W. CHAPIN.

VEGETABLE-CUTTER.

No. 191,653. Patented June 5, 1877.

Fig. 1

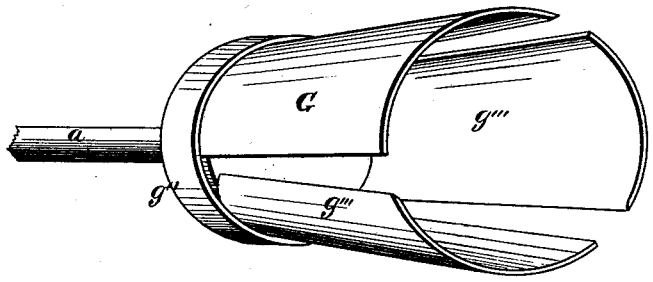


Fig. 3.

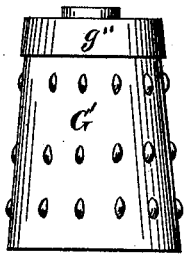
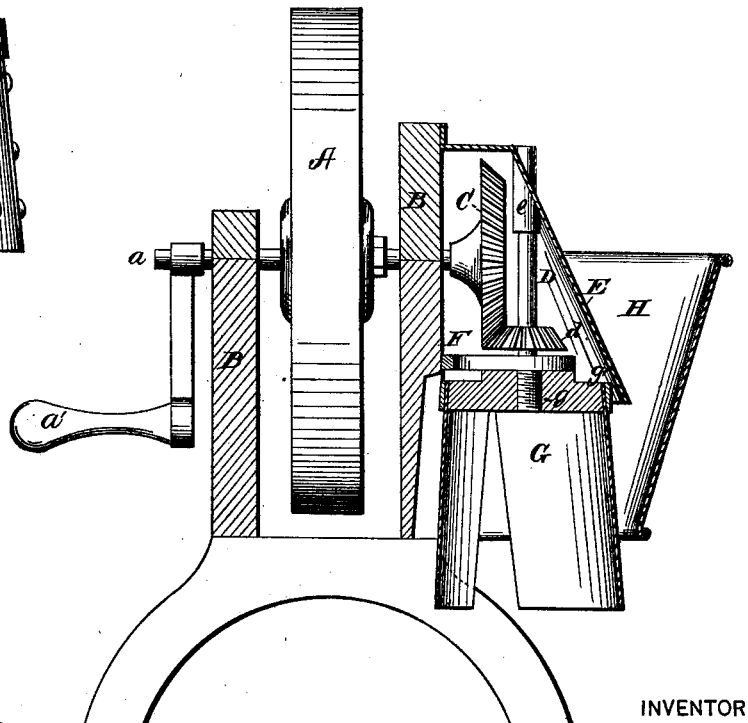


Fig. 2.



WITNESSES

Franck L. Durand

P. McMickle.

INVENTOR

Woodruff Chapin,

by L. Deane.

ATTORNEY

UNITED STATES PATENT OFFICE.

WOODRUFF CHAPIN, OF SILVER CREEK, NEW YORK.

IMPROVEMENT IN VEGETABLE-CUTTERS.

Specification forming part of Letters Patent No. **191,653**, dated June 5, 1877; application filed April 12, 1877.

To all whom it may concern:

Be it known that I, WOODRUFF CHAPIN, of Silver Creek, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Root-Cutter, of which the following is a specification:

Figure 1 is a perspective of the cutter, showing it in a horizontal position. Fig. 2 is a vertical central section from side to side, but showing the grindstone and portions of the mechanism in elevation. Fig. 3 is a detail to show a grating device.

The design of the present invention is to produce a device that can be easily made and used by almost any farmer for cutting, grating, or pulping roots, vegetables, fruit, and like farm products; and it consists more particularly in a cutter, grater, or pulper combined with any ordinary grindstone and its frame, or with suitable mechanism; and also, in combining with the said cutter, grater, or pulper a convenient feed chute or hopper, all substantially as will now more in detail be explained.

In the accompanying drawings, A denotes the grindstone, conveniently mounted in its frame B, in any usual manner, to the end of its shaft *a*. Opposite the handle *a'* is fixed the beveled gear-wheel C, which meshes with pinion *d*, and thus is adapted to communicate motion to the spindle D, on which said pinion is placed. This spindle, at the top, passes up through a guide or sleeve, *e*, in the jacket or cover E, which is secured to the grindstone-frame, and serves to cover or protect the mechanism, while the other end of the spindle passes down through a socket in the bracket F, attached to the side of the grindstone-frame. The spindle at this point, where it passes through F, is preferably considerably enlarged, so as to nearly fill the said opening in the bracket, while above the upper edge of this opening or socket the ends of the teeth of the pinion rest. The bearings being suitably lubricated will allow freely the motion of the several parts. To the screw-thread on the lower end of the spindle may be attached the cutter G or grater G', each having for that purpose a central bore or a thread cut in its eye *g*.

The cutter, grater, or pulper is usually somewhat conical in shape, flaring a little from top to bottom, and can be made in any desirable way. I have now shown it as having a solid head, *g'*, in which is the said screw-threaded eye for attaching it to the spindle end, and to its periphery is attached a metallic ring or band, *g''*, having a roughened or corrugated surface, generally as shown in Fig. 3, or else vertical steel blades or knives *g'''*, as shown in Figs. 1 and 2. The following indicates one very simple and easy way to do this—viz., by placing the upper ends of the knives or blades *g'''* flatwise on the head, (or the upper end of the grater, as the case may be,) and then driving down over them (or it) a ring or band, *g''*. The gage or thickness of the cut is made by setting inward the back part of each knife, which is slit on the line of its projection from the hub for that purpose, and which sets the shoulder against the hub in such a manner as to help keep it in position.

To the side of the grindstone-frame is fastened the chute or hopper H, which is in shape preferably the section of a truncated cone, its largest end being at the top. This is so placed as that it shall envelop the mechanism above described, and afford a means by which the roots, vegetables, fruits, or whatever is to be operated upon, can be fed down upon and brought into contact with the cutter, grater, or pulper, and then allow easy and free escape of the product from its lower end, said product here being caught by a suitable receptacle.

In Fig. 2 I have shown and have above described how this revolving cutter, grater, or pulper can be attached and combined with a shaft, so that it may work in vertical position; but I may on occasion attach it directly to the end of a horizontal shaft, so that it may revolve horizontally, the chute or hopper and other parts being merely changed in shape and position to accommodate all this.

It is obvious that in the mere detail of constructing the several parts above described there may be many variations, and I have now shown merely such construction as shall embody the aim and scope of my said invention.

I have thus produced a device of the largest utility to any farmer. Its parts are simple

and cheap, and cannot quickly wear out, nor easily get out of order or repair. The mechanism can be adapted to any grindstone-frame at a very small expense and in a very short time, and not only is a very convenient and ready motor thus provided, but there is also gained in this way the advantage of the grindstone as a fly-wheel, which has been found in practice of very considerable advantage.

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

1. The cutter formed of blades or knives g''', head g, and ring or band g'', said head g being provided with a central bore, and constructed and adapted to operate substantially as set forth.

2. In combination with the cutter G, the hopper H, and fly-wheel A, constructed and arranged substantially as and for the purposes described.

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

WOODRUFF CHAPIN.

Witnesses:

D. R. WOODBURY,

GEO. P. GASTON.