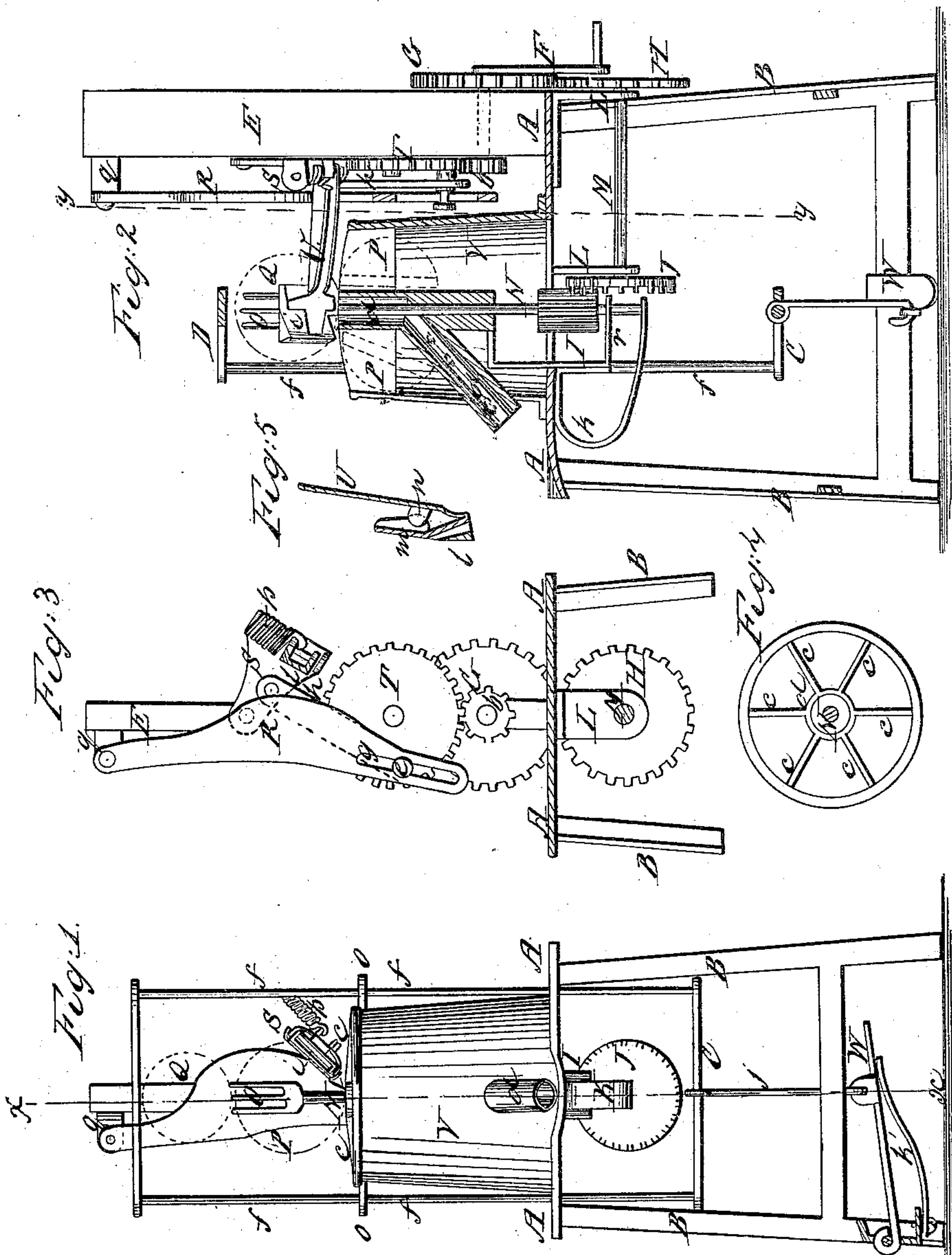


A. Clark,

Apple Parer,

No 78,721,

Patented June 9, 1868.



Witnesses.
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ANDREW CLARK, OF LA FAYETTE, INDIANA.

Letters Patent No. 78,721, dated June 9, 1868.

IMPROVED APPLE-PARER, CORER, AND SLICER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, ANDREW CLARK, of La Fayette, in the county of Tippecanoe, and State of Indiana, have invented a new and useful Improvement in Apple-Paring and Coring-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my invention.

Figure 2 is a sectional view of the same through the line *xx* of fig. 1.

Figure 3 is a detail front view of the mechanism operating the knife, the quartering-cylinder being removed to exhibit the same.

Figure 4 is a detail top view of the quartering-cylinder, showing the radial cutters and coring-tube.

Similar letters of reference indicate corresponding parts.

The object of this invention is to produce a machine by means of which apples and other similar fruit may be pared, cored, and quartered in an expeditious and rapid manner.

It consists in the mechanism set forth in the following.

In the accompanying plate of drawings, A is a table, supported by legs B B; and, to this table the mechanism is affixed.

The paring-mechanism is supported by an upright, E, rising from the table A, and consists of a vibrating-cam plate, R, pivoted to the upright at *g*, and receiving its motion from the wheel T, by means of a wrist-pin or stud, *e*, which works in a slot, *g*, in the lower end of the cam-plate, as shown. The wheel T is toothed, and engages with a pinion, *b*, from which it receives motion, the said pinion being mounted on the shaft of the wheel G, which shaft has its bearings in the upright, E, and is also provided with a hand-crank, F. By the revolution of the wheel T, the cam-plate is vibrated, as will be evident, the stud *e* playing in the slot *g*.

