

J. F. KOHLER.
SLICING MECHANISM.
APPLICATION FILED MAR. 2, 1908.

956,369.

Patented Apr. 26, 1910.

3 SHEETS—SHEET 1.

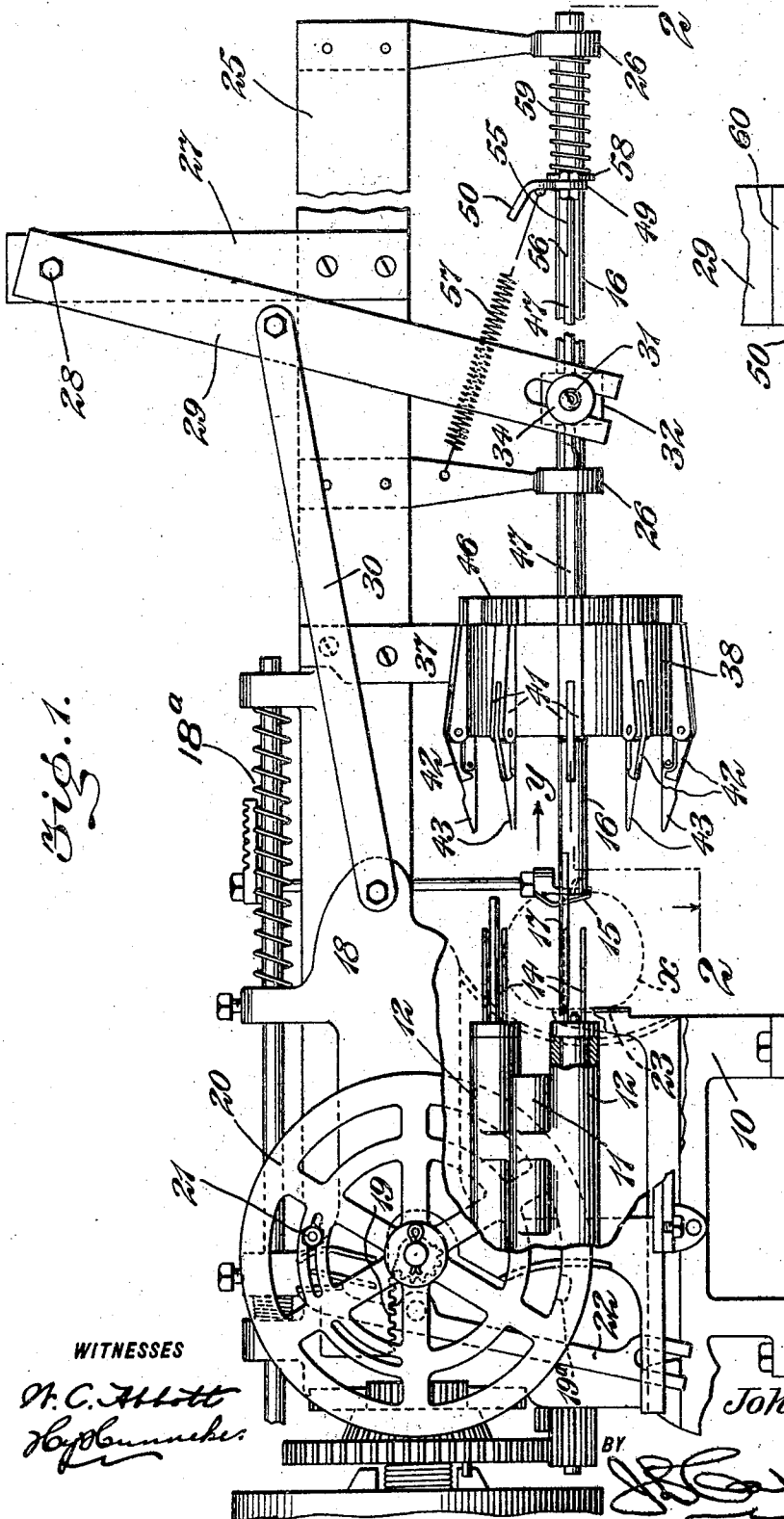


Fig. 1.

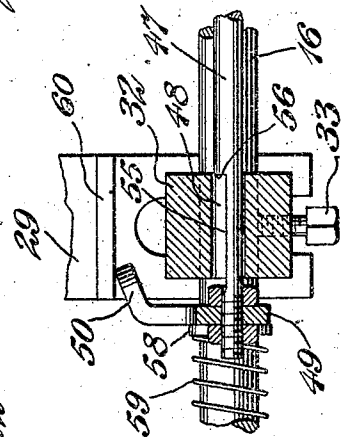


Fig. 8.

