

(No Model.)

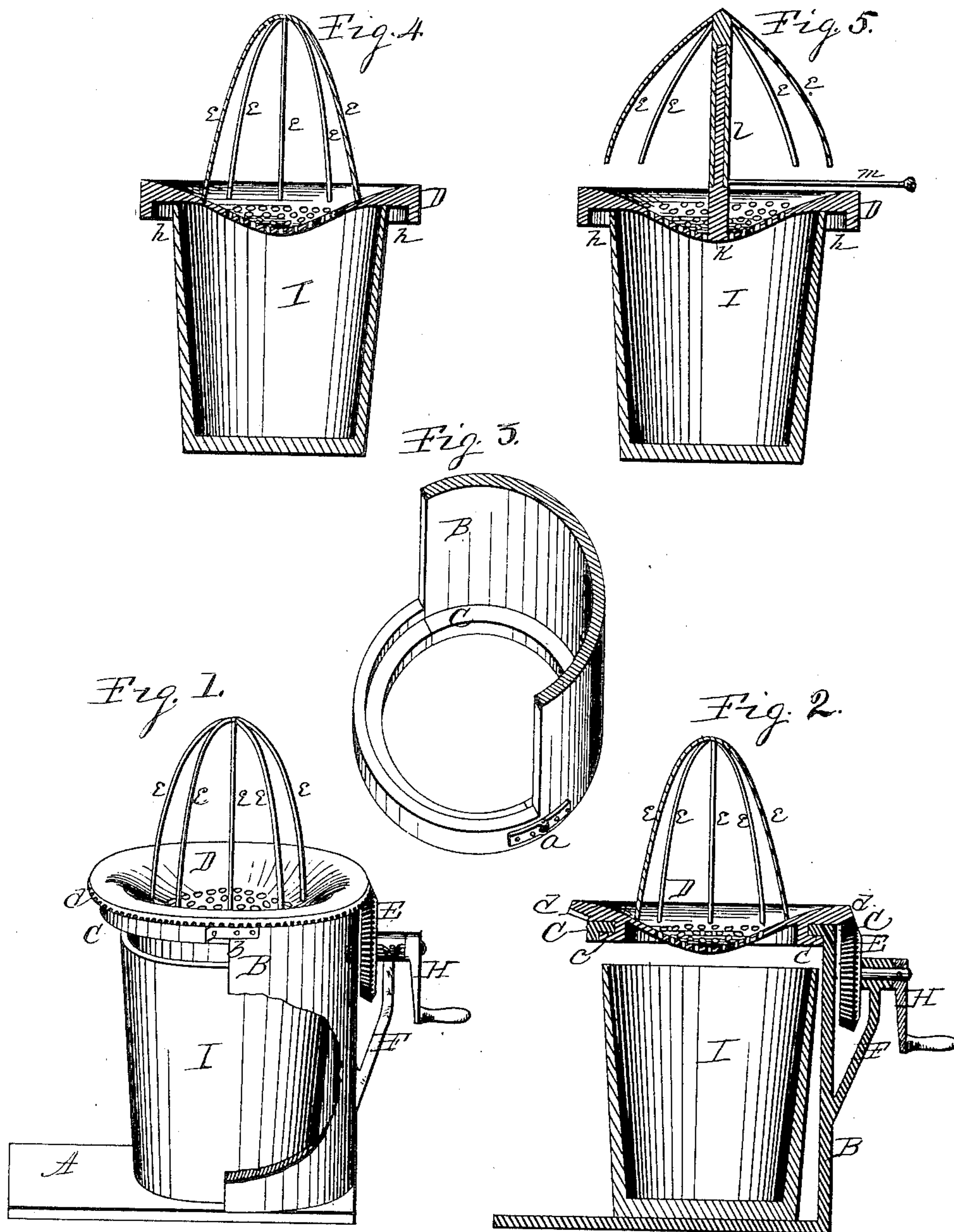
2 Sheets—Sheet 1.

J. P. MANNY.

LEMON JUICE EXTRACTOR.

No. 325,099.

Patented Aug. 25, 1885.



Witnesses.
Lallah Connor.
A. O. Behl

Inventor.
John P. Manny.
Per. Jacob Behl.
Atty.

