Oct. 20, 1931. O. ERL 1,827,977

VEGETABLE SLICER

Filed Dec. 2, 1930 2 Sheets-Sheet 1

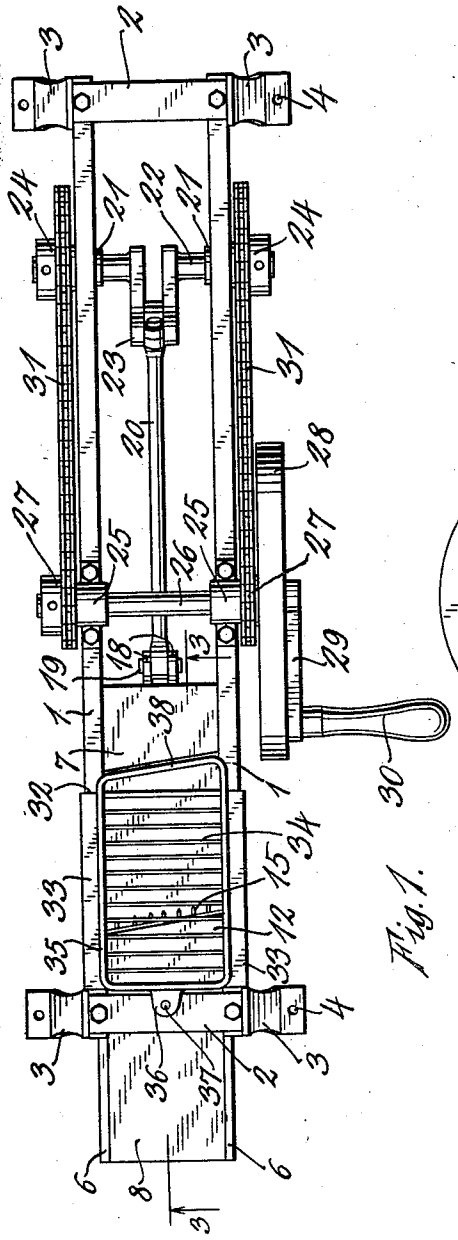


Fig. 1.

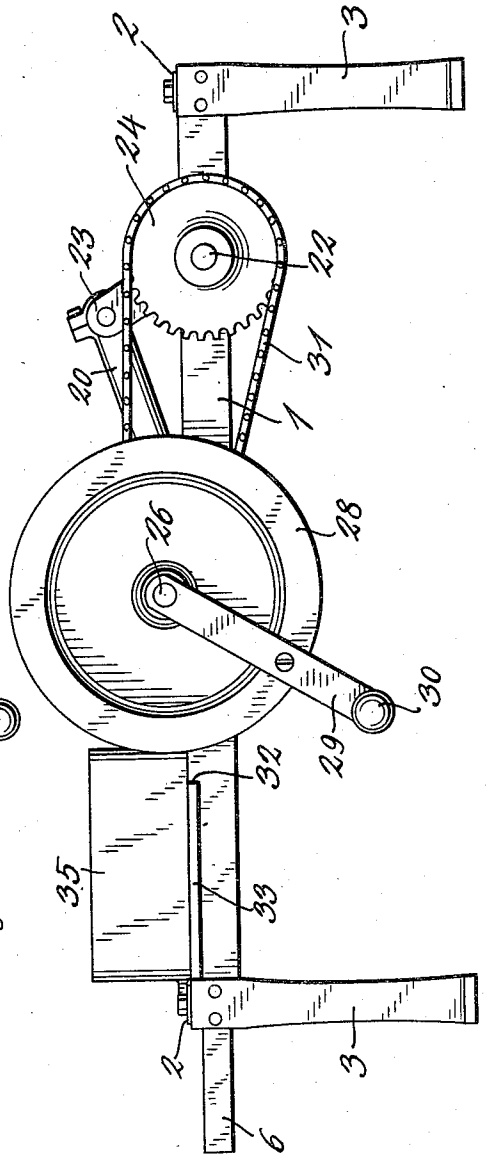


Fig. 2.

