H. A. STODDARD AND F. E. CALLAHAN.

VEGETABLE CUTTER.

APPLICATION FILED APR. 26, 1921.

1,395,369. Patented Nov. 1, 1921.

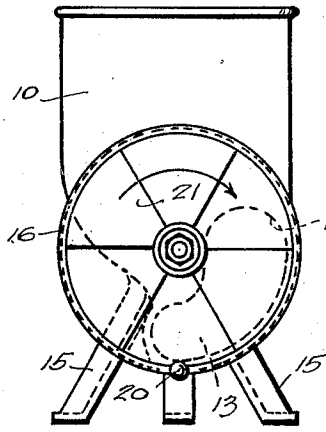


FIG. 1

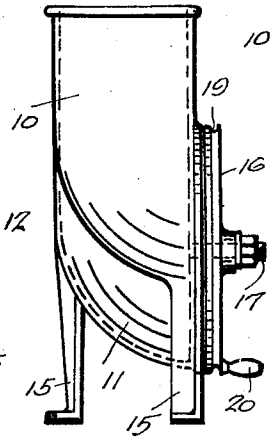


FIG. 2

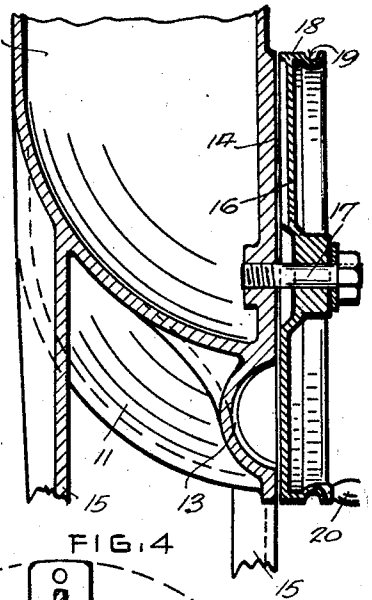


FIG. 4

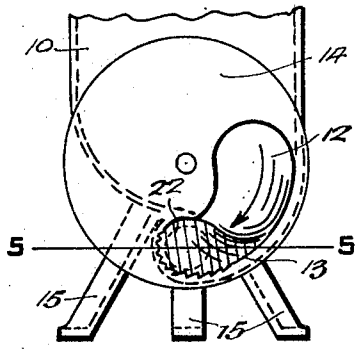


FIG. 3

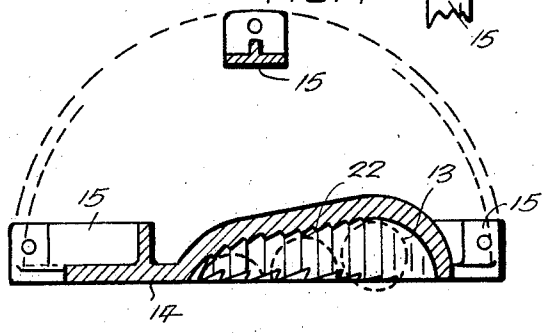


FIG. 5

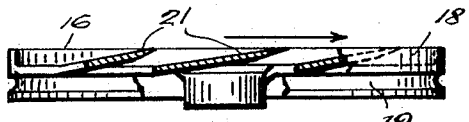


FIG. 6

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UNITED STATES PATENT OFFICE.

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VEGETABLE-CUTTER.

1,395,369. Specification of Letters Patent. Patented Nov. 1, 1921.

Application filed April 26, 1921. Serial No. 464,581.

To all whom it may concern:

Be it known that we, HARRY A. STODDARD and FRANCIS E. CALLAHAN, citizens of the United States of America, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Vegetable-Cutters, of which the following is a specification.

Our present invention relates generally to vegetable cutters and more particularly to slicing machines, our object being the provision of a simple inexpensive arrangement involving but few parts and capable of being maintained in a highly sanitary condition at all times, by which vegetables, fruits and the like particularly potatoes and apples may be sliced evenly and uniformly down to the last bit, without danger to the operator and in fact mechanically without the presence of an operator.

With these objects in mind our invention proposes a slicing machine of the type and construction shown in the accompanying drawing, which forms a part of this specification, and wherein,

Figure 1 is a front elevation of our improved machine,

Fig. 2 is a side view,

Fig. 3 is a front view with the cutter removed,

Fig. 4 is an enlarged vertical section taken centrally through the lower portion of the machine,

Fig. 5 is a horizontal section taken on an enlarged scale and substantially on line 5—5 of Fig. 3, and

Fig. 6 is a top plan view partly broken away and in section of the cutter wheel.

Referring now to these figures our invention proposes a machine which includes a hopper 10 adapted to contain vegetables, fruit and the like to be sliced, and open at its top for the reception of such articles although it will be understood from the matter to follow that the feed of articles to the cutter does not depend in any sense upon the weight of a plurality thereof within the hopper.

