

No. 747,567.

PATENTED DEC. 22, 1903.

W. H. OSTRANDER.

LEMON SQUEEZER.

APPLICATION FILED FEB. 11, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

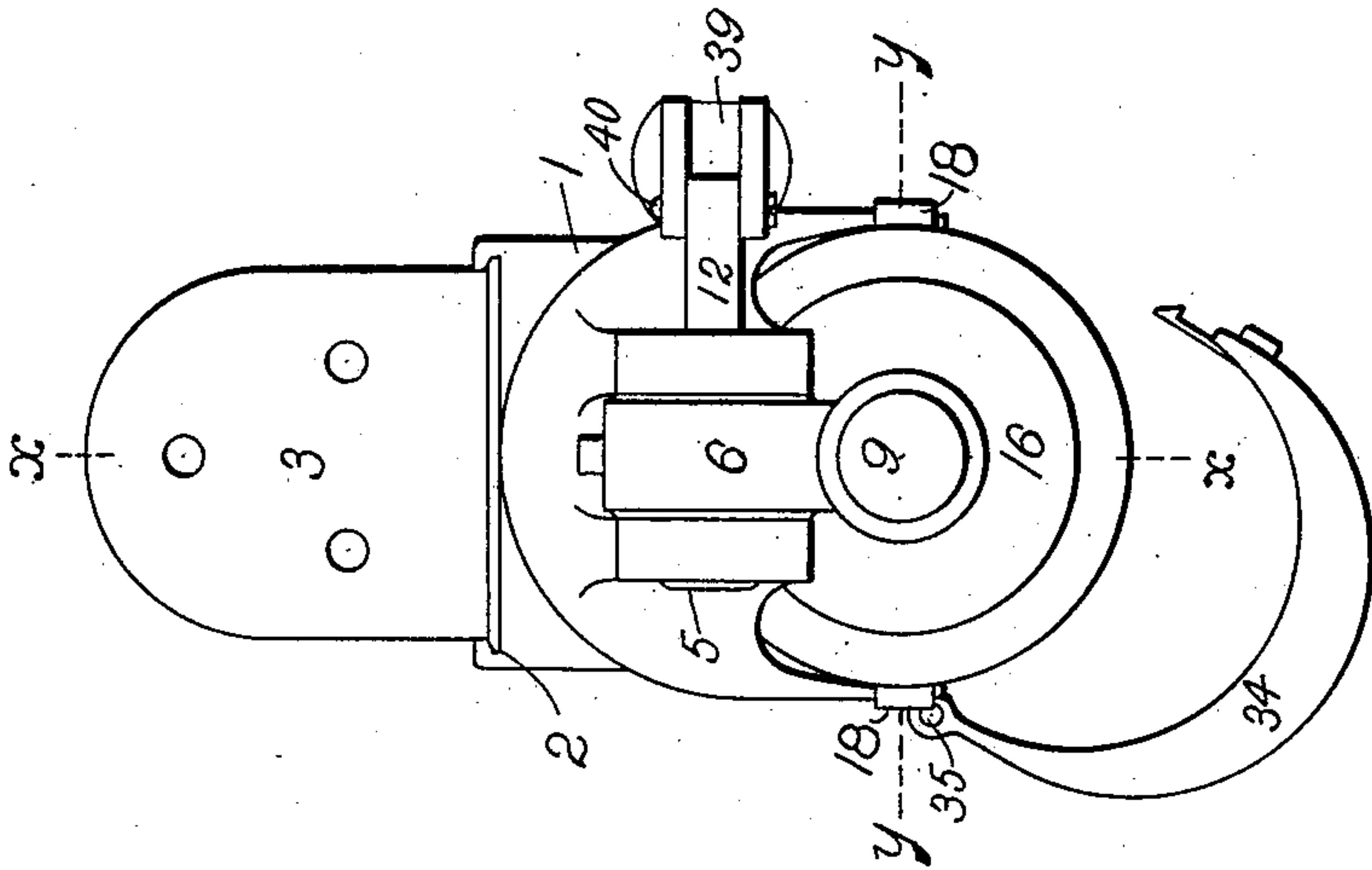


Fig. 2.

