(Model.)

J. CLARK.

APPLE PARER.

No. 303,490. Patented Aug. 12, 1884.

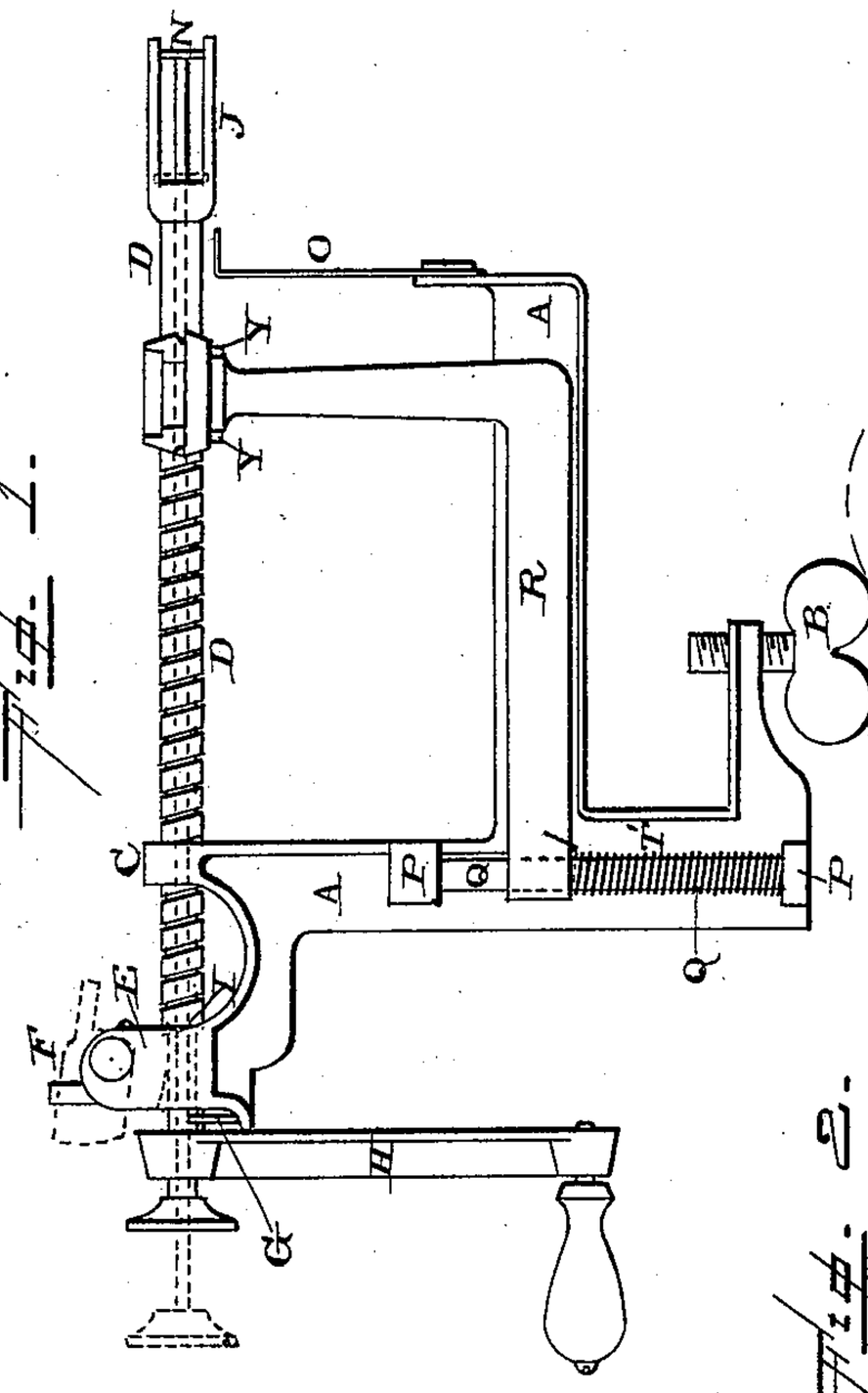

Fig. 1.

