2 Sheets—Sheet 1.

W. H. GOODCHILD.

Meat and Vegetable Cutter.

No. 200,709. **Patented Feb. 26, 1878.**

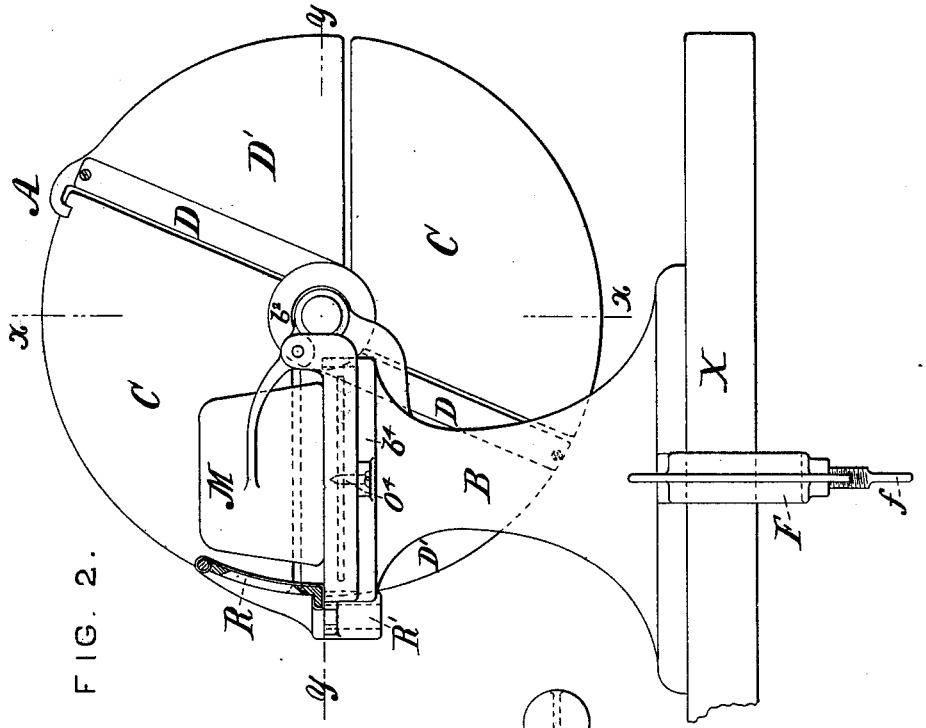

FIG. 2.

