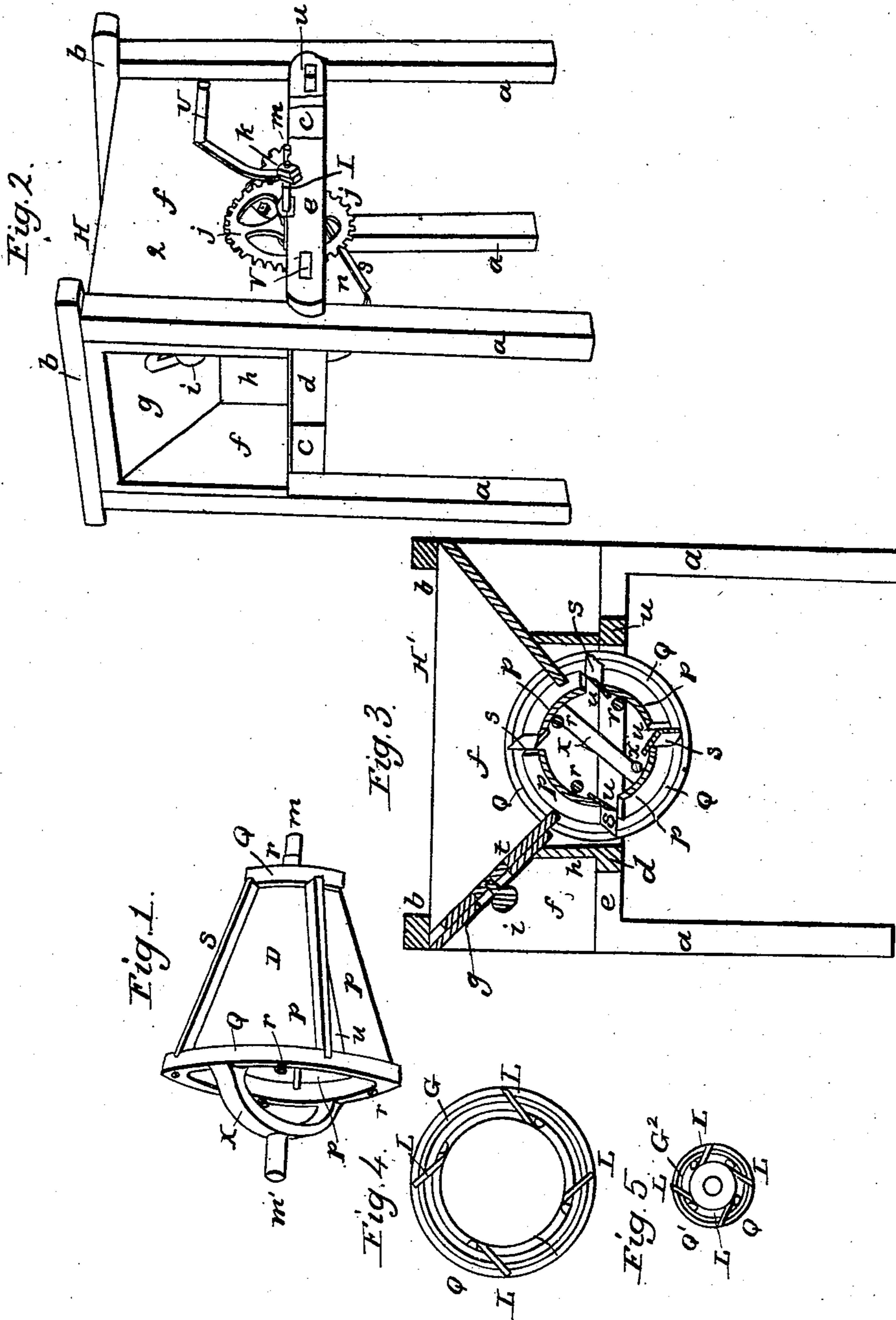


G. J. NEVEIL.  
Vegetable Cutter.

No. 1,825.

Patented Oct. 14, 1840.



# UNITED STATES PATENT OFFICE.

GEO. J. NEVEIL, OF RISING SUN, PENNSYLVANIA.

## VEGETABLE-CUTTER.

Specification of Letters Patent No. 1,825, dated October 14, 1840.

*To all whom it may concern:*

Be it known that I, GEORGE J. NEVEIL, of the Rising Sun village, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful machine for cutting beets or any other roots which are of a nutritious nature and which when cut may be used as food for cattle or which may be applied to any purpose whatsoever wherein it may be found useful, and from the nature and character of this my invention I do hereby denominate it a "vegetable-cutter;" and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of my machine, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective and detached view of that portion of the machine which is brought in immediate contact with the roots and by means of which they are cut and discharged; and which resembles in form a hollow truncated cone. Fig. 2 is a perspective view. Fig. 3 is a vertical section through the center of the machine; Fig. 4, plan of the ring; Fig. 5, plan of the small head.

Similar letters refer to similar parts in the several figures.

I shall now proceed to describe the construction and operation of this machine.

$a, a, a, a$ , are four uprights which are firmly fastened to the horizontal beams  $b, b$ ,—they are also fastened to the cross pieces or girts  $c, c$ , which in their turn are connected with another cross piece  $d$  and its corresponding piece which connect with the pieces  $c, c$  the end  $u$  of which may be seen as extended through and which together with the tenon  $v$  on the end of  $d$ , serves to support the parallel piece  $e$ . The pieces  $f, f$ , are firmly attached to the uprights  $a, a, a, a$ , in which position they form two sides of the hopper. These two pieces  $f, f$ , are plain rectangular boards placed in a vertical position against the inside of the four posts against which they are firmly secured. The two ends of the hopper are represented by  $g, g$ , and its corresponding piece. These are inclined at an angle sufficient to make their lower extremities conform to the exterior surface of the revolving cutter or of that portion of the machine represented by Fig. 1 which also gives a desirable form to the hopper.