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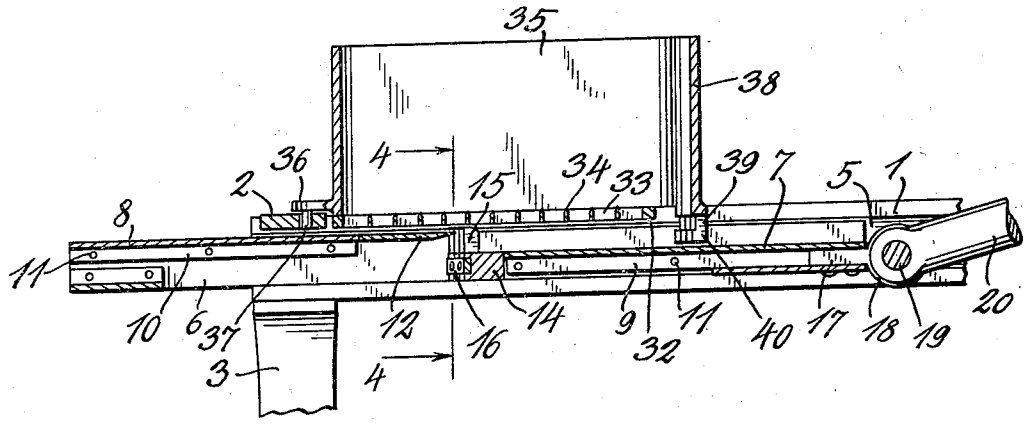


Fig. 3.

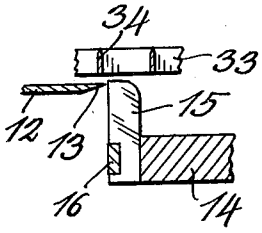


Fig. 5.

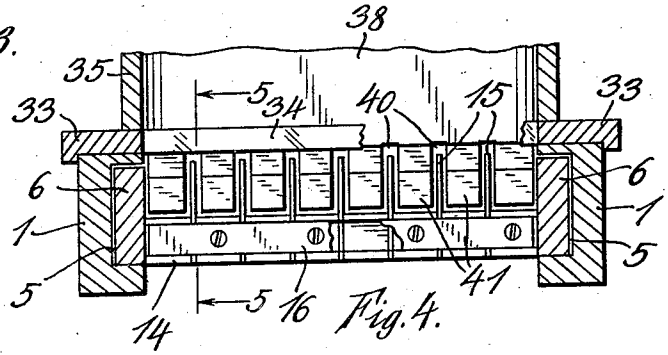


Fig. 4.

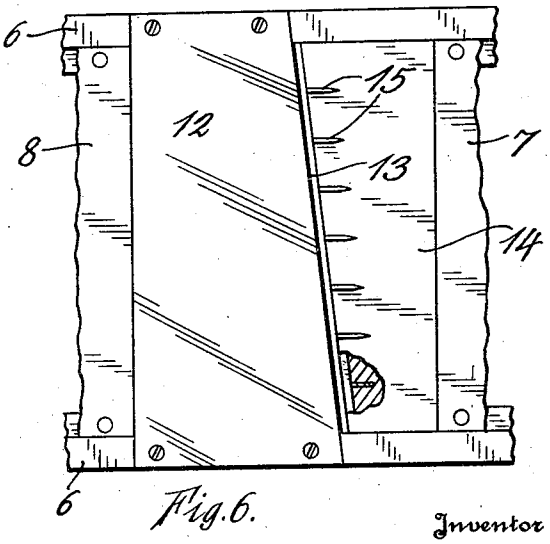


Fig. 6.