WITNESSES

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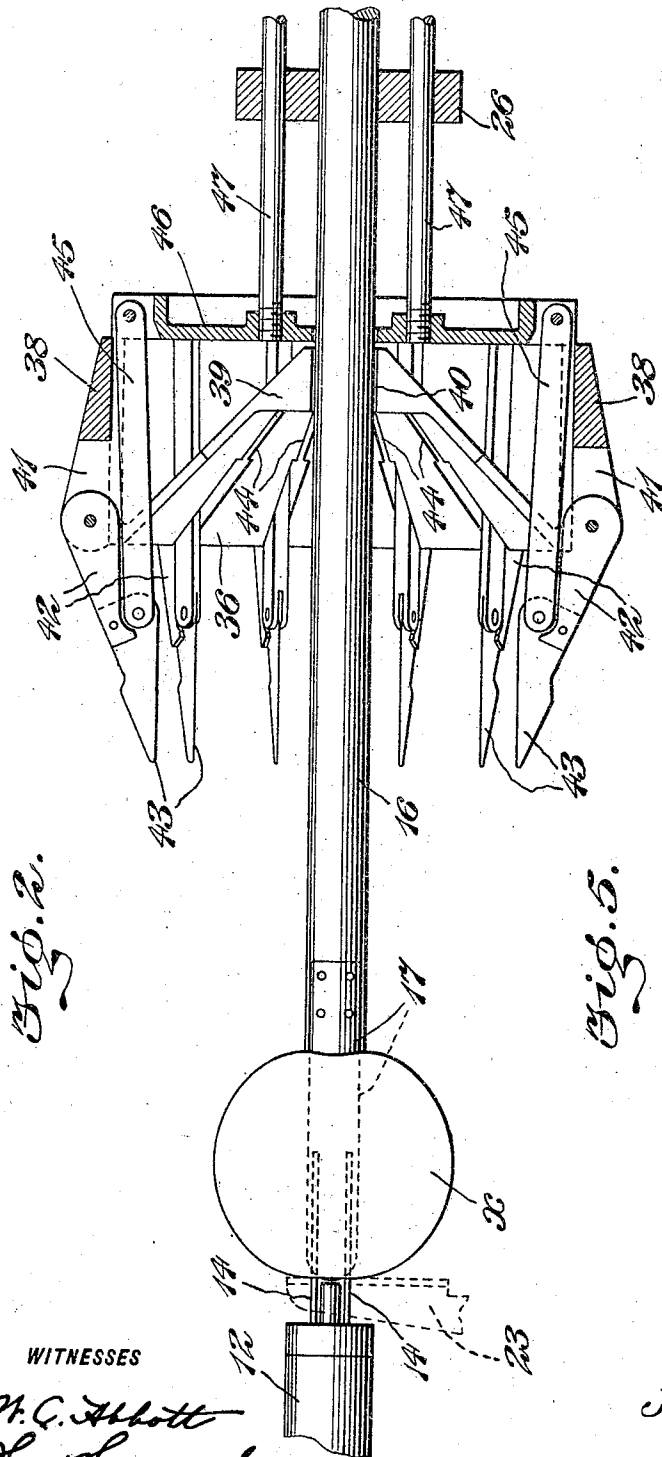


Fig. 2.

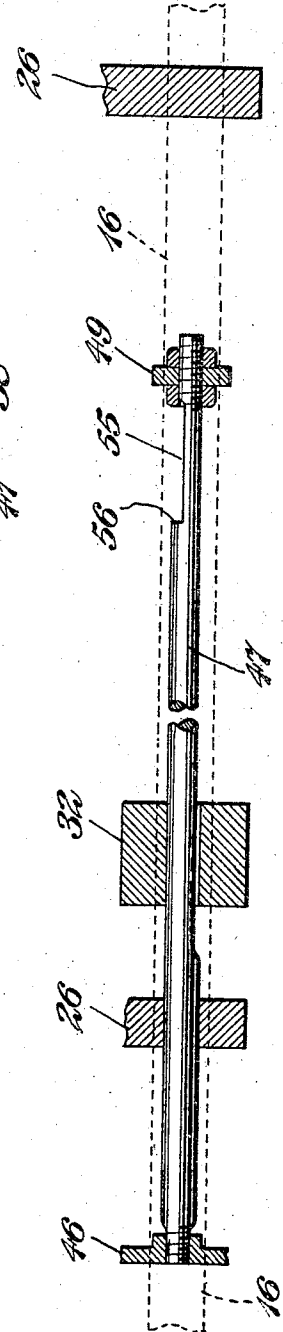


Fig. 5.

WITNESSES

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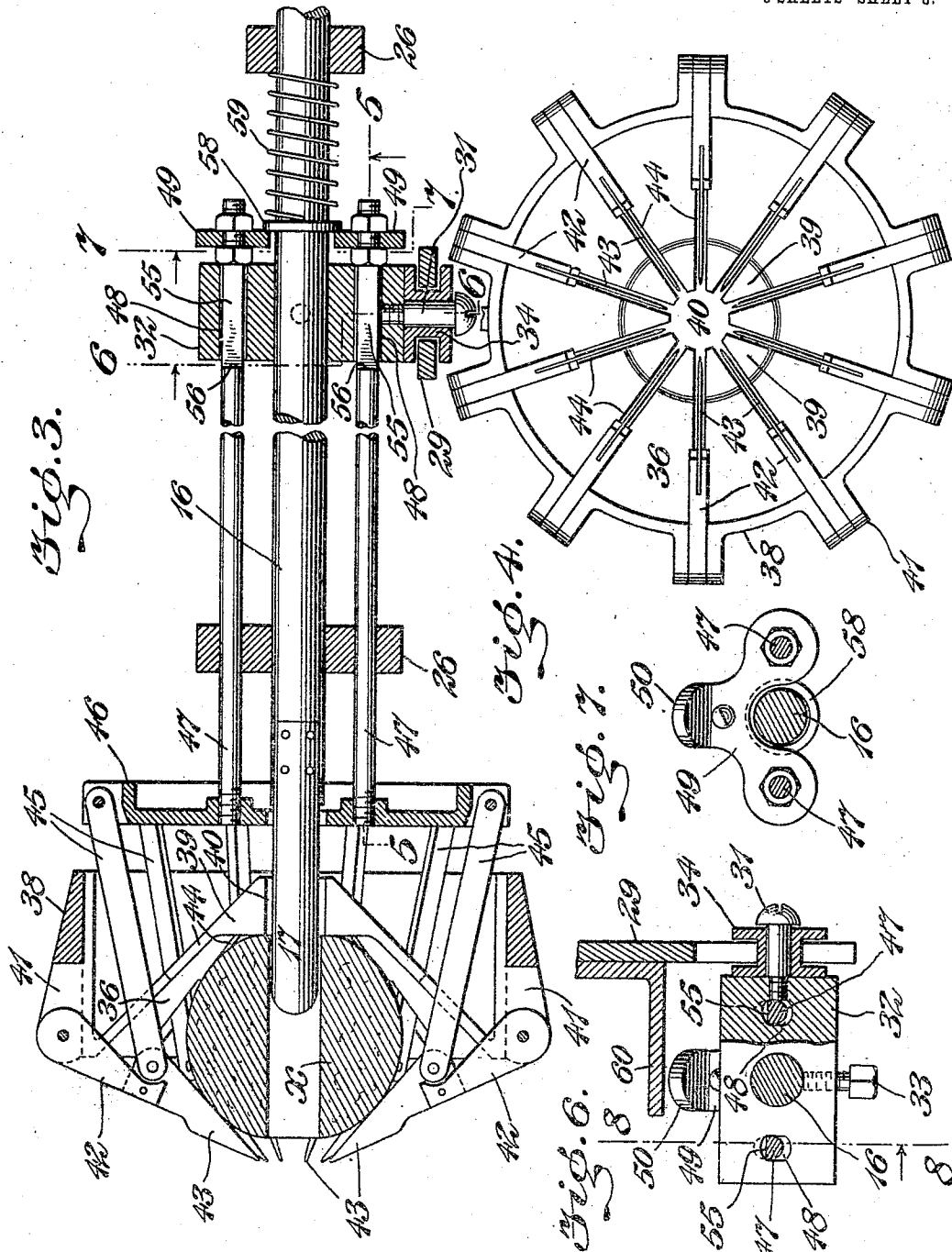
BY *[Signature]*
ATTORNEY

