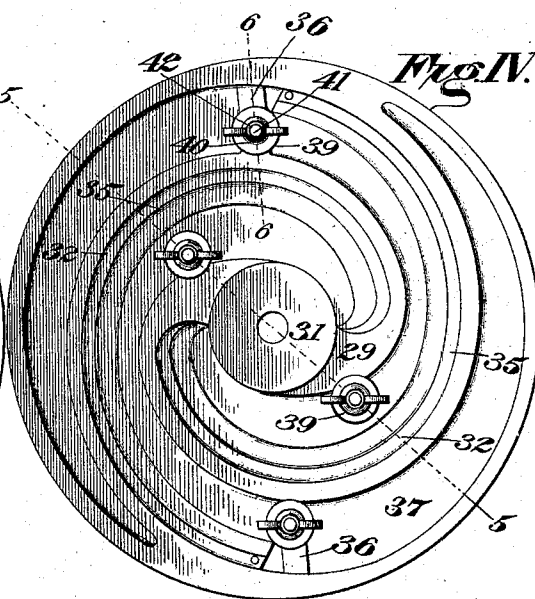
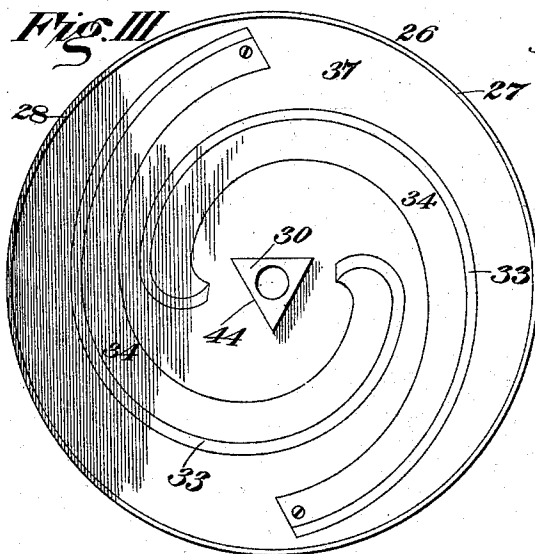
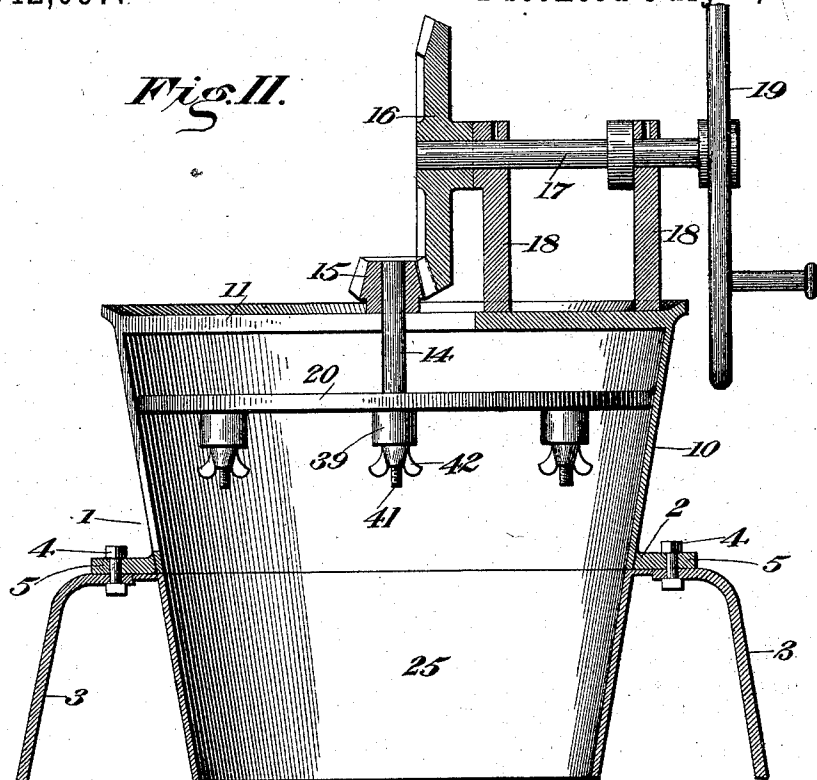
John Netrefa
Inventor

