J. J. Vankersen,

Apple Corer and Cutter.

No. 53,063. Patented Mar. 6, 1866.

Fig 1.

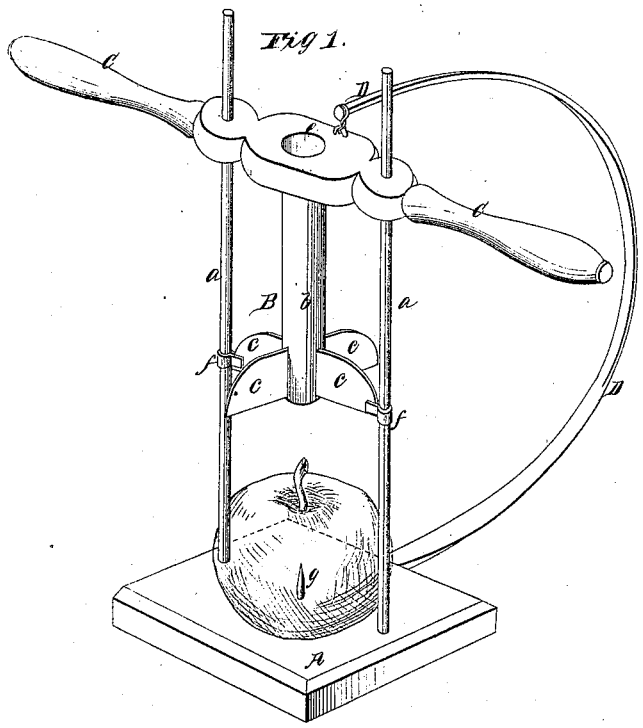


Fig 4.

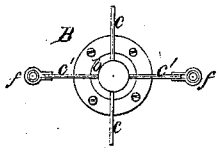


Fig 2.

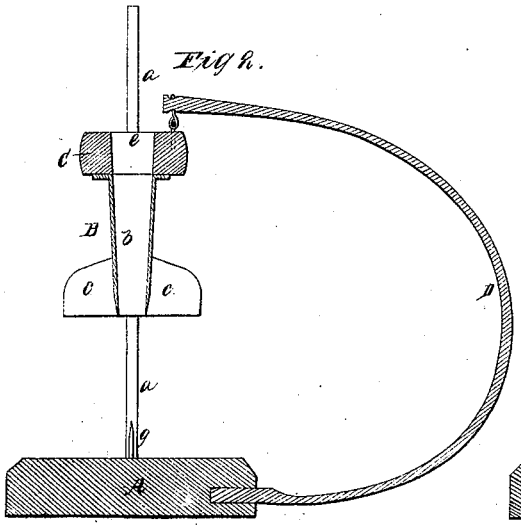
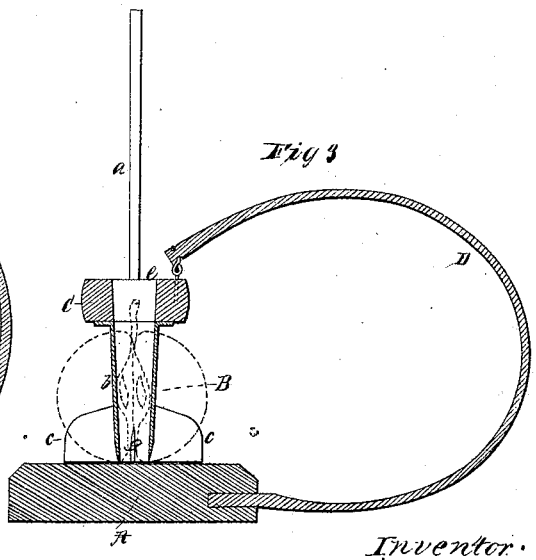


Fig 3



Witnesses:
R. Campbell
E. Brookhyser

Inventor.
Jas. J. Vankersen
by his Attys
Munn, Pennie & Co

UNITED STATES PATENT OFFICE.

JAMES J. VANKERSEN, OF KALAMAZOO, MICHIGAN.

MACHINE FOR CORING AND QUARTERING APPLES.

Specification forming part of Letters Patent No. **53,063**, dated March 6, 1866.

To all whom it may concern:

Be it known that I, JAMES J. VANKERSEN, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a new and Improved Machine for Coring and Quartering Apples; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the improved machine complete. Fig. 2 is a vertical central section through the machine, showing the cutter in an elevated position. Fig. 3 is a similar view, showing the cutter in a depressed position. Fig. 4 is a bottom view of the cutter.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to quarter and core apples at one operation by means of a cutter which is guided by fixed vertical rods, and which is acted upon by means of a bow-spring that will accommodate itself to the vertical motions of said cutter and allow it to rise and fall without binding upon its guides or bending them out of a vertical position, as will be hereinafter described.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

Hitherto apple cutting and coring machines have been constructed with a lever applied to a reciprocating cutter for moving the latter up and down; but it is evident that the cutter cannot receive a vertical motion strictly when acted upon directly by a vibrating lever.

In the accompanying drawings, A represents the base of the machine, upon which are secured two perpendicular guide-rods, *a a*, which may be made of any desirable length, according to the length of stroke which it is desired to give the cutter.

The cutter B consists of a tube, *b*, having four radial knives, *c c c' c'*, projecting from its lower end. The upper end of the tube *b* is secured to a horizontal cross-bar, C, through which bar a hole is made for allowing the cores to escape from the cutter B through the tube *b* thereof, as shown clearly in Figs. 2 and 3. This cross-bar C is perforated at equal distances from the center of the discharge-hole *e*, through which the guide-rods *a a* pass, and the ends of this bar are rounded, so that they serve as handles by means of which this bar, together with its cutter, are moved. On the extremities of the radial cutters *c' c'* vertical tubes *f f* are formed, which tubes receive the guide-rods *a a*, and thus the cutter is sustained by said rods in a truly vertical position and cannot vibrate.

In the operation of cutting and coring apples it is important to employ a spring for supporting the cutter in an elevated position when released, for facilitating the adjustment of the apples beneath the cutter and upon the central spur, *g*, which is directly beneath the axis of the coring-tube *b*, as shown in Figs. 2 and 3.

The spring which I employ is shown clearly in the drawings at D. It may be made of wood or of metal, and is secured at its lower end to the base A and at its upper end to the cross-arm C in the middle of this arm. This spring in the form of a bow, and its upper end may be attached to the movable arm C by a pivot or link, as shown in Fig. 1. Still this is not even necessary, for it will be seen that when the cutter is depressed this bow-spring will bend so as to accommodate itself to the vertical motion of this cutter without thrusting it out of its true position.

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

1. The combination of the fixed guide-rods *a a*, horizontal cross-arm C, and a cutter, B, the blades *c' c'* of which are adapted to serve as guides for the lower end of this cutter, substantially as described.

2. The combination of a bow-spring, D, with a reciprocating cutter, B, and fixed guide-rods *a a*, substantially as described.

JAMES J. VANKERSEN.

Witnesses:

ALEXANDER BUELL,

JAS. W. NORRIS.