

GEORGE BERGNER.

Improvement in Apple Parers, Corers, and Slicers.

No. 122,553.

Patented Jan. 9, 1872.

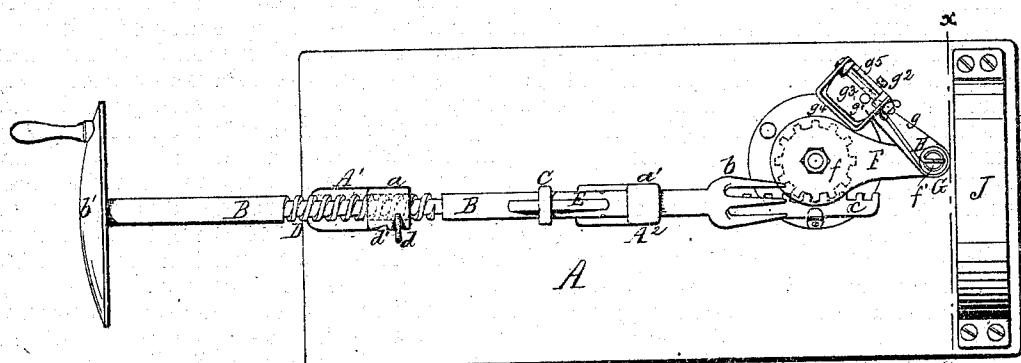


Fig. 1.

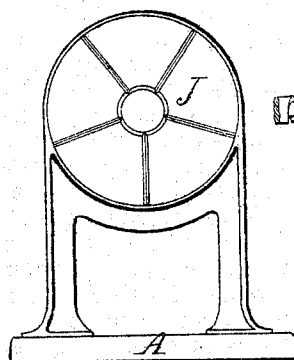


Fig. 3.

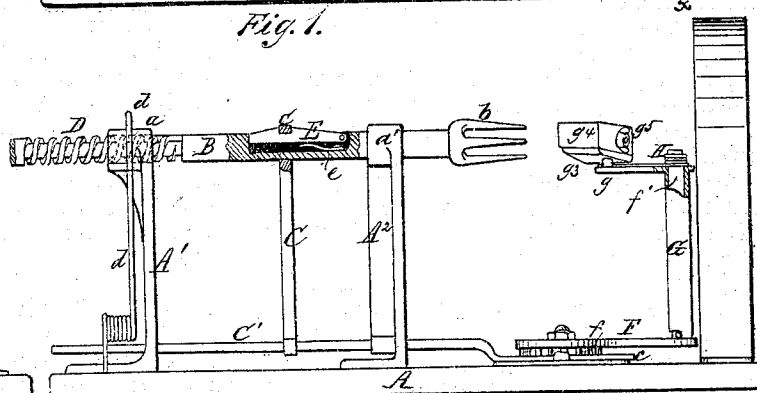


Fig. 2.

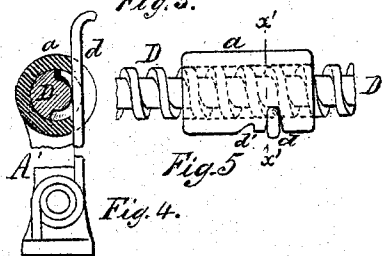


Fig. 4.

Fig. 5.

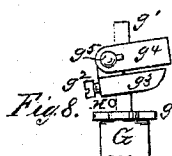


Fig. 8.

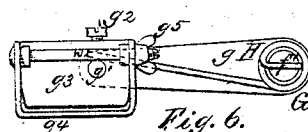


Fig. 6.

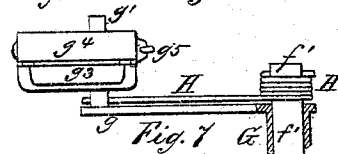


Fig. 7.

WITNESSES:

Robert Burns.
John W. Heath.

INVENTOR:

George Bergner.

per.

Herthel & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

GEORGE BERGNER, OF WASHINGTON, MISSOURI.

IMPROVEMENT IN APPLE-PARERS, CORERS, AND SLICERS COMBINED.

Specification forming part of Letters Patent No. 122,553, dated January 9, 1872.

To all whom it may concern:

Be it known that I, GEORGE BERGNER, of Washington, in the county of Franklin and State of Missouri, have made certain new and useful Improvements in Machine for Paring, Coring, and Slicing Apples; and I do hereby declare that the following is a full and true description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of this invention relates to an improved arrangement and construction of a sliding rack-frame, fork-shaft to impart a part rotary or swinging motion to knife-stock; and, lastly, to certain detail construction of parts, all of which will now more fully appear.

To enable those skilled in these arts to make and use my said improvements, I will now more fully describe the same, referring to—

Figure 1 as a plan view; to Fig. 2 as a part sectional elevation; to Fig. 3 as a face view of slicer and corer; to Fig. 4 as a transverse detail section at line *x' x'*; and Fig. 5 as a detail plan of fork-shaft; Fig. 6 as a plan of paring-knife and its attachment; and to Figs. 7 and 8 as detail front and side views, respectively, of paring-knife and its devices.