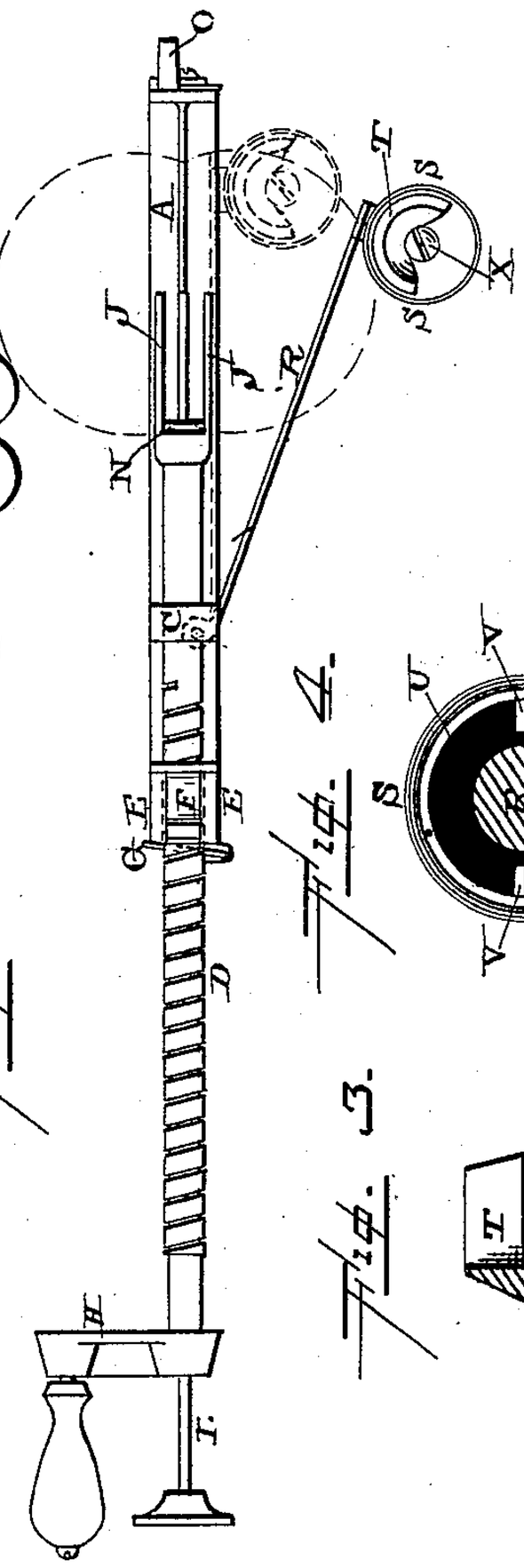

Fig. 2.

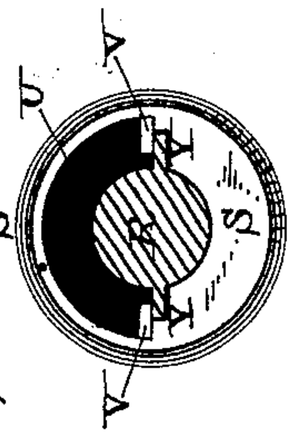

Fig. 4.

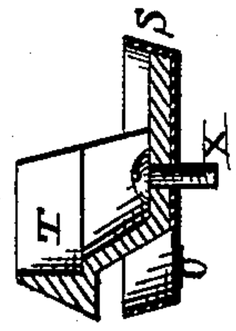

Fig. 3.

Witnesses.

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JOHN CLARK, OF PONTIAC, MICHIGAN.

APPLE-PARER.

SPECIFICATION forming part of Letters Patent No. 303,490, dated August 12, 1884.

Application filed July 30, 1883. (Model.)

To all whom it may concern:

Be it known that I, JOHN CLARK, of Pontiac, county of Oakland, State of Michigan, have invented certain new and useful Improvements in Apple Paring, Coring, and Slicing Machines, of which the following is specification.

My invention relates to an improvement in apple paring, coring, and slicing machines; and it consists, first, in the combination, with the screw-shaft, of a pivoted cam or locking device which will allow the shaft to be drawn back at any time without the necessity of the operator touching the cam, and which cam will sink into place from its own weight when the shaft is pushed forward and turned; second, in a paring-knife which consists of a sharp-edged metallic ring having a recess through its bottom for the peeling to pass through, with a metallic guard, which is placed inside of the knife for the purpose of regulating the thickness of the peeling, the guard being provided with suitable stops upon its under side for preventing the knife from becoming displaced; third, in the arrangement and combination of parts which will be more fully described hereinafter.

The main object of my invention is to so construct the locking-cam that it will automatically engage with the screw-forked shaft when it is forced forward, and which will allow the shaft to be drawn back at any time without the necessity of operating the cam.

Figure 1 is a side elevation of a machine embodying my invention complete. Fig. 2 is a plan view of the same. Figs. 3 and 4 are detailed views of the paring-knife.

