T. Van Kannel,

Cherry Stoner,

No. 48,137. Patented June 6, 1865.

Fig: 1

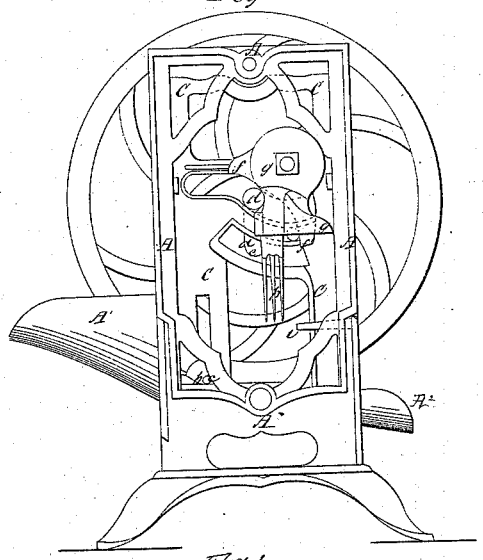


Fig: 2

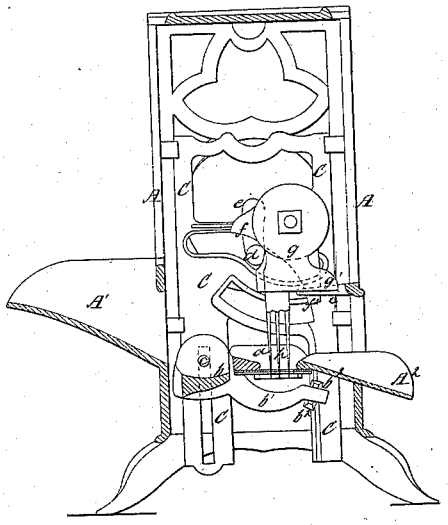


Fig: 3

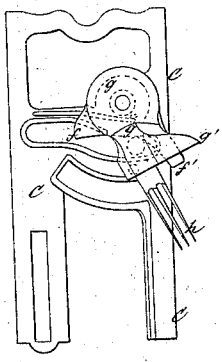


Fig: 4

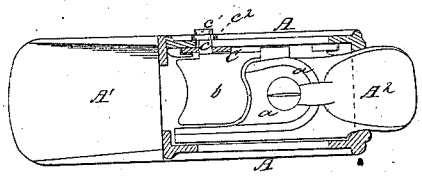
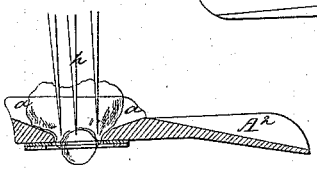


Fig: 5



Witnesses
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UNITED STATES PATENT OFFICE.

THEOPHILUS VAN KANNEL, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND JOSEPH BEAIRE, OF CHESTER, ILLINOIS.

IMPROVED CHERRY-STONING MACHINE.

Specification forming part of Letters Patent No. **48,137**, dated June 6, 1865.

To all whom it may concern:

Be it known that I, THEOPHILUS VAN KANNEL, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and Improved Machine for Stoning Cherries; 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 an elevation of one side of my machine. Fig. 2 is a vertical central section through the machine. Fig. 3 is a front view of the reciprocating slide and oscillating needle-bar. Fig. 4 is a horizontal section through the machine. Fig. 5 is a section of that portion of the machine through which the stones are forced from the cherries.

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

The object of this invention is to so construct a cherry-stoning machine that the contrivance which forces the stones or pits from the pulp will also effect the discharge of the pulp from the machine; also, to communicate a vertical reciprocating motion and a lateral oscillating motion to the contrivance which forces the pits from the pulp, so that said contrivance will not only discharge the pits from the pulp but it will also discharge the pulp from the machine, as will be hereinafter described.

Another object of my invention is to effect the proper movements of the feeder and of the needle-bar by means of a rotary driving-shaft, so that the several operations of feeding the cherries into the machine, depriving them of their pits, and discharging the pulp from the machine can be performed by giving a rotary motion to the driving-shaft, as will be hereinafter described.

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

In the accompanying drawings, A represents a frame which is adapted for receiving and supporting the contrivances for stoning cherries.