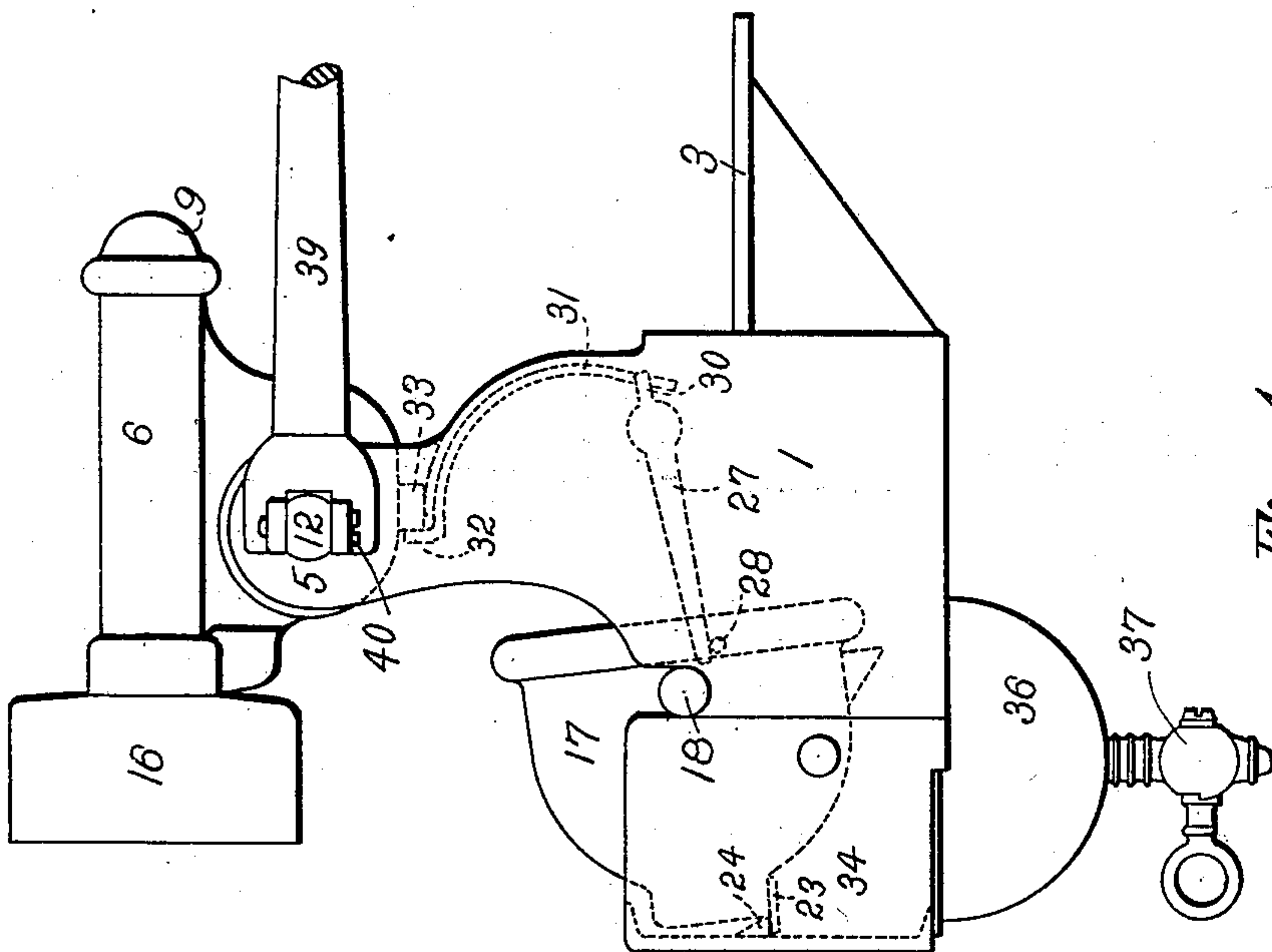


Fig. 1.