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3 SHEETS—SHEET 3.



WITNESSES

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JOHN F. KOHLER, OF NEW YORK, N. Y.

SLICING MECHANISM.

956,369.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN F. KOHLER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and useful Improvement in Slicing Mechanisms, of which the following is a full, clear, and exact description.

10 This invention relates to certain improvements in slicing mechanisms, such as are particularly designed and adapted for slicing apples or other fruit and the like, and the object of the invention is to provide a
15 mechanism of this general character of a simple and comparatively inexpensive nature, having certain features of novelty and improvement, whereby the slicing is effected in a rapid and accurate manner, and without
20 liability of clogging or derangement of the operative parts of the mechanism during its use.

The invention consists in certain novel features of the construction, and combinations and arrangements of the several parts
25 of the improved slicing mechanism, whereby certain important advantages are attained, and the mechanism is rendered simpler, less expensive, and otherwise better
30 adapted and more convenient for use, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In order that my invention may be the
35 better understood, I will now proceed to describe the same with reference to the accompanying drawings, wherein I have shown my improvements applied for use in connection with a fruit paring and coring
40 machine of the type set forth in the United States Letters Patent No. 405,825, granted to W. H. Boutell June 25, 1889, premising, however, that while my improvements are particularly well adapted for employment
45 in connection with such machines, the invention is not limited in this respect, but is capable of general application with good results.

In the accompanying drawings—Figure 1
50 is a rear elevation of a paring and coring machine provided with my improved slicing mechanism; Fig. 2 is an enlarged fragmentary sectional view taken horizontally through the machine in the plane indicated

by the line 2,—2 in Fig. 1, and illustrating
55 certain features of the slicing mechanism to be hereinafter referred to; Fig. 3 is a fragmentary sectional view somewhat similar to Fig. 2, but illustrating certain of the
60 operative parts of the slicing mechanism moved into a different position from that in which they are shown in Fig. 2; Fig. 4 is a front elevation of the slicing head of the mechanism detached, and with its operative
65 parts in the position shown in Fig. 3; Fig. 5 is an enlarged fragmentary sectional detail view showing certain of the operative parts of the slicing mechanism, the plane of the section being indicated by the line 5—5
70 in Fig. 3; Fig. 6 is an enlarged sectional detail view taken transversely through the slicing mechanism in the plane indicated by the line 6—6 in Fig. 3, and showing certain
75 features of construction of the knife controlling means; Fig. 7 is another sectional view taken transversely through the slicing mechanism in the plane indicated by the
80 line 7—7 in Fig. 3, and showing certain features of the releasing means, and Fig. 8 is a sectional view taken through the releasing means in the vertical plane indicated by the
85 line 8—8 in Fig. 6.

Since the paring machine to which I have shown my improvements applied for use
90 forms no part of my present invention I have not considered it necessary to illustrate the same in detail herein, and I will only refer in general terms to such portions
95 of said machine as cooperate with the slicing mechanism comprised in my present invention, it being understood that these co-operating portions of said paring machine may be replaced by corresponding portions
100 of such other machines to which my present invention is applicable, or may be included as portions of the improved slicing mechanism itself, in case the latter be constructed as a unitary machine.

The paring machine herein illustrated is
105 provided with a frame 10, wherein is mounted a revoluble carrier or fruit supporting means 11, having oppositely directed arms 12, 12, each of which is provided with forks 14, 14, which are adapted to penetrate the apples or other fruit to be pared in such a
110 manner as to afford effective supports therefor, and said carrier or support 11 is intermittently driven and is capable of operation,

when turned, to present first the apple or other fruit supported upon one of said forks 14, and then the apple or other fruit supported upon the other fork 14, to a paring knife 15, which is capable of operation to

pare such apples in a well known way. The apple or other fruit, indicated at *x* in Fig. 1, is adapted to be positioned, during the operation of the paring knife 15, in alinement with a coring bar or carrier 16 which will be hereinafter referred to in greater detail, and which carries, at that end which is adjacent to said paring knife, a coring knife 17 capable of operation to core the apple or other fruit presented thereto by the support or carrier 11. Each of the forks 14, 14 whereon the fruit is supported upon the carrier, is mounted upon a stem mounted for rotatory movement in the corresponding arm 12 of the carrier, and driven in any preferred manner so that when the fruit is presented by said carrier in position to be operated upon by the paring and coring knives 15 and 17, the rotatory movement of said forks will serve to revolve the fruit rapidly in contact with the said paring and coring knives in order to assist the operation thereof.

