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JUICE EXTRACTOR

Filed June 18, 1926

Fig. 2

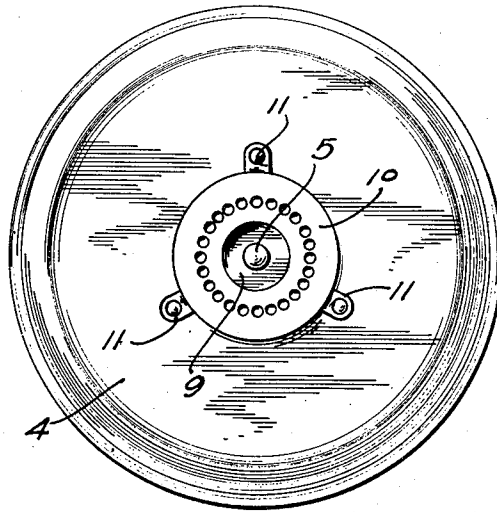


Fig. 3

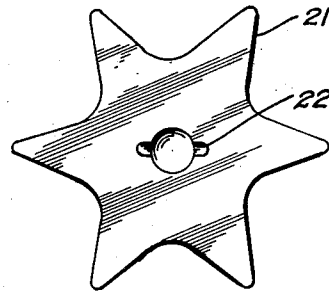
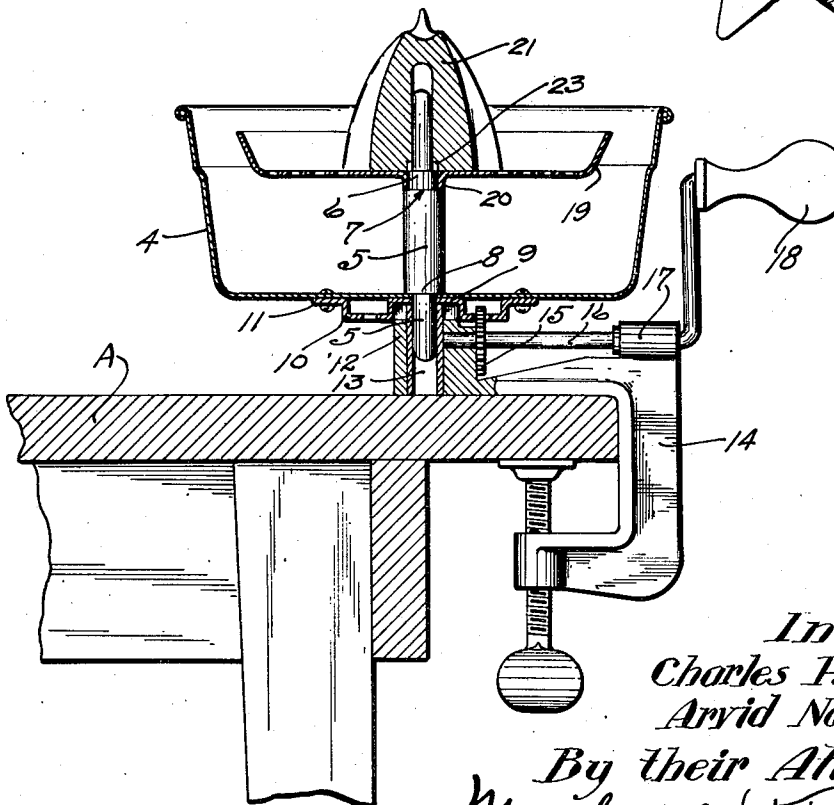


Fig. 1



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UNITED STATES PATENT OFFICE.

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JUICE EXTRACTOR.

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Our invention has for its object to provide an extremely simple and highly efficient device for extracting the juices from lemons, oranges, grape fruit and other citrous fruit and collecting the same after removing therefrom the seeds and pulp.

To the above end, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claims.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings:

Fig. 1 is a view principally in central vertical section showing the improved juice extractor attached to the top of a table;

Fig. 2 is a bottom plan view of the receptacle removed from the base; and

Fig. 3 is a bottom plan view of the juice extractor removed from the operating spindle.

The numeral 4 indicates a pan-like receptacle having a spindle 5 that extends axially through its bottom. Said spindle 5 has its intermediate body portion expanded to afford upper, intermediate and lower annular shoulders 6, 7 and 8, respectively. The lower shoulder 8 rests directly on the inside of the bottom of the receptacle 4 and it will be noted that the body of the spindle 5, between the shoulders 6 and 7, is of a diameter less than that between the shoulders 7 and 8.