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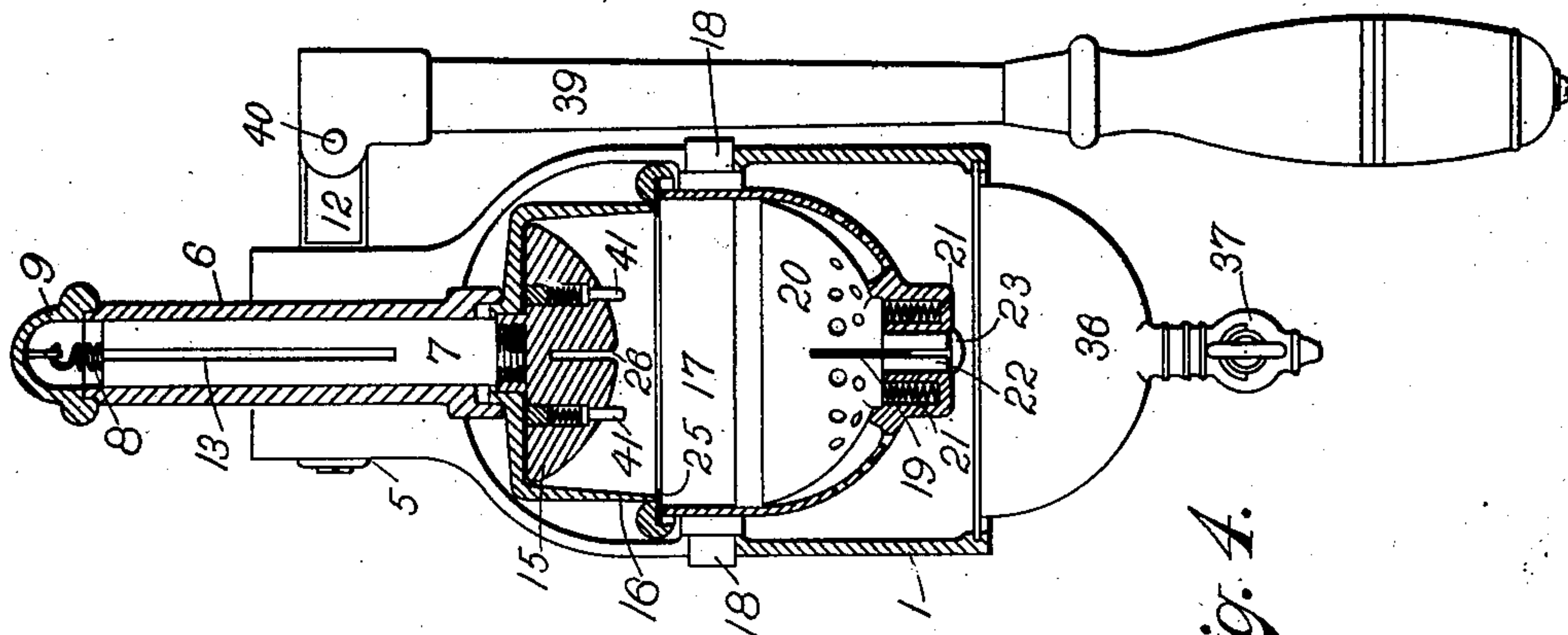


Fig. 4.

