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# UNITED STATES PATENT OFFICE.

ALEXANDER SMITH, OF ARCANUM, OHIO.

## IMPROVEMENT IN COMBINED VEGETABLE SLICER AND GRATER.

Specification forming part of Letters Patent No. **220,882**, dated October 21, 1879; application filed January 30, 1879.

*To all whom it may concern:*

Be it known that I, ALEXANDER SMITH, of Arcanum, in the county of Darke and State of Ohio, have invented certain new and useful Improvements in Combined Vegetable Slicer and Grater; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of this invention consists in the construction and arrangement of a combined vegetable slicer and grater, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, Figure 1 is a longitudinal vertical section. Fig. 2 is a longitudinal section through the knives H. Fig. 3 is a bottom view of disk F. Fig. 4 is a broken plan view of vegetable-grater, and Fig. 5 is a detail.

A represents a band or hoop of any suitable dimensions, provided with legs B B for supporting the same, and across the center of said hoop is secured a frame or bar, C. Through the center of this cross-bar is passed a vertical shaft, *a*, having a pinion, *b*, secured on its upper end. This pinion meshes with a gear-wheel, D, mounted on a stud projecting from the upper portion of a frame, E, which is secured on top of the bar C.

The wheel D is provided with a crank or handle, D', for turning the same, and it is held in gear with the pinion *b* by means of a fender, *d*, secured on top of the cross-bar C, and extending under the wheel and then up on the outer side thereof.

F is a disk or platform provided with a suitable rim and fastened on top of a spider, G, which spider is secured on the lower end of the shaft *a* by means of a thumb-nut, *e*, as shown, so that said disk and spider will revolve with the shaft.

In the disk F are two openings having beveled edges *i i*. These openings are to receive the knives H H. Each knife H is secured on

a plate or bar, I, having a slotted arm, *h*, extending downward at each end. These slotted arms pass over a bar, J, secured to the under side of the disk lengthwise of the opening, and through the center of said bar J is passed a set-screw, K, which screws into a nut in the center of the disk F, by which means the knife can be regulated or adjusted to any desired thickness of slice.

A spring, L, is interposed between the bar J and disk F, to press the knife upward and yet allow the same to yield as may be required.

A grating-disk, M, may be substituted for the disk F, when grating is to be done, by simply unscrewing the thumb-nut *e* and removing the disk F, when the disk M can be put on in the same manner, said disk M being also secured on a suitable spider.

For the purpose of allowing the machine to be attached to a table, I provide an ordinary screw-clamp or vise, N, hinged near one end, on top of the cross-bar C, and extending over the side of the hoop A, a staple and pins being fastened in the hoop to hold the same to the vise or clamp.

Having thus fully described this invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination of the rotating disk F with bars J J, the knives H H, bars I I, with slotted arms *h h*, and the regulating set-screws K K, as and for the purposes herein set forth.

2. The springs L, in combination with the knives H, bars I J, and set-screws K, for the purposes set forth.

3. The combination of the hoop A, cross-bar C, frame E, gear-wheel D, shaft *a*, with pinion *b*, and the interchangeable disks F M, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALEXANDER SMITH.

Witnesses:

JOHN HARBAUGH,  
JOHN WILLHELM.