A′ is a hopper, into which the cherries are put to be fed beneath the needle-bar; and A^2 is a discharge-spout, which is located opposite the hopper, and in such a position as to receive the stoned cherries as they are discharged, one at a time, from the needles. The discharge-spout A^2 may be cast with the basin *a*, as shown in Figs. 2, 4, and 5, and a channel formed leading from said basin into the spout A^2. The basin *a* has a hole through its bottom of sufficient size to admit the largest pits to be forced through, and this hole is partially closed by a thin flexible bottom consisting of a piece of rubber cloth or other suitable substance having a slit in it, as shown in Figs. 4 and 5, through which slit the cherry-pits are forced by the needles, as will be hereinafter described.

Between the basin and the discharge-opening of the hopper A′ is a concave feeder, *b*, which has a slide, *b*′, formed on it, that is guided by the studs b^2, as shown in Fig. 2. A stud, *c*, is formed on the feeder *b* and projects through a vertical slot in the vertically-reciprocating slide C, as shown in Fig. 4, and receives on its end a nut, *c*′, and an elastic washer, c^2, which latter serves as a friction-spring to lift the feeder up to the highest point at the upward start of the slide C, and retain it in such position until the slide C is depressed. Slide C is a thin plate working in grooves or guides, and receiving an up-and-down motion from a crank, *d*, which is formed on or applied to a shaft, *e*, which shaft has a fly or balance wheel keyed on it for equalizing the movements of the machine. The wrist-pin of the crank *d* plays in a slot formed in the plate or slide C, and this pin acts alternately upon the curved projections *f f*′ of an oscillating needle-carrier, *g*, which is pivoted to the slide C, and oscillated at proper times by the action of the crank-pin upon the projections *f f*′.

The object of giving an oscillating or vibrating movement to the needle-carrier *g* is to cause the needles *h* as they rise from the basin *a* to move the cherry into or over the discharge-spout A^2, then to rise upward in this inclined position, (shown in Fig. 3,) so as to pass between the scraper or forks *i*, which clear them of the cherry. When the slide C reaches its highest point, as shown in Fig. 1, the wrist-pin of the crank *d* strikes the projection *f* on the needle-carrier and brings the needles in a perpendicular line with the bed upon which the machine stands. The slide C now descends, and the needles thrust the pit of the cherry

down through the hole which is through the basin *a*, and through the elastic cloth which covers the bottom of said hole. The needles descend in a vertical line coinciding with the hole through the basin *a*, and they ascend in the inclined position shown in Fig. 3.

The operation of my machine is as follows: Cherries are supplied to the hopper A′, and from this hopper they are fed, one at a time, over the feeder *b* and into the basin *a*. When in this basin the needles *h* descend and force the pit from the pulp and discharge the pit from the machine. The needles now begin to rise and at the same time to move toward the fork or claw *i*, so that as the slide C performs its upward stroke the pulp will be stripped from the needles and discharged into the spout A′. During the upward movement of the slide C the feeder will discharge a cherry into the basin *a*, and at the same time prevent the escape of the cherries from the hopper A′.

It frequently happens that the cherry-pits are not fully detached from the pulp by the needles *h*, and to avoid this I cause the needles *h* to force the pits through an elastic substance, which closes over the pits and prevents them from being carried up and discharged by the needles *h* into the spout A^2.

It will be noticed that the feeder *b* has not a continual motion, but moves upward in about one-sixth of a revolution of the fly-wheel, and remains about one-third of a revolution stationary, and the same in descending. This allows sufficient time for the cherry to take its place on the feeder, and also to leave the same.

By reference to Figs. 1, 2, and 3 it will be seen that the needle-carrier *g* has an extended base forming a nose, *g′*, which passes back and forth through or between the fork *i*, and serves to prevent the pulp from sticking to said fork.

In using my improved machine I propose to employ a screw-clamp for fastening it to a bench or table; but, if desired, the machine can be secured permanently to some fixed object.

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

1. So applying the needle-carrier *g* to a reciprocating slide that the needles *h* will discharge the pits from the pulp and then assist in discharging the pulp from the machine, substantially as described.

2. In a machine for stoning cherries which has a rotatory driving-shaft, giving a lateral motion to the needle-carrier in the act of removing the pulp from the basin, substantially as described.

3. Constructing the needle-carrier with a nose, *g′*, for the purpose substantially as described.

4. The feeder *b*, arranged to work between the hopper A′ and the basin *a*, substantially as described.

5. The employment of an elastic perforated bottom for the basin *a*, substantially as described.

6. The arrangement of the hopper A′, feeder *b*, basin *a*, and discharging-spout A^2, so that the cherries will be moved from one to the other of these contrivances, deprived of their pits, and discharged from the machine, substantially as described.

THEOPHILUS VAN KANNEL.

Witnesses:

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