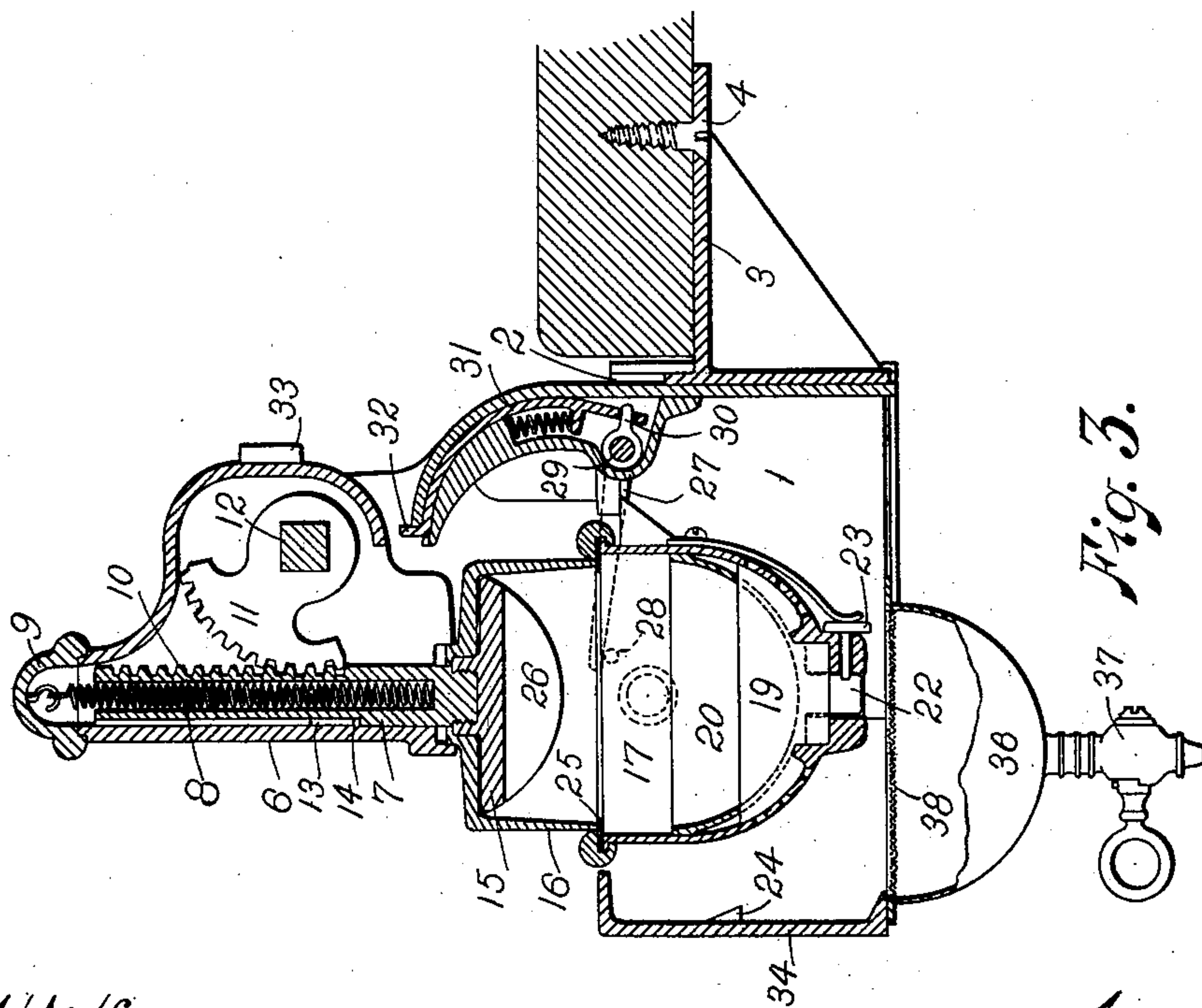


Fig. 3.

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UNITED STATES PATENT OFFICE.

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LEMON-SQUEEZER.

SPECIFICATION forming part of Letters Patent No. 747,567, dated December 22, 1903.

Application filed February 11, 1903. Serial No. 142,911. (No model.)

To all whom it may concern:

Be it known that I, WILLIS H. OSTRANDER, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Lemon-Squeezers; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 This invention relates to a lemon-squeezer.

The object of the invention is to provide efficient means for thoroughly extracting the juice from lemons and similar fruit and automatically discharging the rinds, particularly adapted to circumstances where a large number of fruit are to be operated upon expeditiously and economically. These objects are accomplished by means of the devices illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation showing the apparatus in the position for discharging the rind. Fig. 2 is a plan view. Fig. 3 is a sectional elevation through X X of Fig. 2. Fig. 4 is a transverse section through Y Y of Fig. 2.