At its base the hopper has a downwardly inclined and spirally curved portion 11 forming therein a feed or discharge channel into one end of which the articles fall singly from the hopper 10 and the opposite end of which leads to the front of the machine and communicates with one end 12 of a spirally curved discharge slot 13 in a circular face plate 14 with which the hopper is provided at its lower front portion.

The hopper 10 may be supported in any suitable manner as by means of legs 15 and its face plate 14 presents a generally flat circular face at the front of the machine against which a cutter wheel 16 rotates. This wheel is mounted upon an axial bolt 17 extending from the center of the face plate 14 and is preferably provided with a rim 18 which may have a circumferentially grooved portion 19 in case the cutter wheel is to be driven by a belt. A crank 20 is also provided for hand rotation of the cutter wheel and for cutting purposes this wheel has its web radially separated and formed with inclined cutting blades 21 as seen in Fig. 6 which are laterally deflected toward the face plate 14 and uniformly inclined in the direction of rotation of the cutter wheel as indicated by the arrow in Fig. 1 so that it thus becomes apparent the entire series of blades 21 may be resharpened from time to time as necessary by simply removing the cutter wheel and applying its inner face against the flat side of a grinding wheel and the like.

In accordance with the invention furthermore the feed slot 13 of the face plate 14 gradually tapers and is of decreasing depth from the communicating end of the hopper feed channel, thus decreasing gradually in depth in the direction of rotation of the cutter wheel as shown so that as the articles are sliced they are automatically shifted by the action of the cutter wheel along the gradually decreasing slot and thus automatically fed into the effective plane of rotation of the blades 21 down to the last bit of vegetable of fruit as will be seen by a comparison of the dotted line positions in Figure 5.

The wall of the feed slot 13 is moreover provided with teeth 22 inclined as particularly seen in Fig. 5 in the direction of rotation of the cutter wheel 16 and consequently in the direction of shifting movement of the articles being sliced so that by virtue of these teeth undesirable rotative or shifting movements of the articles which might result in inaccurate and ununiform slicing is avoided.

By curving the feed slot 13 of the face plate 14 as above described the articles be-

ing sliced will more naturally and more readily follow rotary movement of the cutter wheel 16 and by arranging the lower discharge channel of the hopper on a spiral with one end communicating with the discharge slot it is quite obvious the articles will readily and freely find their way into the slot of the face plate so as to avoid lying upon the weight of articles within the hopper to cause a proper feed thereof from the hopper. This permits of effective slicing of the last article within the hopper as well as the first.

It is obvious from the foregoing that our invention provides a machine which may be readily operated, which may be formed of any suitable material, which may be easily maintained in a highly sanitary condition, and which will be effective and efficient for the purposes stated.

We claim:

1. A vegetable slicer including a rotary cutter, and a hopper having a feed channel and also having a vertical face plate at one side against which the cutter rotates, said face plate provided with a feed slot at its lower portion below the axis of the cutter communicating at one end with the said channel and gradually decreasing in depth therefrom in the direction of rotation of the cutter.

2. A vegetable slicer including a rotary cutter, and a hopper having a feed channel and also having a face plate against which the cutter rotates, said face plate provided with a feed slot communicating at one end with the said channel and gradually decreasing in depth therefrom in the direction of rotation of the cutter, the wall of which slot having teeth inclined in the direction of movement of the cutter as described.

3. A vegetable slicer including a rotary cutter having a flanged rim and having its wall within the rim radially separated and laterally displaced to form cutting blades, a hopper having a generally flat face plate against which the rim and blades of the cutter wheel are movable, said hopper having a lower discharge channel and said face plate having a feed slot communicating at one end with the discharge channel of the hopper and gradually decreasing in depth away from the said channel and in the direction of rotation of the cutter wheel.

4. A vegetable slicer including a hopper having a circular face plate at one side of its lower portion and also provided with a spiral discharge channel in its base, said face plate having a curved feed slot in its face communicating at one end with the discharge channel of the hopper and gradually decreasing in depth from the said channel, and a cutter wheel mounted to rotate against the face plate, having cutting blades inclined toward the latter in a direction corresponding to the taper of the said feed slot as described.

5. A vegetable slicer including a hopper having a circular face plate at one side of its lower portion and also provided with a spiral discharge channel in its base, said face plate having a curved feed slot in its face communicating at one end with the discharge channel of the hopper and gradually decreasing in depth from the said channel, and a cutter wheel mounted to rotate against the face plate, having cutting blades inclined toward the latter in a direction corresponding to the taper of the said feed slot, said feed slot having its wall provided with teeth inclined in the direction of its taper as and for the purposes set forth.

In testimony whereof we have affixed our signatures.

HARRY A. STODDARD.
FRANCIS E. CALLAHAN.