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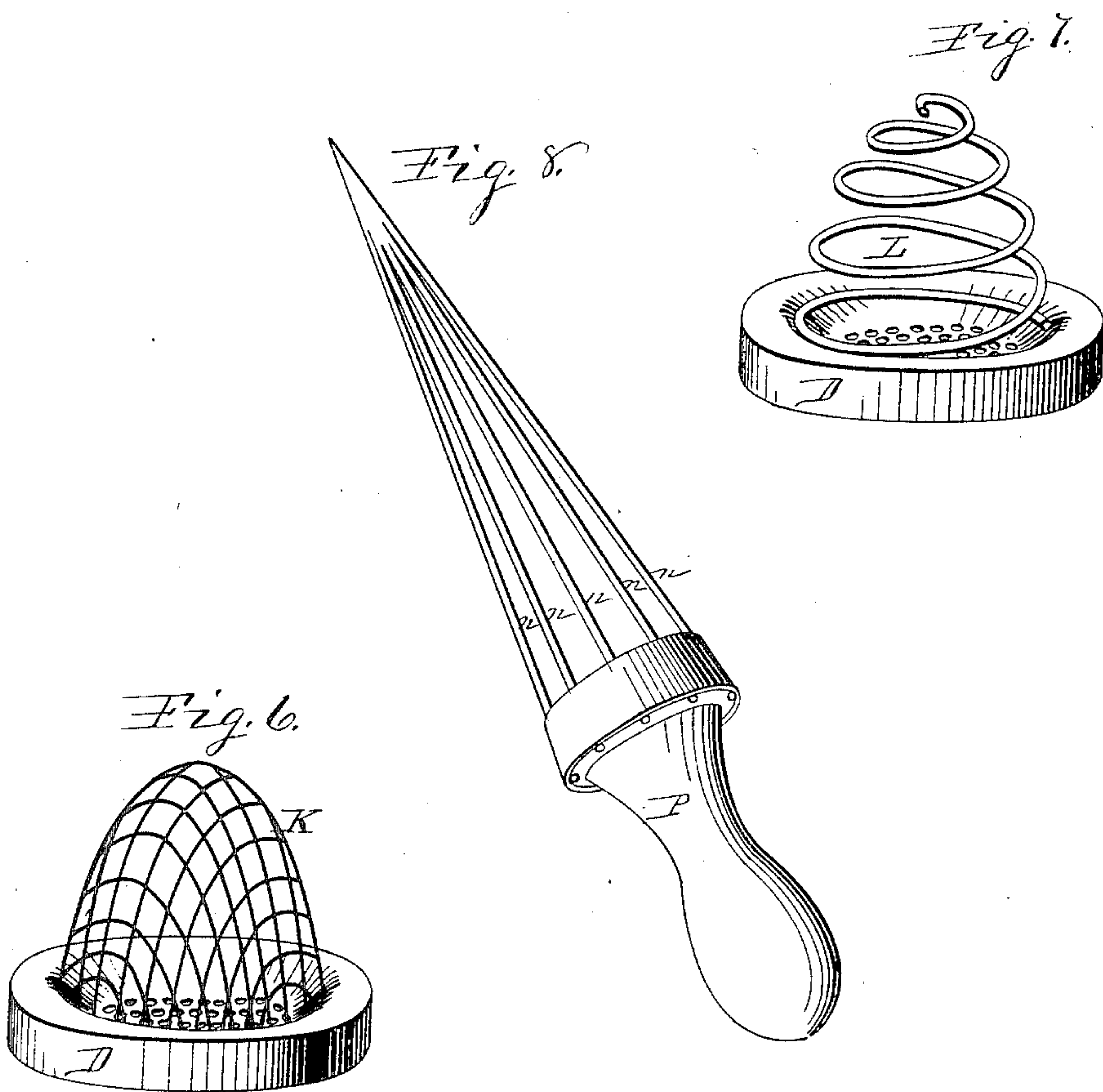
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UNITED STATES PATENT OFFICE.

JOHN P. MANNY, OF ROCKFORD, ILLINOIS.

LEMON-JUICE EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 325,099, dated August 25, 1885.

Application filed December 9, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. MANNY, a citizen of the United States, residing in the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Lemon-Juice Extractor, of which the following is a specification.

The object of this invention is to extract the juice from lemons in such a manner as to exclude the oil and other objectionable matter contained within the rind, and also to exclude from the extracted juice the seeds and the indigestible fibrous or pithy matter contained within the lemon. To this end I have designed and constructed the apparatus represented in the accompanying drawings, in which—

Figure 1 is an isometrical representation of an apparatus embodying the main features of my invention in one form. Fig. 2 is a vertical central section. Fig. 3 is an under-face isometrical representation of the bearing-rim, and a portion of the semicircular support. Fig. 4 is a vertical central section of my invention, in which the supporting-frame and gear-wheels are omitted. Fig. 5 is a vertical central section of my invention, in which the extracting-ribs are made yielding and capable of an oscillatory movement. Figs. 6 to 8, inclusive, are modifications of my improved extractor.

In the figures, A represents a base, which may be of any suitable conformation, preferably a parallelogram in plan and of unequal sides.

