(No Model.) 2 Sheets—Sheet 1.

C. KIMMEL.

Vegetable Cutter and Grater.

No. 243,139. **Patented June 21, 1881.**

Fig. 1.

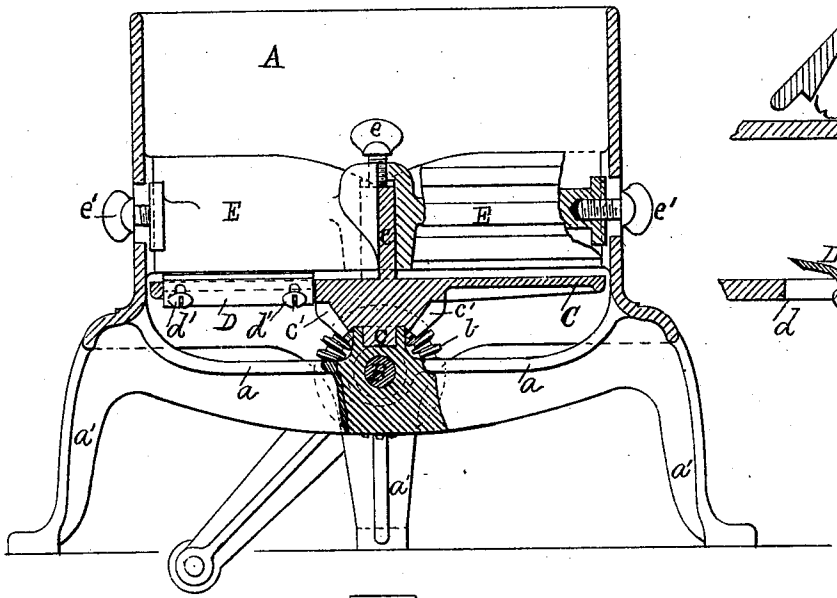


Fig. 4

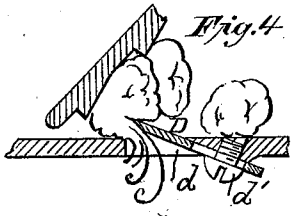


Fig 5.

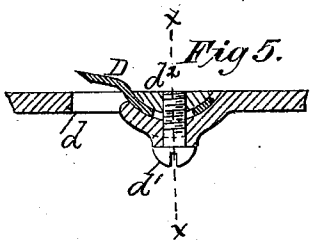


Fig. 2

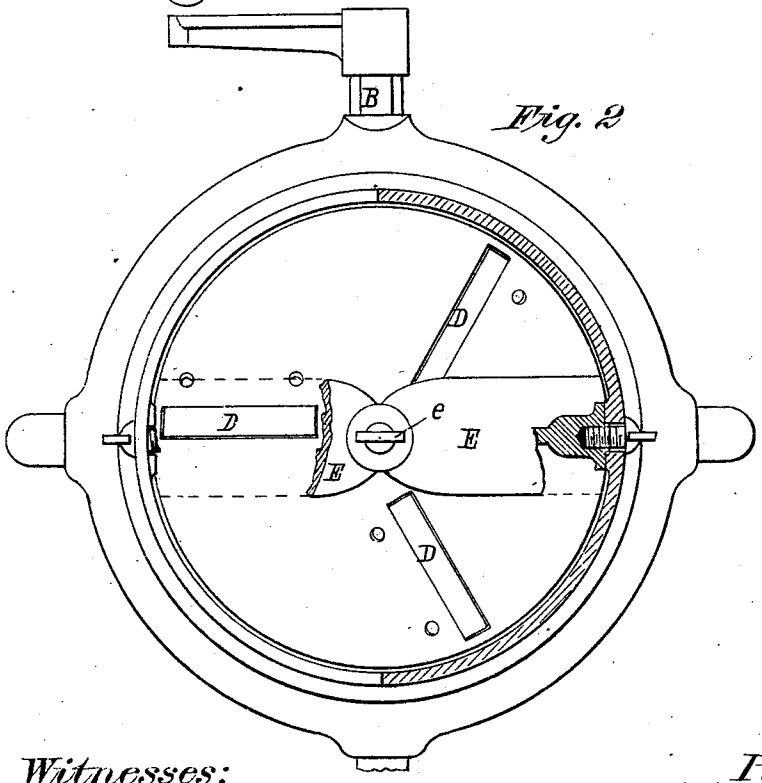
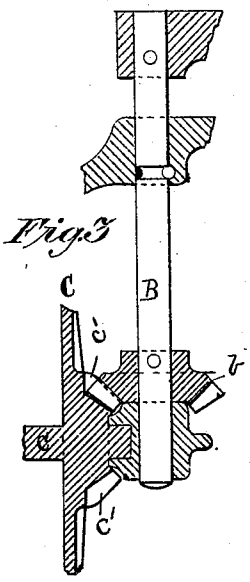