Referring to the drawings, 1 is a suitable frame having a notch or dovetailed recess 2, adapted to engage with a suitable bracket 3, provided with means for attaching it to a table, counter, or the like, (shown in the present instance as screws 4.) Journaled in the frame 1 at 5 is a swinging guide 6. Slidably fitted into the guide 6 is a plunger 7, preferably hollow and provided with a tension-spring 8 in the interior thereof. The lower end of the spring 8 is attached to lower end of the plunger and the upper end is attached to a cap 9 of the guide 6. The plunger 7 is provided with a gear-rack 10, adapted to engage with a segmental gear 11, secured upon a shaft 12, journaled concentrically with the swinging guide 6. The plunger 7 is provided with suitable means to prevent its rotation, (shown in the present instance as a groove 13 and a pin 14, projecting inwardly from the guide 6 into groove 13.) To the lower part of plunger 7 is a plunger-head or presser 15, made, preferably, in the form of a segment of a sphere.

Surrounding this presser and slidable loosely upon the plunger is a hood or casing 16. Directly in the path of the presser 15 and adapted to receive it concentrically when depressed is a lemon-cup 17, swinging freely upon trunnions 18, which are journaled in frame 1. The cup 17 is provided with a stationary knife 19, as shown in Figs. 3 and 4. Within the cup 17 is another cup-like vessel 20, constituting a movable bottom or ejector to cup 17. This ejector is axially movable within the cup 17 and is provided with springs 21 to effect its axial movement. It is also provided with a central pin 22, guided in a hole in the bottom of cup 17. The pin 22 is suitably notched to engage with a spring-latch 23 in the bottom of cup 17. A tappet or projection 24 is provided upon the inner surface of frame 1, suitably placed to engage with latch 23 when cup 17 is swung upon its trunnions 18. Both the cup 17 and ejector 20 are provided with perforated bottoms. The cup 17 is provided with an inwardly-projecting flange 25, of rubber or other similar or suitable material. The ejector 20 is slit or slotted to permit the knife 19 to project therethrough, and a slit 26 is also provided in the presser 15 to receive the knife 19 when the plunger is depressed. Journaled in the frame 1 is a pivoted lever 27, projecting toward one of the trunnions 18 of the cup 17, and a pin or tappet 28 is provided on the side of the cup and adapted to engage with the lever 27. On the other side of the pivot 29 lever 27 has a short projection 30, adapted to engage with the end of a segmental spring-controlled slide 31, which is seated in a suitable recess in the frame 1. Upon the opposite end of the slide 31 is a projection 32, and upon the swinging guide 6 is another tappet or projection 33, adapted to engage therewith during its arc motion incident to the swinging character of the guide 6. The front part 34 of the frame 1 forms a casing around the lemon-cup 17 and is preferably hinged to frame 1 at 35, as shown in Fig. 2. The part 34 is provided with any suitable form of latch to secure it when closed. A suitable funnel or receptacle 36 may be provided, detachably secured

to frame 1 and having a draw-off cock 37 in its bottom and also a screen 38, as shown in Fig. 1. An operating-handle 39 is provided, secured upon shaft 12. This handle is preferably secured to the shaft 12 by a hinged joint 40, as shown in Figs. 1, 2, and 3.

In operation the fruit from which the juice is to be extracted is dropped into cup 17 upon ejector 20, and by means of the handle 39 the presser 15 is caused to descend upon it. Continued motion of the handle depresses the ejector 20, with its contained fruit, till the knife 19 makes an incision in the fruit and the presser 15 squeezes the juice out of it. The juice passes through the perforations in the bottom of the cup 17 and screen 38 into the receptacle 36, from which it may be drawn off by means of the cock 37. The pressing of the ejector 20 downward causes the engagement of the pin 22 with the spring-latch 23, thus holding the ejector 20 temporarily in its bottom position, with the springs 21 compressed.

The first action of the reverse motion of the handle retracts the presser 15 completely to the limit of its axial movement. In order to prevent the rind of the fruit from sticking to the presser 15, spring-pins 41 are provided in the plunger-head or presser 15. Further backward movement of the handle swings the guide 6 upon its center till the tappet 33 engages with the slide-tappet 32. This in turn operates lever 27, which through its engagement with the tappet-pin 28 partially rotates the cup 17 upon its journals 18, as shown in Fig. 1. The spring-latch 23 engages with the tappet 24, thus releasing the ejector 20 and permitting the compressed springs 21 to suddenly force the ejector forward and eject the fruit rind from the cup 17, thus completing the operation.