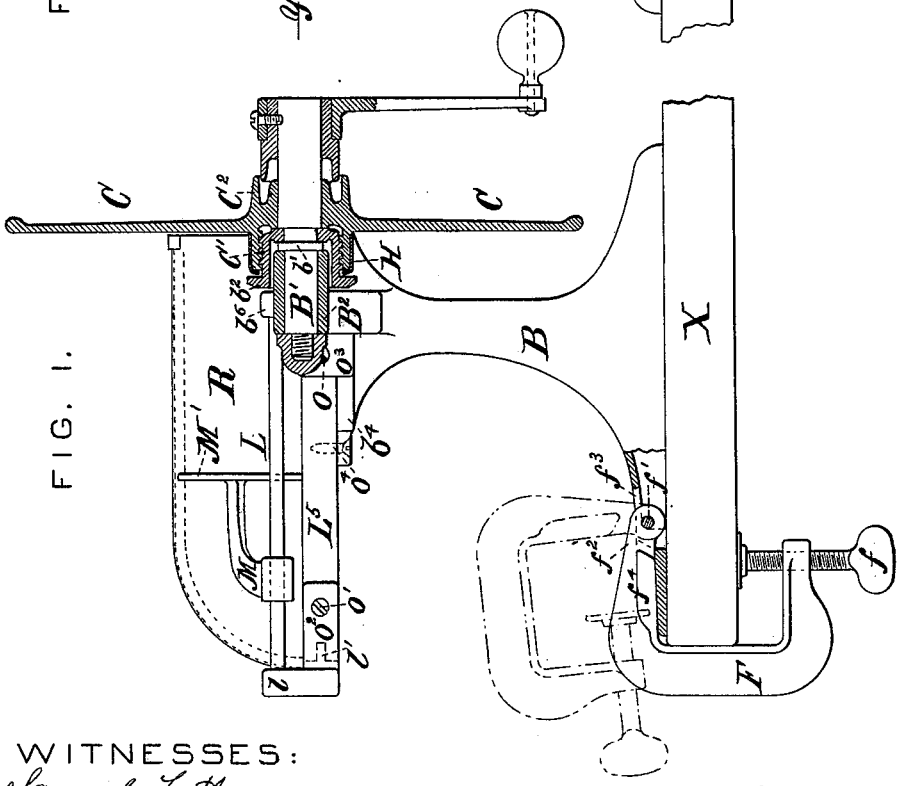

FIG. 1.

WITNESSES:

Samuel F. Hay

Edward D. Mackintosh.

William H. Goodchild

INVENTOR.

2 Sheets—Sheet 2.

W. H. GOODCHILD.

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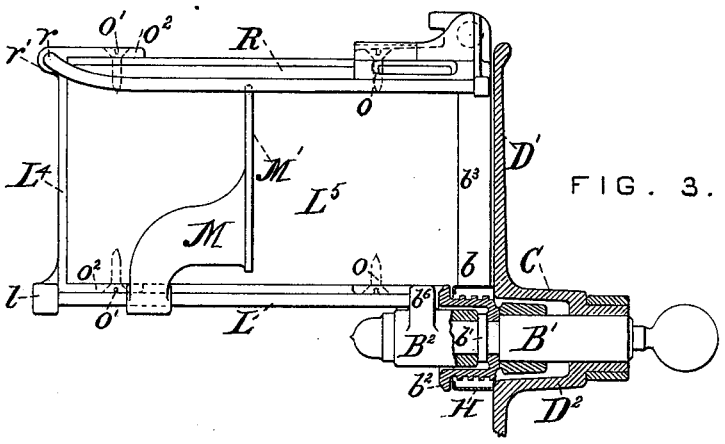


FIG. 3.

FIG. 4.

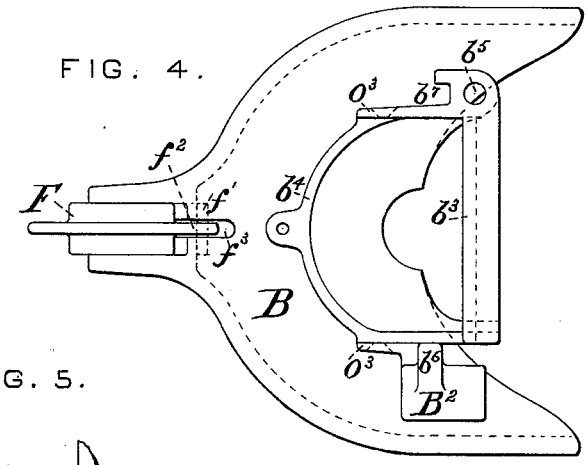


FIG. 5.

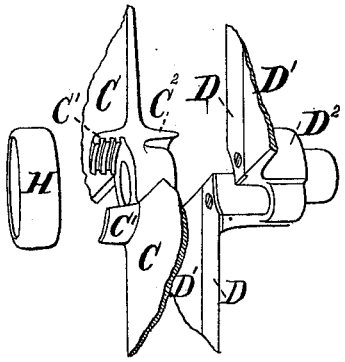
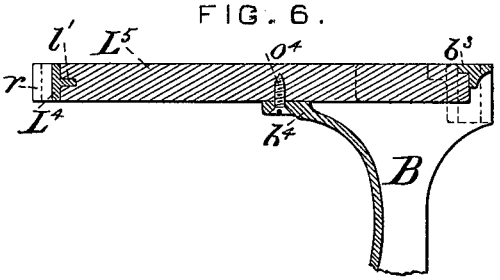


FIG. 6.