On the under side of the bottom of the receptacle 4 is a disk-like bearing plate 9 having an axial hole through which the spindle 5 extends. Said bearing plate 9 is pressed onto the spindle 5 with sufficient force to hold said bearing plate thereon and to clamp the bottom of the receptacle 4 between the shoulder 8 and bearing plate 9 to form a tight joint and to securely anchor the spindle 5 to said receptacle in an upright position. Formed with the outer edge portion of the bearing plate 9, but offset below the same, is an annular member having punched therein a multiplicity of holes to afford a ring gear 10.

Short radial arms 11, formed with the outer edge portion of the ring 10, are riveted to the bottom of the receptacle 4 to securely connect said receptacle, spindle 5 and ring gear 10 for common rotation.

The receptacle 4 is rotatably and detachably carried by a base 12 by having the lower

end portion of its spindle 5 mounted in a bushing 13 which in turn is mounted in a bore in said base.

The bearing plate 9 rests directly on the upper end of the bushing 13 and thus supports the receptacle 4 and parts carried thereby free from the base 12. The base 12 is formed with the upper jaw of a thumb screw-equipped clamp 14 applicable to the top of a table A. A pinion 15 meshing with the ring gear 10 is secured to a horizontal shaft 16 journaled in the base 12 and a bearing 17 on the upper jaws of the clamp 14. On the outer end of the shaft 16 is a hand crank 18 by which said shaft may be operated.

A saucer-like strainer 19 is removably mounted on the spindle 5 within the receptacle 4 by having at its axis a hub 20 telescoped onto said spindle between the shoulders 6 and 7 and supported on the shoulder 7.

A juice extractor 21, which, as shown, is in the form of a corrugated cone, has an axial hole extending therein from its base adapted to receive the upper end portion of the spindle 5. The base of the juice extractor 21 rests on the bottom of the strainer 19 and to hold said extractor for rotation with the spindle 5, the same is provided in its base with a pair of diametrically opposite notch-like seats 22 arranged to receive the end portions of a pin 23 inserted transversely through said spindle.

Obviously, by operating the crank 18 the receptacle 4 and hence the juice extractor 21 is rotated by the intermeshing ring gear 10 and pinion 15. From the above description it is evident that the receptacle 4 can be lifted from the base 12 which withdraws the spindle 5 from the bushing 13 and at the same time disconnects the ring gear 10 from the pinion 15. It is also evident that the juice extractor 21 may be lifted from the spindle 5 and thereafter the strainer 19 can be likewise removed from said spindle. By thus mounting the several parts of the juice extractor the same may be easily separated for the purpose of cleansing the same and very quickly and easily reassembled.

When the device is not in use the receptacle 4 and all the parts carried therein may be detached from the base and stored away, while said base and the parts permanently attached thereto may be left on the table.

The operation of the device may be briefly described as follows:

A half of a citrous fruit will be held on the juice extractor 21 and said juice extractor rotated by the hand crank 18. The pulp and seeds from the fruit will be collected in the strainer 19 and the juice precipitated therefrom into the receptacle 4. At the completion of the extraction the extractor 21 and strainer 19 will be removed from the spindle 5 and thereafter the receptacle 4 removed from the base 12 and the juice therein poured into a glass or other container.

The above described invention, while extremely simple and of comparatively small cost to manufacture, has in actual usage proven highly efficient for the purpose had in view.

What we claim is:

1. The combination with a receptacle having a closed bottom and a fixed spindle extending through said bottom, of a clamp-equipped base having a socket in which said spindle is removably mounted, a gear on the bottom of said receptacle, a crank journaled on said base and having a pinion meshing with said gear, a juice extractor removably mounted on the spindle within said receptacle and held for rotation therewith, and a strainer on the spindle under said juice extractor.

2. The combination with a receptacle having a closed bottom and a fixed spindle extend-

ing axially through said bottom, a bearing plate secured to the bottom of said receptacle and provided with a multiplicity of apertures circumferentially spaced around said spindle to afford a ring gear, of a clamp-like base having a bushing in which the lower end portion of said spindle is rotatably and removably mounted and on which bushing said bearing plate rests, a crank journaled on said base and having a pinion meshing with the ring gear, a strainer removably mounted on the spindle within said receptacle, and a juice extractor having a socket in which said spindle projects above the strainer and interlocks for detachably securing said juice extractor to the spindle for rotation with the receptacle.

3. The combination with a base, of a receptacle having a closed bottom and a spindle rotatably and detachably mounted on the base, a gear on the bottom of the receptacle, a crank journaled on the base and having a pinion meshing with the gear and separable therefrom by the removal of the receptacle from the base, and a juice extractor on the spindle within the receptacle and held for rotation therewith.

In testimony whereof we affix our signatures.

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