The knife *i* is at the extremity of an arm, U, which is pivoted to a vibrating-plate, S, by means of a rod passing through lugs on the plate S, and which are turned up from the plane of the plate S. The arm U vibrates on this rod against the tension of spring *p*, coiled around the rod, and the knife *i* is thereby pressed against the apple, and follows the convexity of the same, when the plate S is vibrated by the link or connecting-rod *h*, which is pivoted on the stud *e*, and also pivoted to the plate S, as shown. The plate S, therefore, obtains its motion from the wheel T.

The convex profile of the cam-plate R is for the purpose of guiding the knife *i* away from the apple on the fork O during the downward motion of the said knife, during which downward motion it is not desirable that the knife should pare the apple. Therefore the arrangement is such that the said convex profile presents itself against the arm U at the commencement of its downward movement, and bears the knife away from cutting-contact with the apple, and guides it around to the base of the apple, when the stud *e*, having reached the lowest point of its revolution, vibrates the cam-plate in the reverse direction, whereby the convex profile of the same, from contact with the arm U, thus leaves it free to obey the tension of its spring *p*, and press the knife, with cutting-contact, against the apple, during its passage over the convexity of the same, from bottom to top. Arriving at this latter point, the cam-plate again presents itself to bear on the arm U, and thus the operation is repeated at each revolution of the wheel T, upon which this mechanism depends for its motion.

The fork O, upon which the apple is held, consists of three flat tines, terminating on the shaft N, the lower end of which bears a pinion, I, or, rather, a toothed cylinder, the face of which is of sufficient length to permit the downward movement of the fork and shaft without disengaging from the crown-wheel J, from which the fork obtains its motion.

The crown-wheel is on the shaft M of the wheel H, which latter engages with the wheel G. The fork thus obtains motion from the hand-crank F.

L are the hanging bearings of the shaft M.

K is a curved spring, against which the end of the shaft N rests, and which returns the fork to its proper position after it has been actuated downward in coring and quartering the apple, as hereinafter set forth.

The quartering-cylinder contains the radial cutters *c c c c c*, extending from the coring-tube *d* to the cylinder at the top of the same. The coring-tube deflects outward through the side of the cylinder, as shown.

The fork-shaft N passes up through the centre of the coring-tube, the bottom of the vertical part of the latter serving as a bearing for the same. *r* is also another bearing for the same.

The bottom end of the cylinder sets over an opening in the table A, so that the quartered apples may drop through, and be conducted away by a hopper or chute, which, in practice, would surround and lead from the opening, but which is not shown in the drawing, to avoid confusing the same.

The sash *f f*, D C has a reciprocating vertical movement, which is attained by the treadle W and spring K, the treadle being connected with the lower cross-piece C by a link, *j*. The side rods *f f* of the sash work in guides, *o o*, and holes in the table.

An enlarged section of the knife *i* is shown at Figure 5, in which *l* is the cutting-edge, *m* the plate of the knife, to which the same is affixed, and U the arm. The plate *m* is formed with lugs, which are pivoted to corresponding lugs on the arm, as shown at *n*.

The operation of this machine is as follows:

An apple, P, is placed on the fork, and pared by turning the crank F, which is further turned until the knife is brought to the position shown at fig. 2. Another (unpared) apple, Q, is placed above, (in contact with the first,) and the treadle pressed upon with the foot, when the cross-piece D impinges against the top of the second apple, bearing it and the fork downward, when the pared apple encounters the coring-tube and the radial cutters, whereby the apple is cored out and divided into several parts, usually called quarters, which fall down through the opening in the table, and are conducted away, as before said. The seeds and seed-capsules are delivered out at the lower end of the tube *d*. The second apple is left on the fork.

Modifications of the several parts of my invention may be made. For example, the pinion I may be made with a key-slot, in which a rib or feathers on the shaft N fit, so that the latter may play up and through the pinion without disengaging from the crown-wheel.

The sash may consist of a single rod, with a projecting cross-piece, and the mechanism of the knife, and the arrangement and operation of the cam-plate, may be variously modified without materially departing from the principle of the invention.

I am aware that many machines for this purpose have been made, and do not claim broadly any of the devices above shown; but I will note, in reference to the operation of the fork, that its downward movement is limited to the coring and quartering of the apple, and it does not descend entirely within the tube, but stops at a point above the same, whereby the second apple, being forced down, is transfixed upon the fork, when, the foot being removed from the treadle, the machine is ready to be turned again. The operation is thus repeated indefinitely.

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

1. The cam-plate R and its dependent mechanism, substantially as described, for the purpose of paring apples and other similar fruit, all as set forth.

2. A sash, D *f f* C, and a yielding fork, O, with its proper mechanism, substantially as described, in combination with the radial cutters *c*, coring-tube *d*, and cylinder V, all as set forth.

3. The cam-plate R, wheel T, plate S, and arm U, all constructed and operating substantially as and for the purpose set forth.

4. The arrangement of the several parts of the machine, substantially as shown and described, and for the purpose set forth.

ANDREW CLARK.

Witnesses:

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