WITNESSES:

Samuel F. Hay

Edward D. Mackintosh

William H. Goodchild

INVENTOR.

UNITED STATES PATENT OFFICE.

WILLIAM H. GOODCHILD, OF NEW YORK, N. Y.

IMPROVEMENT IN MEAT AND VEGETABLE CUTTERS.

Specification forming part of Letters Patent No. **200,709**, dated February 26, 1878; application filed July 20, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. GOODCHILD, of the city, county, and State of New York, have invented certain new and useful Improvements in Meat and Vegetable Cutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

The object of this invention is to make further improvements in machines of the same class as previously patented to Goodchild and Hay.

The improvements herein shown relate more particularly to the arrangement of the stand and table of the machine; and to the arrangement of clamp employed to hold the entire machine in place when in use; and to the mode of supporting and adjusting the gage-plate at its center; and to the manner of arranging the central parts of the cutter-wheel, to effectually exclude the substances operated upon from said central portions, and consequently promote the easy cleaning of the machine.

In the accompanying drawings, Figure 1 is a front sectional elevation of my machine at the line *x x*, Fig. 2; Fig. 2, a side or end elevation, showing the face of the cutter-wheel. Fig. 3 is a sectional plan at and above the table, on the line *y y*, Fig. 2; Fig. 4, a plan of the standard or base of the machine. Fig. 5 is a perspective view of the central portions of the cutter-wheel and the guard-ring separated from each other; Fig. 6, a section through the table and adjacent portions of the standard and outer support.

In the above-mentioned drawings similar letters of reference indicate like parts.

In the rotary cutters as previously patented to Goodchild and Hay, the table or platform on which the material is laid to be fed to the cutter-wheel was secured upon two separate cast supports, each having two feet, and being connected by tie-rods.

It will be noted that in the above arrangement the supports at the end of the table farthest from the cutter-wheel, for the back removable fender R and the rod L^4, on which the sliding feeder M is placed, are formed on one (the left) support of the machine. It is obvious that the usefulness of the machine is thus greatly endangered by the liability of breakage of any part of the said support, which would either prevent the use of the back fender R or feeder M, or destroy the base or support for the entire machine, and render repairs almost impracticable.

The special object sought in the construction of the stand and table herein shown is to provide strong metallic means of support for the fender R and the feeder-rod L herein shown, and at the end farthest from the cutter-wheel, which support shall be entirely independent of the supporting foot or base of the machine, and which may be readily replaced at small expense, thus promoting the useful durability of the machine. This I accomplish by using the standard B, which has sufficient base to support the entire machine, and by using the supporting end piece L^4, which latter is secured to the table L^5 by screws or nails o^1, which pass through the projecting flanges o^2 into it, as shown. In this piece L^4 the bearing r' is formed, to support the outer end of the fender R by means of the wire r, its other end being supported by the pin R′ in the bearing b^5, provided in B. The feeder M is supported by the rod L, which has its outer bearing at l in the piece L^4, and opposite bearing at b^6 on B.

The tongue l', formed on L^4, is grooved into the end of the wooden table-top L^5, and prevents its warping at that end, which same effect is secured at the other end by the joint action of the projecting lug b^3, cast upon B, and the cross-bar or plate b^4, upon which L^5 rests. b^3 and b^4 thus sustain the table L^5 against downward pressure, while any side or upward motion is prevented by the action of the side flanges o^3, through which screws or nails o pass into L^5, and any rising tendency of the latter is further prevented by the screw-fastening o^4, which passes into it through the flange upon b^4, as shown. L^5 is thus firmly held against pressure from any direction, and all the parts kept in proper relative position to each other. Strong bearings may be provided at r' and l for the fender and feeder-rod by employing separate corner-pieces and fastening them to L^5; but I prefer to secure the

additional advantages gained by the use of the tongue l' and the easy fastening of a single piece. I therefore connect said bearings as above set forth.