Fig. 3



Witnesses:
S. P. Hollingsworth
Nathan C. Lane

Inventor,
Charles Kimmel
By Coyne and Elliott
Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.) 2 Sheets—Sheet 2.

C. KIMMEL.

Vegetable Cutter and Grater.

No. 243,139. **Patented June 21, 1881.**

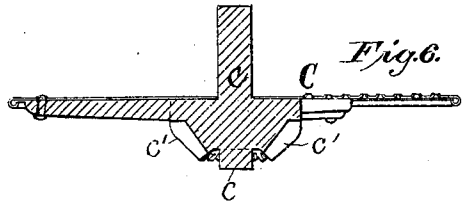


Fig. 6.

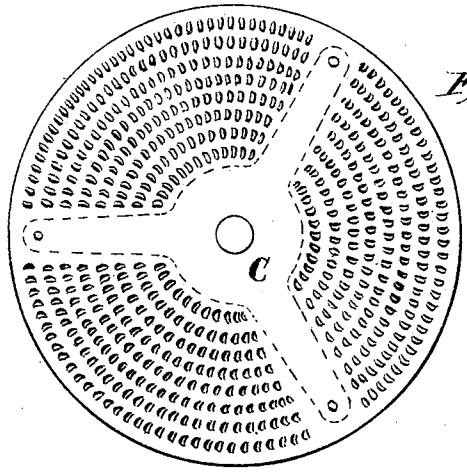


Fig. 7.

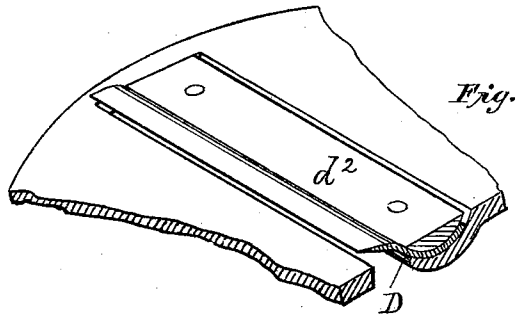


Fig. 8.

Witnesses:
S. P. Hollingsworth
Nathan C. Lane

Inventor,
Charles Kimmel
Coyne and Elliott
Attorneys

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

CHARLES KIMMEL, OF CHICAGO, ILLINOIS.

VEGETABLE CUTTER AND GRATER.

SPECIFICATION forming part of Letters Patent No. 243,139, dated June 21, 1881.

Application filed May 11, 1880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES KIMMEL, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Vegetable Cutting and Grating Machine, of which the following is a specification.

This invention relates to improvements in vegetable-cutting machines in which horizontally-reciprocating radial knife-blades operate in an open-end cylinder and in conjunction with a beveled cross-bar above the disk to which the blades are attached, and shown in Letters Patent of the United States No. 151,884, bearing date of June 9, 1874; and the objects of my improvements are, first, to facilitate the introduction of materials to the cylinder; second, to provide means for adjusting the cross-bar with relation to the cutting-blades. I attain these objects by mechanisms illustrated in the accompanying drawings, in which—

Figure 1 is a vertical cross-section with parts broken away to show the adjustment of the beveled cross-bar; Fig. 2, a plan view partially broken away; Fig. 3, a detail of the driving mechanism. Fig. 4 is a cross-section through one of the cutting-blades, showing the adjustment and operation of the same; Fig. 5, a cross-section of a modification of the blade shown in Fig. 4; Fig. 6, a cross-section through the grating-disk; Fig. 7, a plan view of the same, and Fig. 8 a perspective of a portion of the disk and of the cutting-blade shown in Fig. 5.