Since the means for driving the support or carrier 11 and the forks 14, 14 in the oppositely directed arms 12, 12, thereof forms no part of my present invention, I have not shown such means in detail herein. Where desired, such driving means may be of the construction shown and described in my prior United States Letters Patent No. 897,109, granted August 25, 1908.

The paring machine is provided with an actuating slide 18, mounted for movement longitudinally upon the frame 10, and having a mutilated gear connection at 19 with a cam wheel 20, which is mounted to turn upon the frame and suitably driven to impart reciprocatory movement to said slide at suitable times during the operation of the machine, and said cam wheel 20 is provided with a pin 21 which is capable of engagement with one end of a lever 22 pivoted upon the frame 10 and which is thereby rocked at suitable times during the operation of the machine, the rocking movement of said lever 22 being communicated to a slide or pusher 23 supported in guides upon the frame and capable of operation, when moved, to press upon the apple or other fruit at its side opposite to that at which the coring knife 17 is presented, whereby such fruit is pushed off from the forks 14, and is simultaneously pushed along the coring knife 17 which is thereby caused to pass entirely through such fruit to remove the core thereof, the fruit finally coming to rest upon the coring bar or carrier to which it is transferred from said forks 14 by the operation of said pusher.

The frame 10 is provided at its upper part with a rearwardly extended beam or support 25, parallel with and above the coring bar or carrier 16, and provided, at suitable points, with pendent brackets 26, 26, affording spaced bearings wherein the said coring bar or carrier 16 is mounted for endwise sliding movement in order that the coring knife 17 at the end of said bar or carrier may be moved into and out of position for engagement with the fruit supported by the forks 14, and upon said beam 25 is erected a standard or upright 27, to the upper part of which is pivoted, as shown at 28, a pendent lever 29, having a link connection 30 with the slide 18 of the paring machine, whereby pivotal or rocking movement is communicated to said pendent lever in unison with the reciprocatory movement of said actuating slide 18.

The lower extremity of the lever 29 is extended down at one side of the rear or outer end portion of the coring bar or carrier 19, as clearly shown in Figs. 1 and 6, and is provided with a slot wherewith is engaged a pin 31 projecting laterally from a block 32, adjustably held upon the coring bar or carrier by means of a set screw 33, by which means reciprocatory endwise movement is imparted from said lever to said coring bar or carrier 16, causing the same to be moved in unison with the actuating slide 18 first to press the knife 17 into the fruit to be cored, and afterward, when the pusher 23 shall have been operated as above described, to push the fruit from the forks 14 upon said coring bar or member, to retract the cored fruit out of proximity to the paring knife 15. An anti-friction roller 34 is herein shown upon the pin 31 to lessen friction between the same and the walls of the slot in lever 29.

The improved sliding mechanism, as herein illustrated, includes a rounded or cylindrical supporting member 38, suspended by a bracket 37 beneath the beam 25, and provided with a conical interior part 36 having a central head or abutment 39 provided with a central aperture 40 through which that end of the reciprocatory coring bar or carrier 16 is adapted for free longitudinal movement when actuated from the lever 29, the head or abutment 39 being positioned in alinement with the fruit supported by forks 14 during the operation of the paring and coring means in order that when the coring bar 16 is retracted by the operation of lever 29, carrying the cored fruit with it, such cored fruit shall be moved away from the forks 14 whereon it had been previously supported, and out of proximity to the paring means, and shall come to rest in accurate engagement against said head or abutment 39, which thereby affords a stop to terminate the movement of the fruit when withdrawn

from the paring means by said bar or carrier 16, and which serves to accurately position such fruit with respect to the slicing mechanism in order that effective operation of such mechanism may be assured.

At its side adjacent to the paring means, the rounded or cylindrical supporting member 38 has its edge portion provided at suitable intervals with spaced lugs 41, arranged in pairs, and between each pair of such lugs 41 is pivotally supported one end of a knife support 42, the free extremity of which has connection with a thin knife blade or cutter 43. Any preferred number of these pivoted or swinging supports 42, and of the cutters or knives connected therewith, may be provided, and said supports are so pivoted between the respective pairs of lugs as to insure movement of the knives or cutters in directions converging toward each other and toward the axis of the coring bar or carrier 16, which passes centrally through the head and plays in alinement with the center of the rounded or circular series wherein the supports and knives are grouped.

The spaced lugs 41, 41 between which the knife supports 42, 42 are pivotally mounted are directed forwardly from the head or abutment 39 toward the paring means, and said head or abutment is provided with radially directed slotted openings 44, 44 within which the knives or cutters are adapted to enter when swung rearwardly upon the pivotal connections of their supports 42 during the operation of the improved slicing mechanism. The slotted openings 44 are continued outwardly through the conical interior part 36 and through the peripheral wall of the member 38, and for the actuation of said knives or cutters, their outer ends have pivotal connections with the forward ends of links 45, 45, which play rearwardly through the openings 44 of the head 39, and have their rear extremities pivotally connected with an actuating plunger or member 46, positioned at the rear of the head 39 and centrally apertured for the passage of the coring bar.