The clamp F is arranged, in combination with the base of the standard B, to hold the machine solidly upon a bench or table, X, by means of the thumb-screw f. Any ordinary hinge-fastening may connect F with B; but I prefer, for cheapness of construction and the improved appearance of the base B, to arrange it to swing around on the pin f^1, which passes through its shank f^2, which latter is introduced through the slot f^3. The pin f^1 projecting through the shank f^2 and across the slot f^3, the clamp is always connected with the machine, and can be swung over, as shown in dotted lines, to always permit the machine to stand upon its base on a shelf or other flat surface. The head of the clamp which presses down on the base of the standard is seated in a recess in the said base, as at f^4, this greatly aiding the stability of the machine when fastened in working position. This seat for the clamp F, formed in the base of the machine, is to obviate unnecessary enlargement of said base, and to provide for throwing the cutter-wheel A the greatest distance from the point of fastening consistent with a firm holding of the machine, and consequently insure the discharge of the cut material well onto the table X, and prevent the parings of the apple from falling over the edge of the table to which the clamp is fastened onto the floor when the machine is made as a combined slicer and parer. The slot b^7 in the standard is provided to hold the parer in position. The position of this clamp F at the left end or side of the machine enables it to be fastened to the end of a table, X, and at any desired distance from the front thereof as will prevent substances discharged from the wheel A from being thrown over the front of the table by the rotary motion of the said wheel.

In the rotary cutter as previously patented to Goodchild and Hay, the laterally-adjustable gage-plate was mounted on a threaded nut, which latter was, in turn, placed upon the shaft. It became evident that the thread upon the adjusting-nut and corresponding thread in the hub of the gage-plate were subject to considerable wear by reason of the side play caused by the escape of the cut material through the back of the cutter-wheel, and also by the constant one-sided pressure caused by feeding the material to be cut against the face thereof, thus causing the plate to rock on its threaded central hub, and causing the cutters to produce an uneven or slightly wedge-shaped slice. I wholly avoid the above disadvantages when I employ an adjusting-nut, b, by mounting the gage-plate C directly upon the shaft B^1.

Before describing the manner of laterally adjusting the gage-plate when in the above relation to the shaft and nut, I will describe the means employed to protect the central portions of the cutter-wheel A from clogging up with the material being cut, and to avoid, consequently, any obstruction to the moving parts thereof.

It will be observed, on reference to the patent before referred to, that the cutter, as previously patented, has an arrangement of cross cutting or slitting knives at the back, and also a covering over the said knives, which covering fully protects the openings in the hub D^2, made to permit the lateral movement of the central portion of the gage-plate within said hub D^2 of the knife-plate, and consequently prevents the entrance therein of vegetable substances at the back of the wheel. It will also be seen that when the gage-plate was caused to move back from the face of the knife-plate, by turning the threaded nut, the threads thereon were fully exposed at two points at the face of the wheel to the full extent of the lateral movement of the gage-plate, the central portions of the wheel being thus liable to be filled up by the substances fed to the machine, and the nut being liable to rust fast to the gage-plate. I always avoid the above disadvantages at the face of the wheel, and at the back thereof when the slitting-knives are not in the machine, by employing projecting lips C^1, cast upon the face of the gage-plate, and lips C^2, cast upon the back thereof. These lips C^2 are of sufficient length to always lap over the openings in the hub D^2 of the knife-plate, irrespective of the position of the said gage-plate, and the lips C^1 always lap over the body of the adjusting-nut b, thus protecting the openings made, and the means employed for adjusting the said plate C. The adjusting-nut b extends over the main bearing B^2, in which the shaft B^1 revolves, and is provided with an enlarged rim, b^2, which is preferably serrated to admit of its easy turning by the operator. Said nut b has a screw-thread cut upon its back portion or body, which engages with a corresponding thread cut upon the inside of the lips C^1. Any turning of b upon the shaft B^1 will cause the gage-plate C to slide laterally on said shaft, and thus correctly gage the thickness of the cut of the knives D, which are firmly secured to the knife-plate D^1, and always revolve a slight distance from the edge of the upper cross-bar of the standard B, which forms a part of the table-top, as shown.

