No. 854,229. PATENTED MAY 21, 1907.

O. H. MILLER.

VEGETABLE CUTTER.

APPLICATION FILED DEC. 18, 1906.

2 SHEETS—SHEET 1.

Fig. 2.

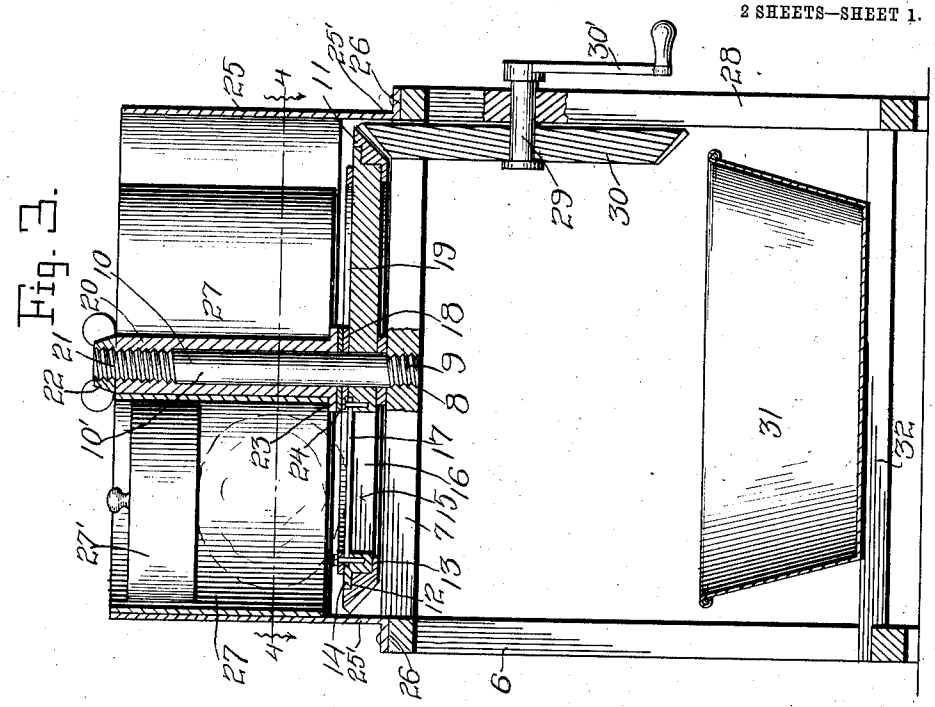
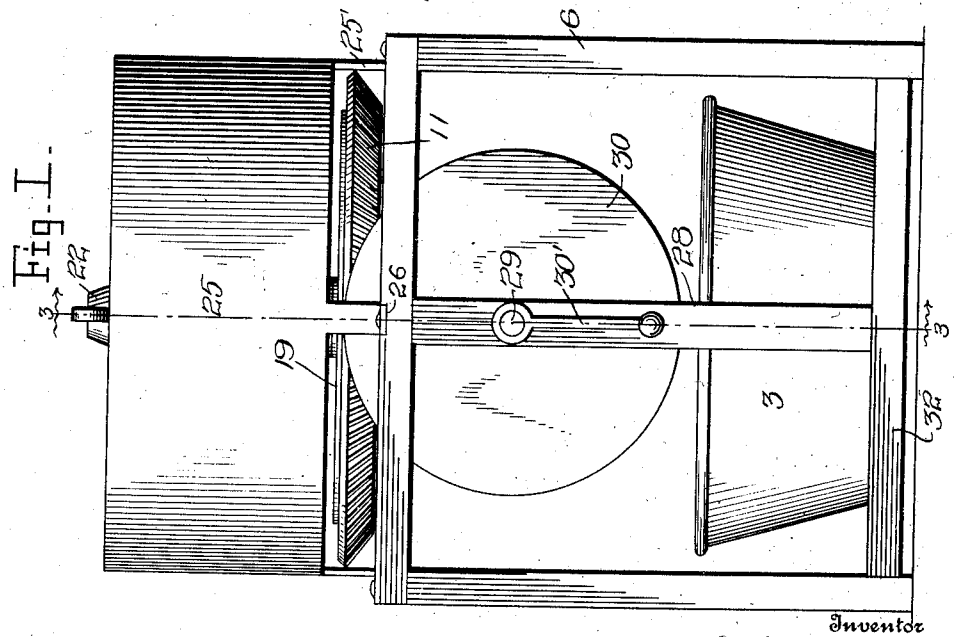


Fig. 1.



Witnesses

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2 SHEETS—SHEET 2.