$h$ , represents a vertical cross piece whose lower extremity or edge rests on one of the cross girts  $d$  and which serves as a support for the inclined end  $g$  of the hopper.

$i$ , is a clamp or screw which serves to secure a slide  $t$  consisting of a rectangular board shod with an iron plate at the end next the cutter and which works on the upper surface of the inclined end  $g$ , and by means of which slide or regulator  $t$ , (when it is raised or depressed) the roots are cut into large or small pieces as may be most desirable. When the aforesaid slide or gage board marked  $l$  in Fig. 3) is raised the cutting will be coarse and when it is brought nearer to the cutters the cutting will be fine.

$j$  represents a cast iron cogged wheel; it is attached to a short axle  $l$ , turning in boxes let into the horizontal side pieces  $c$  and  $e$ .

$k$  is a cast iron pinion which is fixed on the axle  $m$  of the truncated cone and by means of which pinion rotation is given to the cone  $n$  or that part of the machine as shown by Fig. 1.

The two ends of the hopper are inclined at the same angle and the lower edges rest upon the upper edges of two vertical cross pieces which rest upon the cross girts. One side of the hopper is vertical scalloped on the lower edge to admit the smaller end of the cone. Against the opposite side is fitted an inclined board which is scalloped in the lower edge to admit the larger end of the cone to turn therein.

Fig. 1, which is the conical cutter, is composed of four segments of cast iron  $p, p, p, p$ , which are fastened to the rings  $q, q$ , by means of iron rods  $r, r, r$ .  $s, s$  are knives which are firmly attached to the rings  $q, q$  in an angular position.  $u, u, u, u$  are apertures through which the roots pass when cut.

The revolving cutter for cutting the vegetables which is the principal part of my invention is constructed in the following manner. It resembles as before stated a hollow truncated cone and is composed of four pieces  $p$ —each piece being the segment of a hollow truncated cone and all four pieces or segments being held in their proper places at a suitable distance apart to admit the knives and give free passage to the cut particles by two grooved rings—or one ring with a circular groove  $G$  in its side next the ends of the segments, and a circular head or plate  $Q$ , with a similar groove  $G^2$  in it, and the ends of said segments after

the knives are properly set being placed in the aforesaid circular grooves, and held therein by means of screw rods  $r$ , extending from one ring to the other, at the backs  
 5 of the knives—said rods having heads on their ends which extend through the ring at the larger end of the truncated cone, and nuts on their opposite ends, by which the rings, or ring and head, may be forced  
 10 nearer together if required and thus cause them to embrace or grasp the segments and the knives more firmly if necessary. Said knives being let into grooves  $L$  made in the ring, and head across the circular grooves  
 15 in the direction that it is intended the knives should be placed. The knives  $s$ , resemble plane irons and after they are inserted in the spaces between the segments the remainder of each space must be suffi-  
 20 cient to allow the cut particles of the vegetables to pass through said openings into the interior of said hollow truncated cone, from whence they are discharged at the larger end, at the side of the machine.  
 25 A bale or bar  $x$ , extends across the diameter of the large ring for the axle  $m'$  to pass through. At the small end the axle  $m$  projects from the circular plate  $Q'$  which closes said end \*.

30 The operation of the machine is as follows: The sliding gage  $t$  being properly set, the vegetables or roots are placed in the hopper  $H'$ , the hollow truncated cone  $I$  with its cutters is turned by hand, by means  
 35 of the crank  $V$ , and cogged gearing  $I K$ . The knives necessarily come in contact with the vegetables, and cut them up against the lower side of the gage  $t$ , which is faced with a metallic plate to prevent wearing—  
 40 the cut particles pass to the inside of the hollow truncated cone from whence by its conical form they are discharged at the side of the machine. The uncut vegetables continue to descend over the surfaces of the  
 45 inclined ends and side of the hoppers to the cutters where they undergo the same

operation until the whole mass is cut up. The hollow truncated cone is thus made in separate segments for the purpose of setting them for cutting coarser or finer at pleasure,  
 50 which is done by unscrewing the nuts—then adjusting the segments and screwing up the nuts again. When the segments are moved toward the cutting edges of the cutters the spaces between them will be reduced which  
 55 will cause the machine to cut the substances into small particles—the cut particles having to pass through these spaces into the interior of the truncated cone and at the same time the spaces next the back of the  
 60 knives are enlarged which, however, do not affect the operation of the machine as the cut particles do not pass through these last mentioned spaces.

The sliding gage  $t$  is to be set to the  
 65 knives and screwed fast.

I do not claim a hollow truncated cone or inclined hopper, sliding gage, or frame, but

What I do claim as my invention and  
 70 which I desire to secure by Letters Patent consists in—

The before described mode of constructing the hollow truncated cone of cutters for cutting vegetables, roots, &c.—namely,  
 75 by means of the open and solid head grooved on the faces toward each other to admit the ends of the segments and knives and held together by rods and screws arranged in such manner that they can be  
 80 loosened at pleasure for the purpose of setting the segments nearer to or farther from the cutting edges of the knives for the purpose of cutting coarser or finer and again tightened to hold them securely in  
 85 the position in which they are set—all as herein set forth.

GEORGE J. NEVEIL.

Witnesses:

WM. P. ELLIOT,  
 WM. J. MAHER.