The rigid collar b^1 on the shaft B^1 separates the nut b from the bearing B^2, and prevents the revolution of the cutter-wheel from causing any alteration in the set position of the gage-plate.

An important feature of my invention is the sheet-metal tube or guard-ring H, which is slipped over the lips C^1 before the threaded nut b is connected with the gage-plate C, and is held against lateral movement between the knife-plate D^1 and knives D and the rim b^2, the lips C^1 being free to move laterally therein. The object of this ring H is to cover all of the central portion of the face of the wheel A inside of the inner line of the cut of the

knives D, thus insuring the cutting and free passage through the wheel of any substances which can be pressed against its face, and it also has the additional advantage of completely covering the openings between the ends of the two lips C^1 and the openings between C^1 and b^2, caused by the lateral movement of the gage-plate, thus insuring cleanliness and freedom of action of the working parts by entirely protecting the threaded nut *b* and adjacent parts from the material being fed to the cutters.

In carrying out the first above mentioned and principal purpose and object for which I use the ring H, I do not confine myself to the special construction shown, as a projecting ring may be formed upon the face of a cutter-wheel, inclosing its central portions, as and for the purpose set forth, the said ring being entirely independent of any means employed for adjusting the thickness of the cut of the knives in the said wheel.

The feeder M herein shown is arranged to slide upon the rod L, is prevented from striking the cutter-wheel A by the stop-bearing b^6, and is arranged to swing over toward the operator on the rod L and beneath the table, to leave the table-top L^5 unobstructed its entire length for feeding up rhubarb, celery, or other long vegetable substances to the cutter-wheel, and is substantially similar in its actions and purposes, in feeding up articles to the cutters D by its face M′, to the feeder shown in previous patent to Goodchild and Hay. The stripper-bars and the teeth or pins in the lower edge of the face M′ therein shown are herein omitted, and the lower edge of the face M′ permitted to rest upon the table-top when in use.

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

1. The combination of the base B, cutter-wheel A, table L^5, fender R, and feeder M, substantially as described.

2. The clamp F, articulated to the broad foot portion of the base B on the side farthest from the cutter-wheel, and seated, when in use, in a recess in said base, substantially as set forth.

3. The gage-plate C, when placed directly on the shaft B^1, in combination with the adjusting-nut *b* and cutters D, substantially as and for the purposes herein set forth.

4. The combination of the lips C^1 with the gage-plate C and nut *b*, and the combination of the lips C^2 with the gage-plate C and hub D^2, all substantially as and for the purposes herein specified.

5. A circular guard around the center of a cutter-wheel, to prevent any substances being fed against the face of the wheel at a point nearer to the center thereof than that at which they can be cut by the knives in said wheel, substantially as herein set forth.

6. The combination of the guard-ring H, adjusting-nut *b*, and cutter-wheel A, substantially as herein specified.

WILLIAM H. GOODCHILD.

Witnesses:

SAMUEL F. HAY,

EDWARD D. MACKINTOSH.

Correction in Letters Patent No. 200,709.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 8, 1884.

In compliance with the request of the patentee, Letters Patent No. 200,709, granted February 26, 1878, to William H. Goodchild, of New York, New York, for an improvement in "Meat and Vegetable Cutters," is hereby limited so as to expire at the same time with the patent of the following-named having the shortest time to run, viz: English Patent, dated May 24, 1877, No. 2,032; and French Patent, dated June 8, 1876, No. 113,213.

It is hereby certified that the proper entries and corrections have been made in the files and records of the Patent Office.

This amendment is made that the United States Letters Patent may conform to the provisions of Section 4887 of the Revised Statutes.

[SEAL.]

BENJ. BUTTERWORTH,
Commissioner of Patents.

Approved:

M. L. JOSLYN,
Acting Secretary of the Interior.