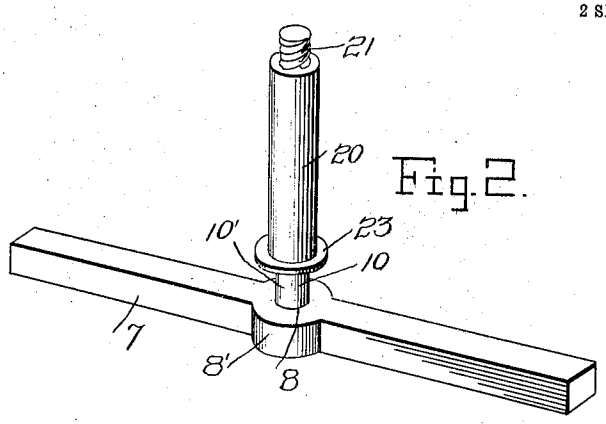


Fig. 2.

Fig. 4.

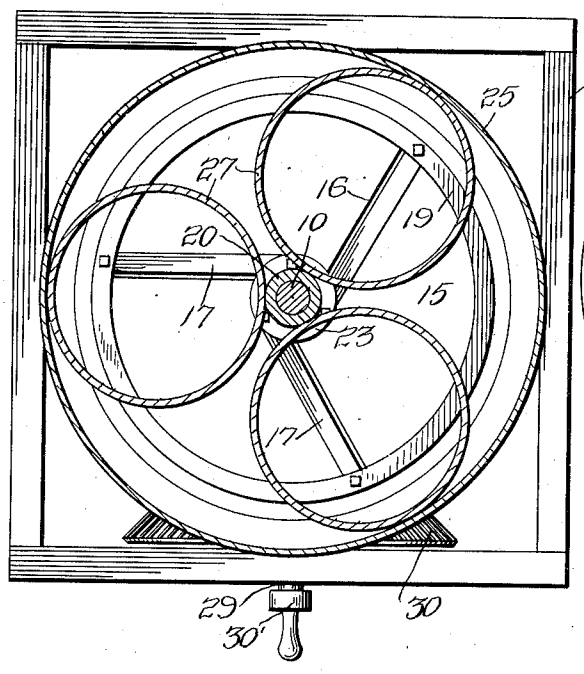
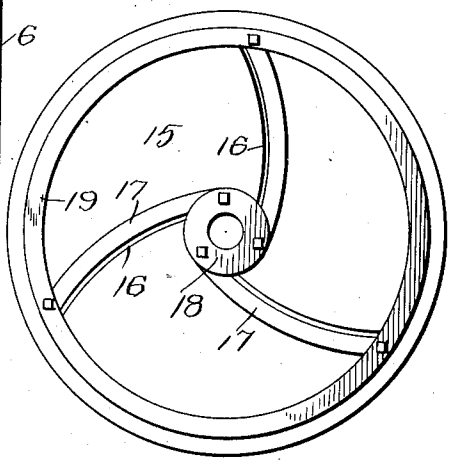


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

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VEGETABLE-CUTTER.

No. 854,229. Specification of Letters Patent. Patented May 21, 1907.

Application filed December 18, 1906. Serial No. 348,462.

To all whom it may concern:

Be it known that I, OTTO H. MILLER, a citizen of the United States, residing at Green Bay, in the county of Brown, State of Wisconsin, have invented certain new and useful Improvements in Vegetable-Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to improvements in vegetable cutters and more particularly to devices of that class in which the knife-plate is secured to one of the drive gears and disposed beneath the hopper cylinder or cylinders, in position to shave off a section or slice of the vegetables as each knife carried by the plate passes therebeneath.

It is the object of this invention to provide a simple, efficient, and durable device of the class described, adapted particularly for use in hotels, restaurants, and other public dining rooms in which a large quantity of certain vegetables is required for each meal, and to this end, the invention consists in the construction, combination and arrangement of parts, all as hereinafter fully described, specifically claimed and illustrated in the accompanying drawings, in which,

Figure 1 is a front elevation of the device. Fig. 2 is a detail view of the frame brace showing also a portion of the bearing-sleeve and the bolt mounted thereon. Fig. 3 is a vertical section on the line 3—3 of Fig. 1. Fig. 4 is a transverse horizontal section on the line 4—4 of Fig. 3. Fig. 5 is a plan view of a modified form of cutter.

Like parts are designated by corresponding reference numerals in the several views.

Referring more particularly to the drawings, 6 designates the frame of the device and as shown comprises an open box-like structure, the upper strips of the sides of the frame being connected by a strap 7 enlarged intermediate its ends, as at 8′, and provided with a threaded socket 8 formed in such enlargement and adapted to receive the threaded lower end 9 of a vertically-disposed bolt 10.