The plunger 46 is supported upon the forward ends of slide rods or members 47, 47 parallel with, but spaced at opposite sides of the coring bar and having longitudinal sliding support in the forward bracket 26 above referred to as affording support for the coring bar during its longitudinal movement, the rear extremities of said slide rods or members 47, 47 also having sliding support in guide ways 48, 48 produced in the block 32 which, as above stated, is adjustably secured to the coring bar or member. Beyond the block 32, the extremities of the said slide rods or members 47, 47 are connected together by a transverse brace or tie member 49, held in place by nuts screwed upon said rods 47, and provided with an upturned cam

projection 50, the function of which will be hereinafter explained.

Adjacent to their rear ends, the slide rods or members 47, 47 are recessed in their upper surfaces, as indicated at 55, 55 on the drawings, the forward ends of such recesses affording shoulders 56, 56, and with said brace or tie member 49 is connected the rear end of a spring 57, which is extended thence in an upward and forward direction to the forward bracket 26, so as to be adapted to exert its tension to elevate the rear ends of said rods or members 47, 47, so that when the coring bar or carrier 16 is retracted to a position in alinement with said recesses 55, 55 in said rear ends of the rods or members 47, 47, the tension of the spring will be exerted to lift said rods or members to an extent sufficient to engage the shoulders 56, 56 at the forward ends of the recesses 55, 55, upon the forward side of the block 32, whereby during the forward movement of said coring bar or carrier the rods or members 47, 47 and the knife actuating plunger 46 connected therewith, will be positively actuated in such a manner as to throw the cutter supports 42, 42 outwardly upon their pivotal connections with the supporting member 38, and to simultaneously throw the cutters carried upon their free ends in outward divergent directions and into position spread apart from each other to permit the introduction of the fruit to be sliced in contact with the head 39.

60 represents a cam projection or member mounted upon one side of the lever 29 adjacent to its lower end, and capable of engagement, during the swinging movement of said lever, with the cam projection 50 upon the brace or tie member 49, in such a manner that at appropriate times during the operation of the improved slicing mechanism, as will be hereinafter explained, the said cam projection or member 60 upon lever 29 is caused to contact upon the upper surface of the cam projection 50 upon the brace or tie member 49 in such a manner as to depress the rear ends of the rods or members 47, 47, against the tension of the spring 57, whereby the shoulders 56, 56 at the forward ends of the recesses 55, 55 in said rods or members 47, 47 are depressed out of engagement with the front surface of the block 32, affixed to the coring bar or carrier 16, and actuated from lever 29, so that the rods or members 47, 47 are released from said coring bar or carrier, and the same is permitted to move forwardly without imparting further forward movement to the cutter actuating plunger 46, and without inducing further outward or opening movement of the knives 43, 43 and their carriers 42, 42.

59 represents a spring coiled upon the rear end of the coring bar or carrier 16, having one end engaged upon the rearmost

bracket 26 wherein said bar or carrier 16 is supported for endwise sliding movement, and 58 represents a slide collar mounted loosely upon said rear end of said bar or carrier 16, and engaged with the opposite end of said spring, and also adapted, during the operation of the mechanism, to be engaged behind the brace or tie member 49 connecting the rear ends of the slide rods or members 47, 47, whereby when the cutter actuating plunger 46 shall have been moved forwardly to throw the cutters or knives into opened position, as shown in Figs. 1 and 2, and when the cam projection 60 of lever 29 shall have operated, by engagement with the cam projection 50 of the brace or tie member 49 to depress the rear ends of slide rods or members 47, 47 and free the same from the block 32 upon coring bar or carrier 16, to permit further forward movement of the latter, as above described, the tension of said spring 59 will be exerted to retain said cutter actuating plunger 46 in its forwardly moved position, and thereby to maintain the knives or cutters in opened position during such movement of the coring bar or carrier as is necessary to transfer the fruit from the paring means into position to be operated upon by such knives or cutters.

In the operation of my improvements, as herein illustrated, the parts are so timed that the coring bar or carrier 16 will be retracted or moved away from the paring means and from the position shown in Figs. 1 and 2 to that shown in Fig. 3, when the rotary support or carrier 11 is operated to present an unpared apple or other fruit to the coring means, such retraction of the coring bar or member being accomplished, in the structure herein shown, by the engagement of the mutilated gear surface upon the wheel 20 with the gear surface at 19 upon slide 18, whereby said slide 18 is moved against the tension of its retracting spring 18^a. During such retraction of the coring bar or carrier 16, and while the rotary support or carrier 11 is being operated to present the unpared fruit to the paring means, the pusher 23 will also be retracted toward the left from the position shown in Fig. 1, so as to permit proper positioning of such unpared fruit with relation to the paring and coring devices.

After the presentation of the unpared fruit to the paring means 15 by the operation of the rotary support or carrier 11 as above described, the mutilated gear surface upon wheel 20 will pass out of engagement with the gear surface at 19 upon slide 18, whereby the spring 18^a will be permitted to retract said slide 18, and owing to the link connection of said slide 18 with lever 29, said lever 29 will be simultaneously actuated to impart a sharp forward endwise movement to the coring bar or carrier 16

wherewith its lower end has connection through block 32, whereby the coring knife 17 carried upon the forward end of said bar or carrier 16 will be pressed toward or into the core of the fruit at the side opposite to the pusher 23, the rotatory movement imparted to the fruit supporting forks 14 meanwhile serving to present the peripheral surface of the fruit to the paring knife 15 in order that the fruit may be pared, and also serving to assist the introduction of the coring knife 17 into the fruit, and its operation in cutting out the core thereof.