Owing to the hinged character of the part 34 and the removable character of the receptacle 36, the machine and its working parts are made readily accessible, facilitating the cleansing of all the parts exposed to the action of the acid juices of the fruit. The detachable character of its attachment to the table or counter provides for convenience both in packing for transportation and for handling.

The cover or hood 16 to the lemon-receptacle 17 performs the very desirable function of preventing the juice from squirting outside of the receptacle, thus not alone avoiding the undesirable and inconvenient scattering of the juice, but is a source of economy.

The inturned rubber flange 25 not only assists in forming a joint between the two parts of the lemon-receptacle, but also deadens the sound and jar incident to the action of the ejector, to which it acts as a stop or bumper.

In designating the above-described device as a "lemon-squeezer" and employing this term in the claims I desire it to be understood in a generic sense as the machine is

adapted to extract the juice from any other fruits, though it is peculiarly adapted to the purpose specifically indicated herein.

It is obvious that many changes in detail may be made without departing from the essential character of this invention. I therefore do not desire to confine myself to the particular form of construction herein set forth or arrangement or proportion of parts shown; but

What I claim as new is—

1. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon, means adapted to puncture the lemon, a presser adapted to coact with the receptacle whereby through the relative movement of the presser and receptacle, the lemon is squeezed, mechanical means adapted to tip the receptacle and means adapted to eject the lemon from the tipped receptacle.

2. A lemon-squeezer comprising organized means consisting of a two-part receptacle for a lemon, one of the parts adapted to contain the lemon and the other forming a cover or hood thereto, means within the receptacle movable relatively to the two parts of the receptacle whereby the lemon is punctured and squeezed and means adapted to eject the lemon.

3. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon, a hood or cover adapted to move to and from the receptacle during a portion of the operation of the device and means adapted to enter the receptacle and squeeze the lemon.

4. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon provided with an ejector, means adapted to puncture the lemon and a presser adapted to coact with the receptacle whereby through the relative movement of the presser and receptacle, the lemon is squeezed and mechanical means adapted to tip the receptacle and operate the ejector whereby the lemon is thrown from the receptacle.

5. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon provided with an ejector, and having a perforated bottom and a knife seated therein, an axially-movable presser adapted to enter the receptacle and mechanical means adapted to operate the presser, effect the tipping of the receptacle and the movement of the ejector whereby the lemon is perforated, squeezed and ejected.

6. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon provided with an ejector and having a perforated bottom and a knife seated therein and an axially-movable presser adapted to enter the receptacle, the presser being formed with a shank provided with teeth and an enlarged presser-head, a segmental rack engaging with the teeth whereby axial movement is given to the presser, a shaft upon which the segmental rack is secured and a frame in

which the shaft and pivoted receptacle are journaled, a handle upon said shaft and mechanical means whereby through the arc movement of the handle, the described parts perform their various movements and the cutting, squeezing and ejecting of the lemon is effected.

7. A lemon-squeezer comprising organized means consisting of a pivoted receptacle for a lemon, provided with an ejector and having a perforated bottom, a knife seated therein, an inwardly-turned detachable flange at its top of rubber or other suitable material, an axially-movable presser adapted to enter the receptacle, the presser being formed with a shank provided with teeth, an enlarged presser-head, a hood slidably attached to the shank in which the presser-head is normally seated, the hood being adapted to rest upon the inwardly-turned flange of the receptacle during the operation of the presser, a segmental rack engaging with the teeth on the shank whereby axial movement is given to the presser, a

shaft upon which the segmental rack is secured, a tipping guide in which the pressure-shank is seated and guided, a frame in which the tipping guide, shaft and receptacle are journaled, a handle upon said shaft, and mechanical means whereby through the arc movement of the handle, the described parts perform their various movements and the cutting, squeezing and ejecting of the lemon is effected.

8. A lemon-squeezer comprising organized means consisting of a two-part receptacle for a lemon, one of the parts adapted to contain the lemon and the other forming a cover or hood thereto, means within the receptacle movable relatively to the two parts of the receptacle whereby the lemon is squeezed and means adapted to eject the lemon.

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