Witnesses
M. E. Fowler
Samuel Wacker
By Joseph L. Atkins
Attorney

3 Sheets—Sheet 2.

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Witnesses *M. E. Fowler* *John Netreffe* Inventor
Samuel H. Baker *By Joseph L. Atkins* Attorney

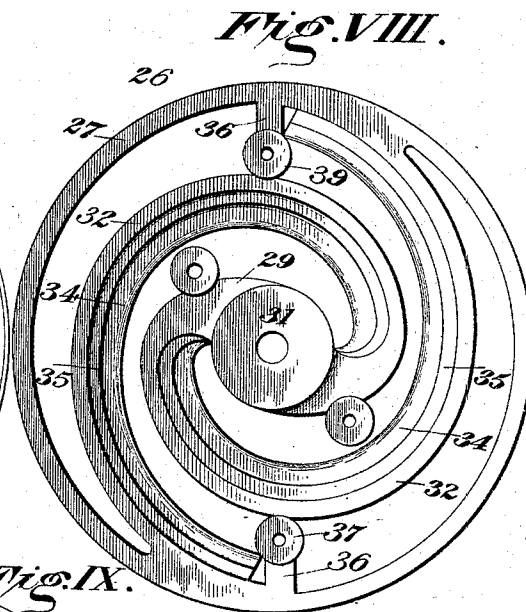
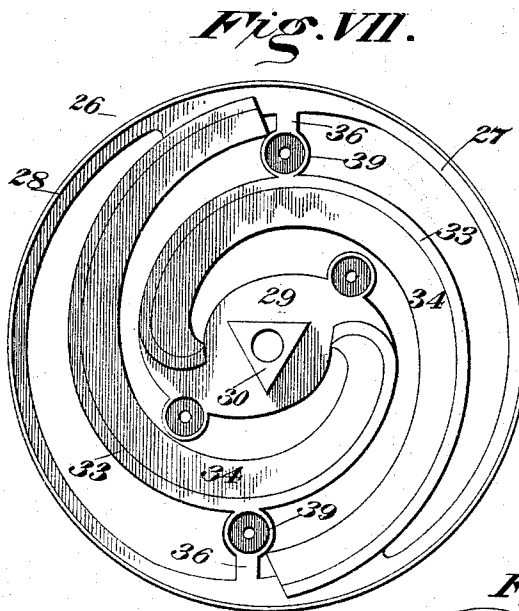
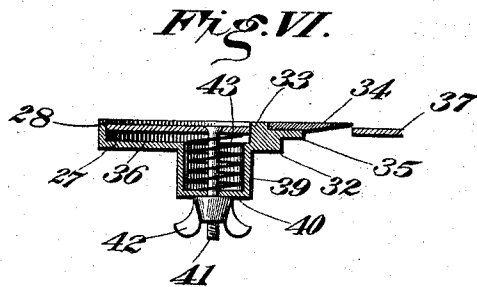
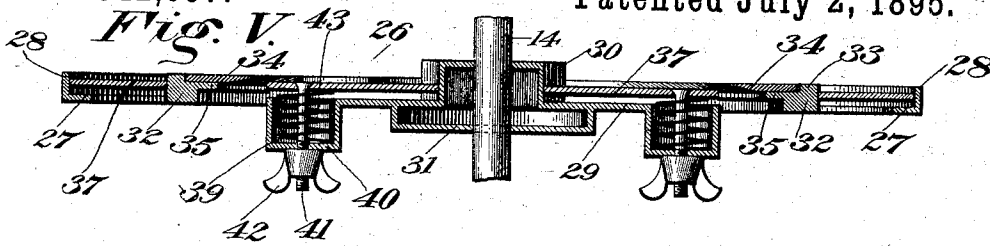
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3 Sheets—Sheet 3.