A is the bed-frame, formed with standards $A^1 A^2$ to support in their hollow bearings *a a'* the longitudinal fork-shaft B. At one end the shaft B terminates with a fork, *b*, while at its opposite end said shaft is provided with a knob-crank *b'* for pushing and turning. In connection with fork-shaft B is arranged a slide-frame, consisting of a standard, C, (through top bearing of which shaft B also passes,) and a sliding-rod, C', (see Fig. 2;) at its forward end said rod C' is formed into a rack-bar, *c*, (see Figs. 1 and 2,) and its rod extension is properly guided in its slide movement in the standards $A^1 A^2$. The fork-shaft B, playing loosely in its bearings, can readily be slid backward and forward by the operator. In order to revolve the shaft B the same is provided with a suitable worm, D, relatively positioned. In said worm a spring, *d*, (passing through a slot of bearing *a*,) engages, the coil of said spring being properly secured to a projecting pin of the standard A^1 , as shown in Figs. 1, 2, 4, 5. When disengaged the spring-wire *d* is inserted in a notch, *d'*, of bearing *a*. The wire-spring *d*, made

to engage in the worm of shaft B, imparts a back rotary motion to said shaft when the same is operated by its crank. In order that the return and forward sliding motion of fork-shaft B shall be imparted to the rod C' with its rack *c* there is arranged within shaft B a slotted pawl, E, actuated by a spring, *e*, said pawl device being fitted to engage with the collar-bearing of the standard C, as shown in Fig. 2. When, therefore, the operator draws back the fork-shaft and adjusts the spring to engage in the worm of said shaft, the same, by its rotary backward motion, withdraws the rack-rod C'.

The sliding motions of the rack-rod are made to operate a knife-stock as follows: The knife-stock consists of an arm-support, F, its bottom face formed with a pinion, *f*. At the end of said arm is secured a vertical stock, *f'*, which is inclosed by a hollow stock, G, carrying near its top a swinging arm, *g*, as clearly shown in Figs. 2 and 7. At the end of swinging arm *g* is secured a projecting pin, *g'*, to which, by means of a set-screw, *g''*, is secured a cutter-head, *g'''*. Further, to the bearings of said cutter-head, is secured a paring-knife, *g''''*, adjustably by its slot, and a set-screw, *g'''''*, in manner indicated in Figs. 6, 7, 8. Thus the knife *g''''*, it will be noticed, can readily be adjusted to cut different thicknesses of peelings. In order that the paring-knife stock G (which turns loosely on vertical stock *f'*) can be adjusted to suit and bear against the surface of the apple, there is properly arranged on top said knife-stock G a coiled spring, H, its wire end *h* bearing against the pin *g'* that supports cutter-head devices. (See Figs. 1, 2, 6, and 7.) The knife-stock thus formed is pivoted by its lower arm *g*, by proper pin and nut, in relative position to bed A of the machine, so that its pinion *f* shall gear with rack *c* of the sliding rod C', as shown in Figs. 1 and 2. The slide motions of the rack-rod thus impart the required revolving motion to the knife-stock proper. Its paring-knife *g''''* is made to cut in line with the core of the apple, the spring H pressing hollow stock and devices against the apple. The same is thus properly peeled. A suitable slicer and corer, J, (see Fig. 3,) can be secured in proper position, so that, by the forward thrust of the fork-shaft B, after paring has been done, the apple can also be sliced and cored.

The operation of these parts is therefore as follows: The apple to be pared is placed on the fork *b* of fork-shaft B by its pawl E, is made to engage with sliding standard C, and the spring *d* is adjusted to engage in the worm D of said fork-shaft. The operator, next turning the shaft B, imparts a rotary return movement to said shaft with apple. Simultaneously the rack-rod C', by its rack *c'*, imparts a swinging turn motion to knife-stock, its knife paring the apple as desired.

To core and slice the apple thus pared the operator disengages the spring *d*, pushes, by the palm of his hand, the crank-knob *b'*, so that the fork-shaft with apple is passed forward through the slicing-knives and corer. Immediately as the fork-shaft B is operated backward and forward the forward and reverse motion of the knife-stock occurs. Thus the knife assumes the proper position for operation.

Having thus fully described my said invention, what I claim is—

1. A knife-stock, consisting of arm-support F, pinion *f*, stock *f'*, hollow stock G, its arm *g*, carrying spring, and cutter devices, arranged to operate as and for the purpose set forth.

2. The arrangement of an adjustable swinging knife-stock, constructed as described, rack-rod *c* C', its standard C, in combination with fork-shaft B, worm D, spring *d*, pawl E, standards A A', all constructed to operate as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand.

GEORGE BERGNER.

Witnesses:

WILLIAM W. HERTHEL,
ROBERT BURNS.

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