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2 Sheets.

W. B. & D. H. HARNISH.

Improvement in Vegetable Cutters.

No. 118,235.

Patented Aug. 22, 1871.

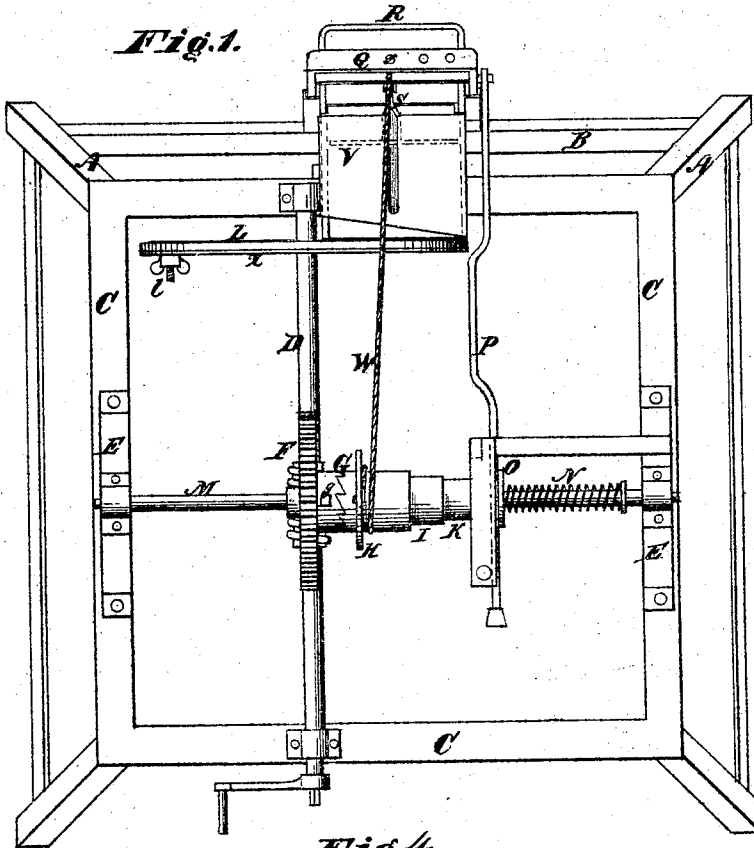
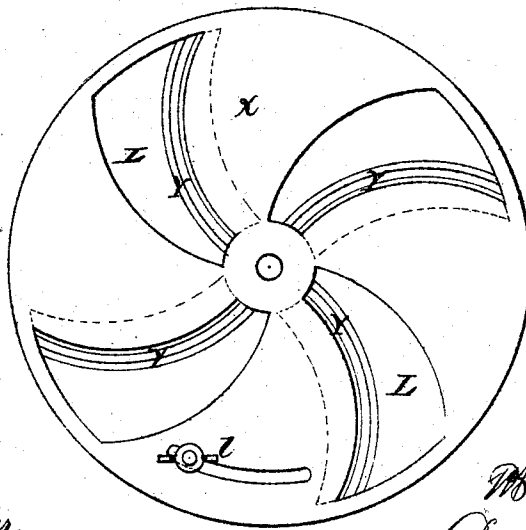


Fig. 4.



Witnesses.

Jacob Stauffer,
Henry C. Stauffer.

Inventors.

W Harnish Miller.
David H. Harnish

W. B. & D. H. HARNISH.

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Fig. 2.

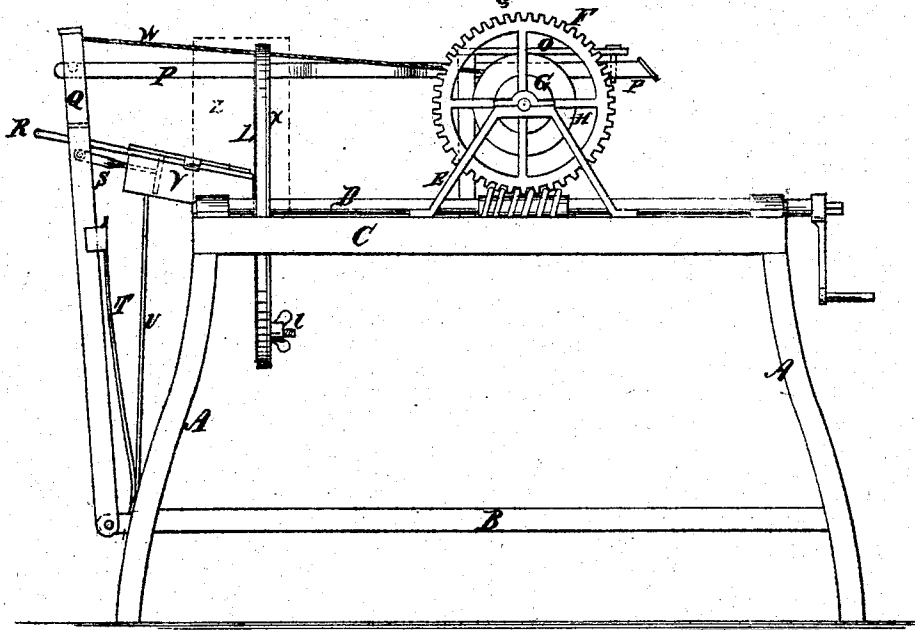
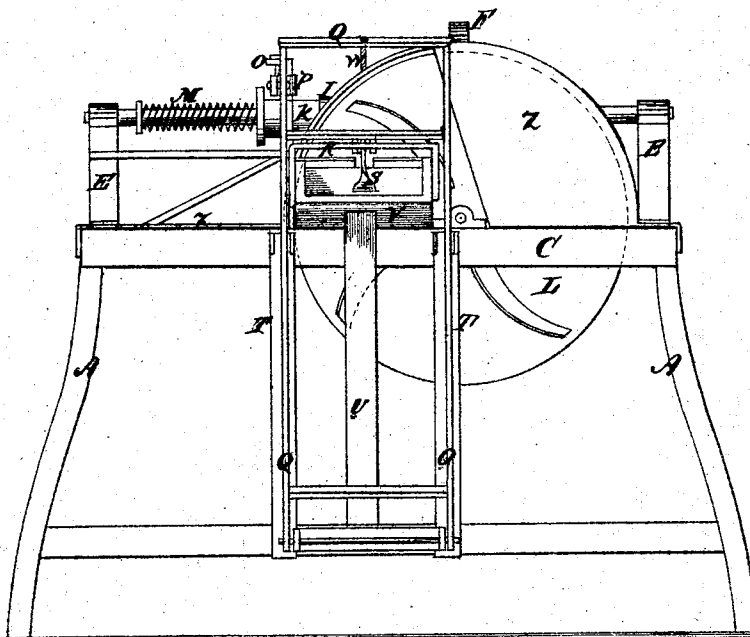