J. NETREFA.
SLICING AND PARING MACHINE.

No. 542,097.

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Witnesses
M. E. Fowler
Samuel Baker

Inventor
John Netrefa
Joseph L. Litcher
Attorney

UNITED STATES PATENT OFFICE.

JOHN NETREFA, OF CLEVELAND, OHIO.

SLICING AND PARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 542,097, dated July 2, 1895.

Application filed February 25, 1895. Serial No. 539,604. (No model.)

To all whom it may concern:

Be it known that I, JOHN NETREFA, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful
5 Improvements in Slicing and Paring Machines, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce a
10 device adapted to facilitate the operation of slicing or paring with economy and dispatch; and it consists in the employment of certain novel mechanism hereinafter described.

In the accompanying drawings, Figure I is
15 a perspective view of my machine. Fig. II is a central vertical sectional view of the same, showing some of the parts in elevation. Fig. III is a top plan view of the cutting-disk. Fig. IV is a bottom plan view thereof. Figs.
20 V and VI are sectional views thereof on the lines 5 5 and 6 6 of Fig. IV. Figs. VII and VIII are top and bottom plan views of the disk-frame, and Fig. IX is a view of the feed-box and cover.

Referring to the figures on the drawings, 1
25 indicates the frame of my machine, constructed of any suitable material, preferably metal, consisting of a supporting-belt 2, supported by legs 3, secured at their upper extremities, as by bolts 4, to lateral lugs 5, projecting from the belt, and of horizontal brackets 6 upon the legs.

7 indicates the body part or receptacle, preferably constructed of sheet metal and of a
35 downwardly-converging cylindrical form, permitting of its being supported by the belt 2 and its easy detachment therefrom, it being apparent that the receptacle may be lifted from the frame by the handles 8, provided for that purpose, when it is desired to clean or repair it. The receptacle is preferably formed
40 in two parts 9 and 10, as illustrated, which are provided, respectively, with heads 11 and 12, which, when the two parts of the receptacle are joined, will constitute a cylindrical head 13 for the receptacle, the parts being bolted or otherwise secured together when in use.

14 indicates a vertical shaft extending
50 through the head and suitably journaled therein, secured to which, above said head, is a beveled gear 15, meshing with a somewhat

larger gear 16, carried upon a horizontal shaft 17, journaled in the bearing-brackets 18, supported upon the head.

19 indicates a power-wheel secured upon
55 the opposite extremity of the shaft and adapted to impart rotation to the shaft 14 through the intermediate mechanism.

20 indicates a cutting-disk carried upon the
60 shaft 14 immediately below the head and adapted to be revolved at a high rate of speed.

21 indicates an elongated and preferably
somewhat curved feed-aperture in the head 11, into which the vegetables or other articles
65 to be sliced are placed resting upon the cutting-disk and designed to be sliced or pared thereby, a feed-box 22, of a shape correlative with that of the aperture and having an apertured top, being inserted into the feed-aperture to retain the vegetables against the disk,
70 a cover 23 closing the aperture in the top of the feed-box when desired.

24 indicates the chute projecting downwardly from the belt, adapted to direct the
75 product of the machine into a suitable receptacle 25, supported therebelow upon the brackets 6.

The device described constitutes the general construction of my machine, but is employed merely as the necessary mechanical
80 accompaniments of a novel cutting-disk, by the peculiar construction of which I am enabled to pare or slice any desired article by a clean graduated cut, preventing all bruising or tearing of the article and permitting
85 of the cutting of slices of various thicknesses by an adjustment of the device, which may be accomplished without appreciable labor or loss of time.