Loosely mounted upon the plain portion 10′ of bolt 10 above straps 7 is a ring gear 11, whose upper face is provided with a series of sockets 12, and whose under face has an inwardly extending annular flange 13 formed thereon, the gear further including a hub portion through which said bolt passes, so as to allow the gear to rotate freely thereon, as afterward described, and a series of spokes connecting the gear rim and hub. The sockets 12 formed in said gear are adapted to receive outwardly extending tongues 14 formed on a cutter-plate 15 likewise provided with a hub portion, disposed in alinement with the gear hub, the bolt 10 passing therethrough as will be readily understood. Plate 15 is further provided with a series of radial slots 16 which extend at opposite ends partly into the plate hub and rim, the knives 17 which fit in said slots being held in placed by means of a plate 18 adapted to be bolted to the upper face of the cutter plate hub and by a ring 19 which fits over the upper face of the rim of said cutter-plate and is bolted thereto. These knives may be straight, as shown in Fig. 4, or slightly curved, as shown in Fig. 5, according as desired, the knife slots in which said knives are disposed having corresponding form, the knives in both constructions being preferably disposed radially of the plates.

The ring gear and its attendant parts above referred to is held in place upon the bolt by means of a sleeve 20, the bore of which is threaded at its upper end to engage the threaded end 21 thereof, said sleeve being further held in place by a wing-nut 22 mounted upon said bolt end. The lower end of said sleeve is preferably widened or flared, as at 23, to form an enlarged bearing face which may contact directly against the upper face of plate 18 or against a washer 24 interposed between said plate and sleeve face.

Mounted upon the upper face of the machine frame is an open cylindrical collar 25 provided with perforated lugs 25′, through which the bolts for fastening said collar to said frame are passed, said lugs preferably fitting in sockets 26 formed in the upper face of the frame 6. This collar serves as a means for retaining a series of open cylindrical hoppers 27 in place above the cutter plate, the size of the hoppers being so proportioned with respect to the inner diameter of the collar that said hoppers are held in mutual frictional contact with each other and are in this way held in fixed position. The disposition of the hoppers with respect to the cutter plate is such that when the latter is rotated, as hereinafter described, the knives carried thereby are brought successively beneath the hoppers and are adapted

to shave off or slice the material contained in the several hoppers and forced into contact with the knives by means of plungers 27′ fitted in the several hoppers and adapted to press down upon the contents thereof.

The brace 28 which forms a portion of the frame 6 has loosely mounted therein a stub shaft 29, on which is mounted a gear 30 in mesh with the ring gear 11, so that when gear 30 is rotated through its crank-handle 30′, such rotation will be directly imparted to the ring gear and the cutter plate secured thereto.

By reason of the open formation of the frame of the machine, any suitable receptacle 31 may be positioned therewithin to receive the slices of material cut by the knives in their movement beneath the hoppers, the frame sides being provided at their bottoms with a pair of cross-braces 32 to retain the receptacle in proper position. It will be obvious furthermore, that the frame may be partially inclosed at its sides by means of movable doors or panels.

In the operation of the machine the several hoppers are filled with vegetables or other material to be sliced and the plungers or weights disposed therein. The ring gear is then driven through the medium of gear 30 when the cutter plate carried by said gear will rotate therewith bringing the knives secured thereto successively beneath the several hoppers to cut or slice the material therein which is forced below the lower edge of the hoppers by the action of the plungers. It will be obvious that the collar may contain a greater number of hoppers than that shown in the present instance, and that the number of knives carried by the cutter plate may be proportionately increased, it being necessary, however, that each knife shall have passed completely beyond a hopper before the succeeding knife reaches the same, so that a complete slice may be cut by each knife. Owing to the formation of the sockets in the ring gear and to the provision of lugs upon the cutter plate, it will also be obvious that one cutter plate may be substituted for another at will.

Further description of the machine and its operation is thought unnecessary.

What is claimed, is—

A vegetable slicer comprising a frame; a series of open ended cylindrical hoppers disposed above said frame; a cylindrical collar mounted upon the upper face of said frame and embracing all of said hoppers, for holding the latter in mutual frictional contact with each other and retaining them in fixed position; a strap connecting the opposite sides of said frame and provided with a bearing disposed directly beneath the central space between said hoppers; a vertical bolt disposed within said space and having its lower end fitted in said bearing; a ring gear carried by said bolt and provided with a series of sockets formed in its rim; a cutter plate detachably carried by said gear and provided with a series of outwardly extending lugs, adapted to be received in said sockets, and with a series of knife-slots; knives disposed in said slots; a sleeve incasing said bolt and provided with an enlarged lower end adapted to contact with said cutter plate, to retain said cutter plate and ring gear in place; means for retaining said sleeve in place upon said bolt; means disposed within each hopper for forcing the material contained therein into the path of movement of the knives; and means for rotating said ring gear, to bring the knives carried by said cutter plate successively beneath said hoppers, to slice the material contained therein.

In testimony whereof, I affix my signature, in presence of witnesses.

OTTO H. MILLER.

Witnesses:
CHARLEY PAVLAT,
ALICE PARISH,
JOHN F. DOCKRY.