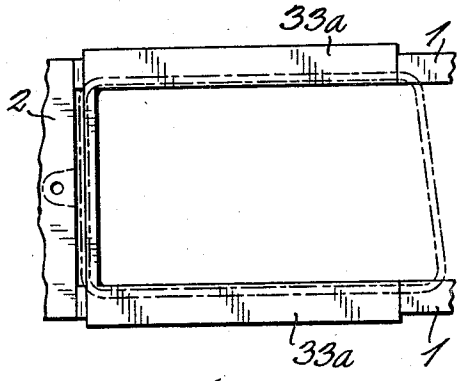


Fig. 7.

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UNITED STATES PATENT OFFICE

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VEGETABLE SLICER

Application filed December 2, 1930. Serial No. 499,458.

This invention relates to improvements in vegetable slicers of the type employed in restaurants and hotels for slicing vegetables.

It is the object of this invention to produce a vegetable slicer of a substantial and simple construction that shall be very effective and which shall be adapted for use where large quantities of vegetables are to be sliced.

This invention, briefly described, consists of two spaced parallel guides mounted on supports that are adapted to be fastened to a table. The guides carry a cutter head that is slidably connected with them and which is reciprocated by means of a crank shaft and connecting rod that can be turned by means of a crank or by a motor. The cutter head has one end thereof formed with a flat surface lying in one plane and the other end is formed from another flat surface lying above the plane of the first flat surface. A knife is associated with the upper plane and the cutting edge of this knife is spaced from the lower plane a distance equal to the thickness of the cut. Extending upwardly from the lower flat surface directly in front of the knife are a plurality of short blades spaced equal distances apart. Located above the reciprocating cutter head is a removable frame having a plurality of spaced knife blades extending transversely thereof and located above this frame is a hopper into which the vegetables are placed and through which they are fed to the slicer. The front wall of this hopper extends downwardly into close proximity to the lower flat surface and this downward projection forms an abutment that holds the vegetables during the cutting operation.

Having thus briefly described the invention, the same will now be described in detail and for this purpose reference will be had to the accompanying drawings in which the preferred embodiment of the invention has been illustrated, and in which:

Fig. 1 is a top plan view of the improved vegetable slicer;

Fig. 2 is a side elevation of the slicer;

Fig. 3 is a section taken on line 3—3, Fig. 1;

Fig. 4 is a section taken on line 4—4, Fig. 3;

Fig. 5 is a section taken on line 5—5, Fig. 4;

Fig. 6 is a top plan view of a portion of the cutter head showing the slicing knife and the slitting knives in their respective positions; and

Fig. 7 is a view showing the removable transverse blade frame replaced by an open frame.

In the drawing numeral 1 represents the two spaced parallel guide members that are connected at their ends by means of cross members 2. At each corner of the assembly comprising members 1 and 2, a leg 3 is located. These legs serve to support the guides above the surface of the table or bench and are provided with openings 4 for the reception of securing bolts or screws.

Referring now to Fig. 4, it will be seen that the inner surfaces of the guides are provided with channels 5 in which are slidably mounted a cutter head comprising two members 6 that are connected by means of plates 7 and 8, which are secured to the upper surfaces of bars 9 and 10, respectively. These bars are secured to the side members 6 by means of rivets 11. From Fig. 3 it will be seen that the plate 7 lies in a plane below plate 8 and that a knife 12 is located at the front end of plate 8 and forms an extension of the latter. The front end of knife 12 is sharpened so as to form a cutting edge 13 that is preferably inclined with respect to the side 6 as shown more clearly in Fig. 6. Extending between the side members 6, directly in front of the cutting edge of the knife 12 is a transverse metal member 14 of a thickness equal to the distance from the top of plate 7 to the bottom of members 6. Extending upwardly from the upper surface of member 14 are a plurality of slitting blades 15 that are held in place by means of a bar 16, as shown in Fig. 3. The front ends of blades 15 are sharpened and these blades extend upwardly a short distance above the upper surface of the knife 12. Located in front of the plate 7 is a transverse member 17 provided with two spaced ends 18 that are perforated for the reception of a pin 19 to which the rear end of the connecting rod 20 is connected. Secured to the under side of the guides 1 near the front ends