Similar letters refer to the same parts throughout the several views.

A represents an open-end cylinder, provided with a rigid cross-bar, *a*, supporting the operating mechanisms of my machine, said cylinder being supported upon suitable legs, *a'*. The cross-bar *a* is enlarged at its center and provided with a transverse perforation, in which is journaled the horizontal crank-shaft B, carrying the beveled cog *b*.

C is a disk, provided with a vertical shaft, *c*, having its lower edge journaled in a suitable recess in the bar *a*, and provided with a bevel-wheel, *c'*, corresponding to and gearing with the cog *b* of the shaft B. The disk C is provided with a series of radial slots, *d*, one side wall of which is longitudinally beveled and has secured thereto, by a set-screw, *d'*, a straight knife-blade, D, having an elongated slot, as shown in Fig. 4, to enable its adjustment toward or from the opposite wall of the groove, to regulate its depth of cut upon the vegetable to be operated upon.

Instead of beveling the wall of the grooves and having the cutting-blades straight, the back of the blade may be concavo-convex in cross-section, and the upper face of the disk adjoining the slot be made correspondingly concave to form a seat for said back, the blade being adjustably held in position by a set-screw passing from the under side of the disk through the slot in the blade and secured by a plate or strip, d^2, plano-convex in cross-section, as shown in Figs. 5 and 8. The purpose in either case is to have a solid base against which to clamp the blade and prevent its warping or breaking, as has heretofore been the case in similar machines.

E is a cross-bar, suitably recessed at its center of length, to rest upon the upper end of the shaft of the revolving cutting-disk and provided with a thumb-screw, *e*, to adjust it to any desired height above said disk, and is mounted rigidly in a horizontal position and prevented from turning with the disk by dovetailing its ends and fitting them into corresponding lugs or mortises in the sides of the cylinder, to which it is held by thumb-screw *e' e'*. This cross-bar E is beveled on either side of its center of length in opposite directions, so that as the disk revolves the vegetables will be drawn down and held against the cutting-blades, and in this respect is a feed to the same.

Instead of providing the revolving disk with cutting-blades, I may perforate it from the under side to give it a rough surface adapted for cutting or grating the vegetables, as shown in Figs. 6 and 7, or I may have with each machine a disk of each kind to use as the necessity of the occasion may require, for, as the construction, with the exception of the cutting-surface, is the same, the one may be replaced by the other at will.

By the construction above described it will be seen that free access is had to the cylinder in both feeding the vegetable to and cleaning the same, and that the machine is made more compact in structure and size and its parts

readily adjustable for use and detachable for cleaning or packing.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a vegetable-cutter, the combination, substantially as described, with the revolving cutting-disk and the cog on its under side engaging with the crank-shaft, of a vertically-adjustable feed-bar having oppositely-beveled sides, and extending across and above the face of the cutting-disk, whereby the thickness of the slices may be varied at will.

2. The combination, with the cylindrical receptacle, the revolving disk, and the radial and adjustable cutting-blades, of a feed-bar having oppositely-beveled sides and adjustably secured above said disks and blades, as and for the purpose set forth.

3. The cylinder A, revolving cutting-disk C, and rigid cross-bar *a*, supporting the actuating mechanism and said disk, in combination with an adjustable feed-bar removably secured to said cylinder and resting upon the shaft of the cutting-disk, substantially as and for the purpose described.

CHARLES KIMMEL.

Witnesses:
JOHN G. ELLIOTT,
WILLIAM L. COYNE.