When the coring bar or carrier 16 is in retracted position, its attached block 32 will be positioned in alinement with the recesses 55, 55 in rods or members 47, 47, as represented in Figs. 3 and 6, and the rearward throw of the lever 29 will serve to elevate the cam projection 60 out of position for engagement with the cam surface 50 upon the brace or tie member 49, so that the spring 57 will be permitted to lift the rods or members 47, 47 and to engage the shoulders 56, 56 at the forward ends of the recesses 55, 55 therein, upon the forward surface of block 32, whereby it will be evident that, so soon as the forward movement of said coring bar or member 16 commences, the rods or members 47, 47 are caused to partake thereof, moving the cutter actuating plunger into forwardly thrust position, as shown in Figs. 1 and 2, and causing the cutters or knives to be spread apart from each other into such position as will permit the introduction of the pared fruit between them and in contact with the abutment 39, when the coring bar or carrier 16 is again retracted to transfer the pared and cored fruit from the paring means to the slicing mechanism.

During the forward movement of the coring bar or carrier 16 in unison with slide 18 as above described, the swinging movement of lever 29 will serve to bring its cam projection 50 into contact upon the upper side of the cam projection 50 of the brace or tie member 49, as indicated in Fig. 8, whereby the rear ends of the rods or members 47, 47 will be depressed to such an extent against the tension of spring 57 as may be necessary to withdraw the shoulders 56, 56 at the forward ends of the recesses 55, 55 out of engagement with the forward surface of the block 32, whereupon said rods or members 47, 47 will be released from said block, and the cutter actuating plunger, cutter supports 42, 42 and cutters 43, 43 having reached the limit of their outward or opening movement, will not be further moved.

After the knives or cutters shall have been thrown into fully opened position, as above described, they will be maintained in such opened position by the operation of the spring 59, and the coring bar or carrier 16

will be further moved forwardly so as to present the knife 17 carried upon its forward end a sufficient distance in advance of the opened cutters to permit of being engaged with the fruit supported by the forks 14 at the paring means, the block 32 sliding freely along the rods 47, 47 during such further forward movement, as indicated in Figs. 1 and 5 of the drawings. The coring bar or carrier 16 having been thus actuated to present its coring knife to the fruit in the position indicated in Figs. 1 and 2, the pusher 23 will be actuated by its lever 22, and will operate to push the fruit in the direction indicated by the arrow *y* in Figs. 1 and 2, whereby such fruit while still partaking of the movement of the forks 14 whereon it is supported, is pushed therefrom upon the coring bar or carrier 16, the coring knife 17 meanwhile operating to cut the core completely from the fruit, so that such core is left adhering to the forks 14. The pared and cored fruit will thereupon be supported upon the coring bar or carrier 16 adjacent to the coring knife 17, and when this shall have been accomplished, the pusher 23 is retracted toward the left from the position shown in Fig. 1, to permit further operation of the rotary support or carrier 11, while the mutilated gear surface of wheel 20 operates by engagement with the rear surface at 19 to move the slide endwise of the frame and against the tension of spring 18^a, whereby rearward retracting movement is imparted through lever 29 to said coring bar or carrier 16, which is thereby moved endwise from the position shown in Figs. 1 and 2 to that shown in Fig. 3, to transfer the pared and cored fruit from the paring means 15 to the slicing mechanism in position to be sliced, and to permit further operation of the rotary support or carrier 11 in presenting a fresh apple or other fruit to the paring knife. During such transfer of the pared and cored fruit to the slicing mechanism, the spring 59 operates to retain the cutters 43, 43 in opened position, so that such fruit may pass between said cutters and contact accurately upon the head or abutment 39 through which the coring bar or carrier 16 plays, the block 32 meanwhile sliding freely along the rods 47, 47, until it comes into alinement with the recesses 55, 55 at the rear ends of said rods 47, whereupon by contact of said block against the brace or tie member 49, the further movement of the coring bar or member 16 is communicated to the rods or members 47, 47, and serves to draw them rearwardly against the tension of the spring 59, thereby imparting pivotal movement to the cutter supports 42, 42 which are caused to swing inwardly in directions converging toward the axis of the coring bar or carrier, so that their cutting edges may engage the fruit at

its side opposite to the abutment 39, and effectively slice the same.

The proportion and arrangement of the parts of the improved mechanism as herein shown are such that, when the fruit shall have been positioned in contact with the head or abutment 39, and the movement of the knives shall have commenced, the fruit will be securely gripped and held in such position by the engagement of the cutting edges of the knives at different points around its side which is opposite to said head or abutment, and the fruit being so gripped and held independently of the coring bar or carrier 16, it will be apparent that the further movement of the coring bar or carrier 16 will operate to withdraw the coring knife from within the fruit sufficiently in advance of the operation of the knives in cutting or slicing the same to prevent effectively contact of the slicing knives 43, 43 upon either the coring bar or coring knife 17, while at the same time, the slicing knives or cutters 43, 43 are permitted to be made in such lengths as will insure complete slicing of the fruit into the passage produced by the operation of the coring knife. The provision of the slotted openings 44, 44 radially disposed in the head or abutment 39, and into which the cutting edges of the knives pass when the slicing mechanism is actuated, also insures complete division of the fruit at its side which contacts upon said head or abutment, and permits the slices to fall readily from the slicing head or abutment into a vessel arranged to receive them.

From the above description of my improvements, it will be seen that the slicing mechanism constructed according to my invention is of an extremely simple and comparatively inexpensive nature, and is particularly well adapted for use by reason of the speed and efficiency with which it may be operated, and of the uniformity with which the fruit is sliced, and it will also be obvious from the above description that the mechanism is susceptible of some modification, within the scope of the appended claims, without material departure from the principles and spirit of the invention, and for this reason I do not desire to be understood as limiting myself to the precise formation and arrangement of the several parts of the mechanism herein set forth in carrying out my invention in practice.

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

1. In slicing mechanism, an annular supporting member, a conical part within the same and provided with a series of slots extended through said supporting member, knives pivoted in the slotted portions of the supporting member, a plunger mounted for movement toward and from the supporting

member, connections between the knives and the plunger, and means for actuating the plunger.