Fig. 3.



Witnesses.

Jacob Stauffer,
Henry C. Stauffer.

Inventors.

W. B. Harnish & D. H. Harnish.
David H. Harnish.

UNITED STATES PATENT OFFICE.

BENJAMIN HARNISH, OF LANCASTER, AND DAVID H. HARNISH, OF PEQUEA,
PENNSYLVANIA.

IMPROVEMENT IN VEGETABLE CUTTERS.

Specification forming part of Letters Patent No. 118,235, dated August 22, 1871.

To all whom it may concern:

Be it known that we, BENJAMIN HARNISH, of Lancaster, and DAVID H. HARNISH, of Pequea, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Vegetable-Cutting Machines, of which the following is a specification:

The object of this invention is to adapt a machine for cutting cabbage, slicing potatoes, pumpkins, &c., that will work with ease and speed, and is readily adjusted to cut fine or coarse, and to keep up a regular feed-pressure while cutting by a novel arrangement.

The drawing illustrates the general features of the machine. Figure 1 is a top or plan view. Fig. 2 is a side elevation; Fig. 3, an end view; Fig. 4, disks L and X and knife or cutter Y, shown on the inner face.

A brief explanation will enable any one skilled in the art to make and use this machine.

On suitable supports A and lower cross-pieces B is a frame, C, which supports the bearings E for a shaft, M, on which is a cogged wheel, F, clutch G, drums of different diameters H I K, and lever O acting against a coiled spring, N, or its equivalent on the shaft M. The cogged wheel F derives motion from an endless screw on a shaft, D, that has its bearings in boxes on the frame C and is at right angles to the upper shaft M. This shaft supports the cutting-knives in a circular disk combined of two plates, L X. The inner plate X is movable, and is provided with a slot and a set-screw, *l*, so as to regulate the bit or opening (for cutting fine or coarse) to each of the four bill-hooked cutters Y, by one adjustment of the single screw *l* and inner disk X. A box, V, with a slotted lid, (to allow the connecting-arm *g* attached to the feed or propelling device within the box to slide forward,) is slightly inclined, and opens in close contact with the knives on one side of the disk combination. U is a support to the end of the feed-box V. The parallel hinged bars Q have each a spring, T, to press them outward. To the end of the box V, and attached to the sides, are guide-bars R, that keep the united or parallel bars in line as they are drawn forward by a cord, W, connected to the top cross-piece, and with a drum or either of the drums H I K on the shaft M, upon which the cord is made to wind. The feed-arm *g* is hinged and connected to a cross-piece of the arms or frame Q, and the other to the moveable end of the box V to press

against the contents within the box, and to push or feed it forward to the action of the knives. There is also shown a tripper-arm, P, so that, when the cord has drawn the bars and feed sufficiently close to require refilling the box, this tripper P is made to wedge against the lever O connected with the clutch, and presses it out against the coiled spring N, which disengages the drum or drums from the hub or clutch-teeth on G, and is now acted upon by the springs T, causing the parallel bars Q to spring back, uncoiling the cord by revolving the drum so detached, which at the same time removes the pressure from the lever O, so that the coiled spring N pushes the drums forward, the teeth on the clutch come in contact, and the winding up and feed are repeated. These are mechanical motions readily understood. The outer disk, being cast somewhat heavier than the inner, has the bill-hooked knives Y attached to the outer face by two screws countersunk with burs on the inner side. The inner disk X has larger openings, and a circular slot for adjusting the width of the opening by the set-screw. The inner edge is wedge-shaped and notched to allow the same to be brought in closer contact with the inner face of the outer disk L, in proportion as the mouth is narrowed. This disk, as well as the frame-work, it is designed to have cast.

We are aware that knives are used on circular disks, and that springs have been used for the purpose of feeding the knives variously arranged; we, therefore, do not claim any of the parts separately considered; but as a whole we deem the arrangement both novel and useful.

We may add that a cap, Z, is made to set over the cutting-disk, shown in outline, Fig. 3.

What we claim as our invention, and desire to secure by Letters Patent, is—

The arrangement, in a vegetable cutter, of the parallel, united, and hinged bars Q Q, tripper P, springs T, guide R, connecting-arm *g*, with the rear end of the box V, in combination with the combined disks L X, bill-hooked cutters Y, combined drums and clutch G H I K, and cord-connection W, all jointly operated by a crank-handle, substantially in the manner and for the purpose specified.

B. HARNISH.

Witnesses: DAVID H. HARNISH.
JACOB STAUFFER,
HENRY C. STAUFFER.