

UNITED STATES PATENT OFFICE.

MARVIN SMITH, OF NEW HAVEN, CONNECTICUT.

APPLE-PARER.

Specification of Letters Patent No. 15,625, dated August 26, 1856.

To all whom it may concern:

Be it known that I, MARVIN SMITH, of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Machine for Paring and Slicing Apples; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists—first—In the construction of a machine in such a manner, that during the operation of paring and slicing apples and removing the cores from off the fork, a vibratory, or oscillating—and also a lateral movement may be given to the fork which carries the apple in addition to its axial or rotating motion. Second—In the novel and peculiar method of hanging or attaching the paring knife—namely—in such a manner, that the motion of the knife while passing over the apple to remove the paring, shall also be oscillating—the oscillating line of motion of both knife and fork being in the same plane—and third—In the use of a forked pawl, with which the fork carrying the apple comes in contact in its backward movement, thereby removing the core from the fork.

For more particular descriptions, reference is had to the accompanying drawings, in which—

A, A, represents a flat board that serves as a pedestal or bottom upon which the machine is placed, in the end of which and under the slicing wheel E, a slot or opening *b, b*, is made through which the slices of apple fall.

B, B, B', represents a post or standard which supports in the bearing at B' the shaft *a, a*,—on which shaft, and near the bearing B' is fastened the gear, or driving wheel C, C, C.

Through the hub, or eye of the beveled wheel *f, f*,—the hub of the serpentine shaped arms *d, d*,—is loosely fitted, and forms the bearing upon which the wheel *f, f*, revolves.

In the back of wheel *f, f*,—are firmly fastened, pins *g, g*,—of such length as to extend beyond the plane of motion—of the crank arm F.

If the crank be turned around while in contact with either of the pins *g, g*,—the wheel *f, f*, will also be turned around—imparting motion to the pinion *e*, and to the fork *c*, which carries the apple, while the arms *d, d*, remain stationary, or are moved backward and forward at pleasure.

Through the end of the arm *d*,—opposite the one supporting the fork *c*,—the spindle *h*, is loosely fitted, so as to be easily turned around or moved lengthwise, and to the outer end of said spindle *h*,—a knob or ball is attached that serves as a handle by which to move the fork *c*, backward and forward, or laterally upon the shaft *a, a*. Upon the inner end of said spindle *h*, the pinion *o*, is firmly fastened, the tooth of which correspond to those of the wheel *f, f*,—with respect to pitch, but are made pointed, or wedge shaped to facilitate connection and disconnection with the wheel *f, f*,

G, represents the stock or handle of the paring knife, with the knife *m*, attached.

i, i, represents the pin firmly secured in the bottom board A, A, and in a line parallel with the axis or shaft *a, a*, upon which the paring knife handle G, is hinged and turns.

s, represents a spring coiled around the pin *i, i*,—the action of which spring being to press or bear the knife against the apple while revolving upon the fork *c*.

H, represents a forked pawl—or automatic arm, hinged at *n*,—and held in position by the coiled spring *u*, except when moved by contact with the backward movement of the fork *c*.

E, represents a wheel or disk with the pinion *r*, fastened upon the hub thereof, and which is moved by the gear or driving wheel C, C, C, for the purpose of cutting the apple in slices after it has been pared—said dish having radial knives *v, v, v*, fastened upon its sides or face opposite to the pinion *r*, and turning upon the arm *w*,—which is firmly fastened in the top of the post or standard L.

In the construction of my improved machine, I do not confine myself to any particular material of which to make them,—nor to the relative velocities of the different moving parts—nor to any particular size of any of the parts—but for the information of persons skilled in the branch of mechanics to which it relates I give the dimensions of the several parts which are nearly as follows: The diameter of wheel C, C, C, eight and one fourth inches. The diameter of pinion *r*, two and one fourth inches. The diameter of slicing wheel E, six inches. The diameter of beveled wheel *f, f*, four and one fourth inches. The diameter of pinion *e*, one inch. The height of post B, B, B' five and a half inches. The height of post L,

three inches. Length of knife handle G, from the pin *i*, *i*, five and three fourth inches. The length of pawl H, five inches. The length of shaft *a*, *a*, seven and a half inches, and one half of an inch in diameter.

The best method of operating the machine herein described, is to turn the fork *c*, to an angle of about forty-five degrees back of, and below the shaft *a*, *a*, to put the apple upon the fork—the hub of the wheel *f*, *f*, being placed against the eye of the crank F, and with the hand upon the knob or spindle *h*,—the apple is moved forward in the direction of the knife *m*, until the knife has passed entirely over the apple—when the knife falls back to the position indicated by dotted lines *p*. The fork *c*,—with the gears in mesh—is then moved upon the shaft *a*, *a*, in the direction of— and against the bearing B'—the pins *g*, *g*, and the crank F, becoming disengaged—the pinion *o*, is brought into gear with the wheel *f*, *f*,—and the spindle *h*, being turned once around upon its axis—the fork with the apple upon it, will also be turned against the slicing wheel E. If then the fork *c*, having upon it the apple core, be turned upon the shaft *a*, *a*, in the direction of— and into contact with the pawl H,—the respective centers of motion of the fork and pawl being such, that the pawl passes beyond, and off the points of the fork—thereby removing the core.

I do not claim the combination in the same machine, as such—of knives of different

kinds and operating in different ways for the purpose of paring and slicing apples, it having been done many years since—but

What I do claim as my invention and desire to secure by Letters Patent, is—

1. The construction of a machine for paring and slicing apples—in such a manner that a vibratory or oscillating motion may be given to the fork carrying the apple—simultaneously with the axial, or rotating motion of the same—whereby I am enabled to use a paring knife that shall be automatic or selfacting in its operation, yet equally adapted to paring apples large or small.

2. I claim the knife *m*, and handle G, hinged and operating in such a manner, that the adjustment of the cutting edge of the knife, to the entire surface of the apple, shall be coincident with the vibratory or oscillating motion of the fork carrying the apple—And

3. I claim the pawl H, or its equivalent, hinged at such a point, with respect to the oscillating center of the fork *c*,—that as the said fork is moved in the direction of the hinge of said pawl, the point of contact between the fork *c*, and the pawl H, shall recede from the oscillating center of said fork *c*.

MARVIN SMITH.

Witnesses:

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