2. A slicing mechanism having a head whereon an apple or the like is adapted to contact and provided with slotted openings converging toward its central part, a plurality of knives supported at the outer part of the head and spaced apart from each other to permit an apple or the like to be positioned between them in contact with said head, and means for moving said knives toward each other in directions alined with the converging slots of said head.

3. A slicing mechanism having two members, one of which is a carrier adapted to support an apple or the like, and the other of which is a head adapted for contact with an apple or the like supported by the carrier and provided with a plurality of divergent slots, a plurality of knives movable toward and from the head and engageable with said slots, means for moving one member relatively to the other to position the apple or the like supported by the carrier between the knives and head, and means for moving the knives toward the head to slice the apple.

4. A slicing mechanism having a head whereon an apple or the like is adapted to contact, a plurality of knives supported at the outer part of the head, means for moving the knives apart from each other to permit an apple or the like to be introduced between them in contact with the head, a carrier engageable with an apple or the like and capable of movement to introduce the same between the knives in contact with the head, and means for moving the knives toward each other in directions converging toward the center of the head.

5. A slicing mechanism having two co-adjutant slicing means, one of which is a head whereon fruit to be sliced is adapted to contact, and the other of which comprises a plurality of knives spaced apart from the head to permit fruit to be sliced to be introduced between said co-adjutant slicing means, a carrier engageable with the fruit and capable of movement to introduce the same between the head and said knives, mechanism for moving one of said co-adjutant slicing means toward the other to slice the fruit positioned between them, and mechanism to withdraw the carrier from engagement with the fruit during such movement of one of said co-adjutant slicing means toward the other.

6. A slicing mechanism having two co-adjutant slicing means, one of which is a head whereon fruit to be sliced is adapted to contact, and the other of which comprises a plurality of knives adapted to be separated from the head to permit the introduction of fruit to be sliced between the co-adjutant

slicing means, a carrier, engageable with the fruit and capable of movement to introduce the same between the head and said knives, mechanism for moving one of the co-adjutant slicing means away from the other to permit the introduction of the fruit between them, mechanism for moving one of the co-adjutant slicing means toward the other to slice the fruit positioned between them, and means for moving the carrier to release the fruit during such movement of one of said co-adjutant slicing means toward the other.

7. A slicing mechanism having knives adapted to be separated to permit the introduction of fruit to be sliced between them, a carrier engageable with the fruit and movable to introduce the same between the knives, means for moving one knife away from the other to permit the introduction of fruit to be sliced between them, means for moving one knife toward the other to slice the fruit, and means to withdraw the carrier from engagement with the fruit during such movement of one knife toward the other.

8. A slicing mechanism having a plurality of knives adapted for cutting engagement at different sides of fruit to be sliced, a coring device adapted to be positioned between the knives to support the fruit to be sliced, means for moving the knives toward each other to slice the fruit positioned between them, and means for withdrawing the coring device from between the knives during such movement of the knives toward each other.

9. A slicing mechanism having two members, one of which is a head adapted for contact with fruit to be sliced, and the other of which is a knife member adapted to be separated from the head to permit the introduction of fruit to be sliced between the members, a coring device adapted to be positioned between said members to support the fruit to be sliced, means for moving one of the members toward the other to slice the fruit positioned between said members, and means for withdrawing the coring device from between said members during such movement of one member toward the other.

10. A mechanism of the character described having a coring knife, slicing knives adapted to be separated to permit the introduction of fruit to be sliced between them, a carrier adapted to convey the cored fruit from the coring knife to said slicing knives, means for pushing the fruit past the coring knife and upon the carrier, and means for moving one of the slicing knives toward the other to slice the fruit positioned between them by said carrier.

11. A mechanism of the character described having a coring knife, two co-adjutant slicing means, one of which is a head whereon fruit to be sliced is adapted to con-

tact, and the other of which comprises a plurality of knives adapted to be separated from the head to permit the introduction of fruit to be sliced between the co-adjutant slicing means, a carrier adapted to convey the cored fruit from the coring knife between said co-adjutant slicing means, mechanism for pushing the fruit past the coring knife and upon the carrier, and mechanism for moving one of the co-adjutant slicing means toward the other to slice the fruit positioned between them.

12. A mechanism of the character described having a coring knife, a head whereon fruit to be sliced is adapted to contact, a plurality of slicing knives adapted to be separated from each other and from the head to permit the introduction of fruit to be sliced between them in contact with the head, a carrier adapted to convey the cored fruit from the coring knife between the head and slicing knives, means for pushing the fruit past the coring knife and upon the carrier, and means for moving the slicing knives toward each other and toward the head to slice the fruit positioned between them.

13. A slicing mechanism having a head whereon fruit to be sliced is adapted to contact, knives mounted for movement toward the head and adapted to be separated therefrom to permit the introduction of fruit to be sliced between them and said head, a carrier engageable with fruit to be sliced and capable of reciprocatory movement to introduce such fruit between the knives and said head, means for moving the knives away from the head when the carrier is moved in one direction, and means for moving the knives toward the head when the carrier is moved in an opposite direction.

14. A slicing mechanism having a head whereon fruit to be sliced is adapted to contact, knives mounted for movement toward the head and adapted to be separated therefrom to permit the introduction of fruit to be sliced between them and said head, resilient means for holding said knives away from the head, a carrier engageable with fruit to be sliced and movable to introduce such fruit between the knives and said head, and means controlled from the movement of said carrier for moving the knives toward the head to slice the fruit positioned between them and said head.