26 indicates the frame of my disk, which
90 consists of a circular strip or band 27, provided with a lateral peripheral flange 28, and of a central disk 29, having secured above and below it, respectively, a triangular block 30 and a strengthening-disk 31 and connected
95 with the band 27 by spiral or hyperboloidal spokes 32, provided upon their outer edges with a flange 33, upwardly projecting to about the height of the annular flange 28, against
100 which is secured the back of a spiral or hyperboloidal knife 34, slightly upwardly inclined, as illustrated, and braced by a brace-flange 35.

36 indicates bridges spanning the space be-

tween the spokes and the band to strengthen the frame and render the same rigid.

37 indicates a circular gage-plate fitting within the annular flange 28 and provided with slits or elongated knife-apertures 38, permitting it to lie flat against the band 27 and in a lower horizontal plane than the knives.

In order to regulate the thickness of the slice to be cut by the knives of the disk, it is necessary that some means be provided for regulating the vertical distance between the gage-plate and the cutting-edges of the knives. For this purpose I provide spring-thimbles 39, suitably located upon the frame projecting therebelow and provided with apertured heads 40, through which project gage-pins 41, secured to the gage-plate and screw-threaded at their extremities to receive the thumb-nuts 42.

43 indicates a spiral spring surrounding the pins within the thimbles and bearing against the heads 40 and the gage-plate, whereby the plate will be held yieldingly in as close proximity to the knife-edges as the thumb-nuts will allow. It is obvious that by screwing the thumb-nuts in one direction or the other the cut of the knives may be regulated by properly adjusting the gage-plate. The gage-plate is provided with an aperture 44 to receive the triangular block, the disks 29 and 31 and block 30 being provided with correlative apertures for the reception of the shaft 14.

The operation of my device is as follows: Supposing it is desired to slice a number of vegetables, they are placed in the feed-box 22, and power being applied through the wheel 19, shaft 17, gears 16 and 15, and shaft 14 the cutting-disk is revolved at a high rate of speed. The weight of the vegetables retaining the same upon the gage-plate, the knives make a long sweeping cut, which by reason of the shape of the knives and their correlation is practically continuous.

I do not desire to limit myself to the details of construction herein shown and described, but reserve to myself the right to vary, modify, and change the same within the scope of my invention.

What I claim is—

1. In a slicing and paring machine, the combination with a frame and actuating mechanism,

of a rotatory unyielding cutting disk provided with a knife and a yielding gage plate, substantially as specified.

2. In a slicing and paring machine, the combination with a frame and actuating mechanism, of a cutting disk, knives supported above the disk, and an adjustable gage plate intermediate of said knives and disk, substantially as specified.

3. The combination with a cutting disk and knife, of an intermediate adjustable gage plate, substantially as specified.

4. The combination with a cutting disk and a knife supported thereabove, of a gage plate intermediate of the knife and disk, and means for securing a yielding adjustment of the gage plate, substantially as specified.

5. The combination with a cutting disk and knife supported thereabove, of a gage plate supported above the disk and provided with an aperture through which the knife projects, substantially as specified.

6. The combination with a cutting disk and knife, of an intermediate gage plate, and a spring between the disk and gage plate, substantially as specified.

7. A cutting disk consisting of a frame and plurality of knives, of spring thimbles upon the frame, gage pins projecting from the gage plate into and through the spring thimbles, spring surrounding the gage pins within the spring thimbles and bearing against the gage plate and the end of the thimble, respectively, and thumb screws upon the gage pins below the thimbles, substantially as specified.

8. A cutting disk consisting of a frame having a peripheral flange and knife flange projecting at right angles to the frame, a knife secured to the knife flange and conforming to its contour, and a gage plate fitting within the peripheral flange and provided with a slit through which the knife and knife flange project, and means for adjusting the gage plate, substantially as specified.

In testimony of all which I have hereunto subscribed my name.

JOHN NETREFA.

Witnesses:

J. W. SJKORA,
ANTON MARES.