At B is represented a semi-cylindrical support having one end securely fixed to the base, from which it rises to support the extractor. The upper end of the semicircular support is provided internally with an inward-projecting annular ring or fillet, C, and this annular ring is in two equal parts, having a hinged connection, as at *a*, and a clasp, *b*, or other suitable device to connect the parts at the side opposite their hinged connection. This annular ring furnishes the bearing support to the extractor.

At D is represented a cap, concave on its upper surface, of bowl or basin form, and its central portion is provided with a full series of perforations. (Clearly shown in the drawings.) The outer edge of the cap D is provided with an annular groove, *c*, of proper dimensions to

receive the annular bearing C, freely to rotate thereon. The upper outer edge of the cap D, on its under inclined face, at *d*, is fitted with gear-teeth, producing a bevel-toothed gear-wheel.

At E is represented a bevel-toothed gear-wheel, supported to revolve in a bracket-bearing, F, springing from the semicircular support in such position relatively with the cap D that the gear-teeth of the respective wheels shall engage each other in working contact. The shaft of the gear-wheel E is provided with a hand crank or winch, H, by means of which rotary motion may be imparted to the cap by reason of its gear-tooth connection.

At *e* are represented ribs, of any suitable material, rising from the upper surface of the cap D in semi-elliptic or hyperbolic dome form.

In the use of my improved extractor, a suitable vessel, as a tumbler, I, is placed on the base, under the perforated cap. The lemon from which to extract the juice is cut transversely about the center of its length. The cut face of the lemon is placed upon the apex of the skeleton extractor and pressed downward. Rotary motion is then imparted to the extractor, which will cause the ribs to rotate within the lemon and extract the juice therefrom, which will descend through the perforations of the cap into the vessel placed for its reception. In this operation the seeds and other particles removed from the lemon will be caught in the concave upper surface of the cap, from which they can be readily removed.

In the cap D, shown at Figs. 4, 5, 6, and 7, the annular groove *c* and the gear-teeth *d*, on the under face of the cap D, are omitted, and instead thereof the under face of the cap is recessed, as shown at *h*, to receive the tumbler I or other vessel. In Fig. 6 I have employed, at K, a wire webbing produced in hyperbolic form, rising from the upper face of the cap, and in Fig. 7 I have employed a spirally-coiled wire, L, rising from the upper face of the cap in hyperbolic outline form. In the use of these modified forms of my skeleton extractor the cut surface of the lemon is placed on the apex of the extractor and is pressed downward with an oscillatory movement sufficient to extract the juice, which will descend through the perforations in the cap and be caught in the vessel; and the seeds and other objectionable or

refuse matter removed from the lemon in extracting the juice will be caught on the upper concave surface of the cap. The cap D, in Fig. 5, is provided with a vertical stud-journal, 5 K, rising from the center of its upper face.

At l is represented a tubular shaft supported on the stud-journal k, and capable of an oscillatory movement thereon.

To the upper end of the tubular shaft l are 10 fixed the extracting ribs, and from their connection therewith depend in Gothic or hyperbolic curved form producing a flexible skeleton extractor.

At m is represented a lever-arm fixed to the 15 tubular shaft, from which it projects laterally, and is employed to impart an oscillatory movement to the extractor to extract the juice from a lemon pressed upon the apex thereof.

Still another form of my improved skeleton 20 extractor is shown at Fig. 8, in which a handle, P, is provided with a series of ribs, n, rising in conic form, as clearly shown. In the use of this form of my improved extractor, a small portion is cut from each end of the lemon, and 25 it is then held in one hand over a suitable vessel, and the extractor, held in the other hand, is then passed through the lemon endwise, with a rotary or oscillatory movement, which operates to extract the juice and collect the 30 seeds and other refuse matter within the cone, to be afterward removed therefrom.

By the use of my improved extractor in the

preparation of lemonade I am enabled to extract and collect the juice of the lemon, and exclude therefrom the oil of the rind, the seed, 35 and other objectionable matter.

I claim as my invention—

1. A lemon-juice extractor consisting of a base portion and a skeleton frame rising therefrom, and adapted to be turned or oscillated, 40 substantially as set forth.

2. A lemon-juice extractor consisting of a perforated base and a skeleton frame rising therefrom, said frame being adapted to be oscillated in contact with the pulp of a lemon 45 to extract the juice from the pulp without forcing out the oil of the lemon-peel, substantially as set forth.

3. As an article of manufacture, a lemon-juice extractor consisting of a supporting-base 50 and a frame formed by a series of ribs secured to said base, the device as thus constructed being adapted to be rotated to extract the juice by the contact of said ribs with the pulp of the lemon, substantially as set forth. 55

4. The combination, substantially as hereinbefore set forth, of a supporting-frame, a skeleton extractor, a gear-train, and a winch, as and for the purpose set forth.

JOHN P. MANNY.

Witnesses:

HARRY B. JILSON,
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