15. A slicing mechanism having a head whereon fruit to be sliced is adapted to contact, a series of knives pivotally supported around said head and capable of movement toward and from the same, an actuating member having connection with the respective knives and controlling the movement thereof, a carrier engageable with fruit to be sliced and movable to introduce such fruit between the knives in contact with the head,

resilient means for holding the actuating member in position when moved to throw said knives away from each other and from the head during the introduction of the fruit between them, and means controlled from the movement of the carrier for moving the knives toward the head to slice such fruit.

16. A slicing mechanism having a head whereon fruit to be sliced is adapted to contact, a series of knives pivotally supported around said head and capable of movement toward and from the same, a carrier guided for endwise reciprocatory movement between said knives and engageable with fruit to be sliced and adapted, when moved, to introduce the same between the knives and in position for contact with the head, means for retaining the knives separated from each other and from the head during movement of the carrier to introduce the fruit between said knives, and means, controlled by the movement of the carrier, for moving the knives toward each other and toward the head to slice the fruit.

17. A slicing mechanism having a centrally apertured head whereon fruit to be sliced is adapted to contact, a series of knives pivotally supported around said head and capable of movement toward and from the same, a carrier engageable with fruit to be sliced and adapted for reciprocatory endwise movement through the central aperture of the head, means for moving the knives away from each other and away from the head when said carrier is moved in one direction, and means for moving said knives toward each other and toward the head when the carrier is moved in a reverse direction.

18. A mechanism of the character described having a head whereon fruit to be sliced is adapted to contact while being sliced, a plurality of knives having cutting edges adapted to be separated from each other and from the head to permit the introduction of fruit to be sliced between them in contact with the head and movable toward each other and toward the head and adapted, when so moved, to grip and hold the fruit to be sliced between their cutting edges and said head during operation of the knives for slicing the fruit, means for moving the knives apart from each other and from the head to permit the introduction of the fruit to be sliced between them and in position for contact with the head, and means for moving the knives toward each other and toward the head to grip and slice the fruit so positioned.

19. A mechanism of the character described having a head whereon fruit to be sliced is adapted to contact while being sliced, a plurality of knives having cutting edges adapted to be separated from each other and from the head to permit the introduction of fruit to be sliced between them

in contact with the head and movable toward each other and toward the head and adapted, when so moved, to grip and hold the fruit to be sliced between their cutting
 5 edges and said head during operation of the knives for slicing the fruit, means for moving the knives apart from each other and from the head to permit the introduction of the fruit to be sliced between them in position
 10 for contact with the head, means for conveying fruit to be sliced between said knives and in position for contact with the head when the knives are so moved apart from each other and from the head, and
 15 means for moving the knives toward each other and toward the head to grip and slice the fruit so positioned.

20. A mechanism of the character described having two co-adjutant slicing means, one of which is a head adapted for contact with fruit to be sliced, and the other of which comprises a plurality of knives adapted to be separated from the head to permit the introduction of fruit to be sliced
 25 between the co-adjutant slicing means, the said slicing means being adapted, when one of them is moved toward the other, to grip and hold the fruit to be sliced between them, paring means, means for supporting fruit in
 30 position to be pared by said paring means, means for releasing the fruit so supported from such supporting means, mechanism for moving one of said co-adjutant slicing means away from the other to permit the reception between them of the fruit so released from said supporting means, and
 35 mechanism for moving one of said co-adjutant slicing means toward the other to grip and slice the fruit introduced between them.
 40 them.

21. A mechanism of the character described having paring means, slicing knives adapted to be separated to permit the introduction of fruit to be sliced between
 45 them, a carrier adapted to convey the pared fruit from the paring means to said slicing knives, means for pushing the fruit past the paring means and upon the carrier, means for moving the knives away from
 50 each other to permit the fruit conveyed by said carrier to be introduced between them, and means for moving the slicing knives toward each other to slice the fruit so introduced between them.

55 22. A mechanism of the character described having paring means, two co-adjutant slicing means, one of which is a head whereon fruit to be sliced is adapted to contact, and the other of which comprises a

plurality of knives adapted to be separated 60 from the head to permit the introduction of fruit to be sliced between the co-adjutant slicing means, means for pushing the fruit past the paring means, a carrier adapted to convey the pared fruit from the paring 65 means between said co-adjutant slicing means, mechanism for moving one of said co-adjutant slicing means away from the other to permit the fruit conveyed by the carrier to be introduced between them, and 70 mechanism for moving one of the co-adjutant slicing means toward the other to slice the pared fruit so introduced between them.

23. A mechanism of the character described having paring means, slicing knives adapted to be separated to permit the introduction of fruit to be sliced between them, means for supporting fruit in position to be 80 pared by said paring means, means for releasing the fruit so supported from such supporting means, a carrier adapted to receive the fruit when released from said supporting means and adapted to convey said fruit from the paring means to said slicing 85 knives, means for moving the slicing knives away from each other to permit the fruit conveyed by the carrier to be introduced between them, and means for moving the slicing knives toward each other to slice the 90 fruit so introduced between them.

24. A mechanism of the character described having paring means, two co-adjutant slicing means, one of which is a head whereon fruit to be sliced is adapted to contact 95 and the other of which comprises a plurality of knives adapted to be separated from the head to permit the introduction of fruit to be sliced between the co-adjutant slicing means, means for supporting fruit 100 in position to be pared by said paring means, means for releasing the fruit so supported from such supporting means, a carrier adapted to receive the fruit when released from said supporting means and adapted to 105 convey said fruit from the paring means between said co-adjutant slicing means, mechanism for moving one of the co-adjutant slicing means away from the other to permit the fruit conveyed by the carrier to 110 be introduced between them, and mechanism for moving one of the co-adjutant slicing means toward the other to slice the pared fruit so introduced between them.

JOHN F. KOHLER.

Witnesses:

J. FRED. ACKER,
 WM. C. MARTIN.