of the latter are bearings 21 in which is rotatably mounted a crank shaft 22. This crank shaft has a crank 23 to which the front end of the connecting rod 20 is secured. Secured to the outer ends of the crank shaft 22 are sprocket wheels 24. Secured to the upper surfaces of the guides 1 to the rear of the crank shaft 22 are two bearings 25 in which is rotatably mounted a shaft 26. Secured to the ends of shaft 26 are two sprocket wheels 27 and one end of this shaft carries, in addition to the sprocket wheel 27, a balance wheel 28 and a crank 29 having a handle 30. Sprocket chains 31 connect the sprocket wheels 24 and 27 and when shaft 26 is rotated, it will rotate shaft 22 and this in turn will reciprocate the cutter head in a manner quite obvious from the drawings. The upper surfaces of the guides 1 are provided near their rear ends with depressions 32 within which is located a frame 33. This frame carries a plurality of knife blades 34 that connect the opposite parallel sides in the manner shown quite clearly in Figs. 1, 3 and 4. A hopper 35 is supported on the upper surface of the frame 33 and has a rearwardly extending lug 36 that is provided on its under surface with a pin 37 that extends into an opening in the transverse bar 2. This pin serves to locate the hopper and to hold it against longitudinal movement. The front wall of the hopper which has been designated by reference numerical 38 is inclined with respect to the sides and has a downwardly extending portion 39 that is divided by means of parallel cuts 40 into a plurality of spaced lugs 41. The cuts 40 are spaced the same distance apart as the knife blades 15, so that the latter may pass through these notches. The lugs 41 serve as stops to prevent the vegetables from moving forwardly when the slicer is in operation.

With the construction shown and just described, let us assume that vegetables such as potatoes are placed in the hopper 35 and pressed downwardly. The transverse knives 34 will cut the vegetables into transverse slices and when the cutter head is in its rearmost position, the blades 12 and 15 are all located to the rear of the rear end of the hopper and the vegetables can therefore be pressed downwardly into engagement with the flat surface of plate 7. When the cutter head is now moved forwardly, blades 15 will make longitudinal cuts in a manner quite obvious and blade 12 will cut the vegetables in a horizontal plane and the latter will therefore leave the machine cut into cubes.

If, instead of cutting the vegetables into cubical form, it is desired to have them in long strips, the square cross section frame 33 and knives 34 are removed and replaced by a similar frame with the knives 34 removed. This frame has been shown in Fig. 7 and has been designated by reference character 33*a*. When frame 33*a* is substituted for frame 33, it is obvious that knives 12 and 15 are the only ones that operate to cut the vegetables and the latter will therefore leave the machine in the form of elongated square strips.

If, for any reason knives 15 are not desired they can readily be removed by removing the strip 15 that holds them in place and with the machine altered in this way, the vegetables will be cut into slices of equal thickness.

From the above description it will be seen that I have produced a simple and substantial slicing machine that is especially well adapted for use where a large quantity of vegetables, such as potatoes, carrots, cabbage and similar vegetables are to be sliced. This machine can be made very strong and is therefore adapted for use where it is subjected to heavy work.

Having described the invention what is claimed as new is;

A vegetable slicer comprising, in combination, two parallel spaced guides, a cutter head carried by the guides intermediate the latter, means for reciprocating the cutter head, the cutter head having its upper surface in two vertically spaced planes, the front end of the upper surface being lower than the rear end, a slicing knife located at the front end of the upper surface with its cutting edge above the plane of the lower surface, a plurality of spaced slitting blades secured to the cutter head and extending upwardly from the latter just in front of the knife, a frame removable secured to the guides, a plurality of spaced knives carried by the frame and extending transversely of the space between the guides, the lower edges of the transverse knives lying in a plane directly above the cutting edge of the slicing knife and a hopper removably secured to the guide, the front end of the hopper having a plurality of spaced lugs that extend downwardly into the space between the guides, the lugs being so located that the slitting knives will enter the space between them.

In testimony whereof I affix my signature.

OTTO ERL.