A represents the frame of the machine, which is secured to the table, in the usual manner, by means of the clamping-screw B. Upon the top of the frame is formed the smooth guiding-bearing C, through which the endwise-moving screw-threaded forked shaft D is made to pass. At the outer corner of the frame are formed the ears E, which project outward above the top of the shaft a suitable distance, and between which is pivoted the locking-cam F, by means of which the shaft D is held down in position in being moved back and forth; also, secured at this upper corner is the plate G, which engages with the thread-shaft D for the purpose of causing the shaft to move back and forth when turned in the desired direction. The thread upon the shaft D extends no farther than the shoulder I, leaving the shaft plain and smaller in diameter for a distance slightly greater than the width of the ears E between the shoulder I and that point to which the shaft H is secured. When the shaft is forced inward to its full extent, as shown in Fig. 1, the locking-cam F bears against the shoulder, and when an outward pull is given upon the shaft D the shoulder strikes against the cam F and forces it upward, as shown in dotted lines, so that the shaft can be drawn outward its full length at a single movement without the necessity of screwing the shaft around, or operating the cam by hand for the purpose of releasing the shaft. This cam F is entirely automatic in its operation. When left free to move, it sinks downward from its own weight until its near lower corner comes in contact with the screw-shaft, when, by forcing the screw forward and turning it around, the cam sinks into place and holds the shaft down. As soon as the shaft reaches the end of its stroke, it is only necessary to pull backward and slightly upward, when the shaft will slide freely outward. At any time that it is desired to draw the shaft back into the position, as shown in Fig. 2, the operator has but to draw back upon the shaft, when the cam moves back out of the way.

In all other machines which have heretofore been constructed the cam which locks the shaft in place has to be operated entirely by hand, and is not automatic in its operation, as is here shown. The consequence is the operator has constantly to use one hand to throw the locking-cam in and out of place. By making the cam entirely automatic, as is here shown, only one hand is required to operate the screw-shaft, while the other need only be used in placing the fruit upon the fork J.

The shaft D is made hollow, and through it is passed the rod L, which has a small plate, N, attached to its end between the tines of the fork J. After the fruit has been pared and sliced, by pushing the rod L endwise, as shown

in Fig. 1, the core is forced from the fork. When the next piece of fruit is placed upon the fork to be pared, the fruit forces this rod backward into the position shown in Fig. 2.

The slicing-knife O, which will preferably be of the shape shown in Fig. 1, is removably attached to the inner end of the frame A, and in such relation to the fork J that a core slightly smaller than the fork will be left by the time the shaft D has been forced inward to its full extent, as shown in Fig. 1. Where the feed of the shaft D is either greater or less than just the necessary amount, this slicing-knife is either drawn inward or forced outward as the fruit is forced along by the shaft. If, for instance, the screw is cut four threads to the inch, when the fruit reaches the slicing-knife and this slicing-knife is set so that it would cut but three and one-half threads to the inch, it would of course draw the shaft along at that rate, or one inch in three and one-half turns of the shaft, and, if not prevented by the locking-cam, would do so. If the slicing-knife were set five threads to the inch, there would be less feed than the shaft-thread, and it would push the fork-shaft back unless prevented by pushing up the cam. When the coring and slicing knife is made of sheet metal, as is generally the case, either an excess or a lack of feed causes the knife either to be pulled in or opened out, as the case may be, and is thus ruined in a very short time. All this trouble is avoided by the use of the automatic cam F, for it allows the shaft to be forced forward or drawn backward at the will of the operator, and that without the necessity of operating the cam by hand.

Pivoted at the points P is the vertical part Q of the arm R, which carries the paring-knife S at its upper end. Applied to the lower part of the vertical arm Q is the spring T′, by means of which the arm R is forced around into a line, or nearly so, with the length of the frame A. As the fruit that is being pared is forced along by the shaft D, as soon as the upper end of the fruit comes in contact with the circular knife S, the arm R is gradually forced outward, as shown in dotted lines in Fig. 2, and this arm and its knife then follow all the variations in form of the fruit being pared. The spring T′ keeps the knife S pressed against the fruit, and the guard T, which is placed inside of the knife, prevents a paring beyond a certain regulated thickness from being taken off. The knife S, as shown in Figs. 2 and 4, forms a circle, and has a suitable opening through it at U for the escape of the paring. The guard T has a metallic body which is placed inside of the knife S, and is provided with prongs or projections V, as shown in Fig. 4, for the purpose of preventing either the guard or the knife from becoming displaced. The guard and the knife are then secured to the upper end of the arm R by means of the screw X. Upon the upper end of the arm R are the stops Y, against which the projections V upon the guard T strike. By the combined means of the screw X, the projections V, and the stops Y, the parts are held rigidly in place. A knife constructed as above described, owing to its circular shape, is better adapted for following depressions in the side of the fruit than a paring-knife of the ordinary shape.

Having thus described my invention, I claim—

1. The combination of the frame, the automatically-operating cam, and the screw-shaft provided with the shoulder I, which engages the cam, substantially as described.

2. In a paring-machine, the combination of the circular knife U and the guard T, which is placed inside of the knife, and which extends up over the edge of the knife on one side, substantially as set forth.

3. The combination of the circular knife having an opening for the passage of the peeling, the guard T, placed inside of the knife, and provided with the projections V, and the arm R, provided with the stops Y, substantially as specified.

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Witnesses:
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