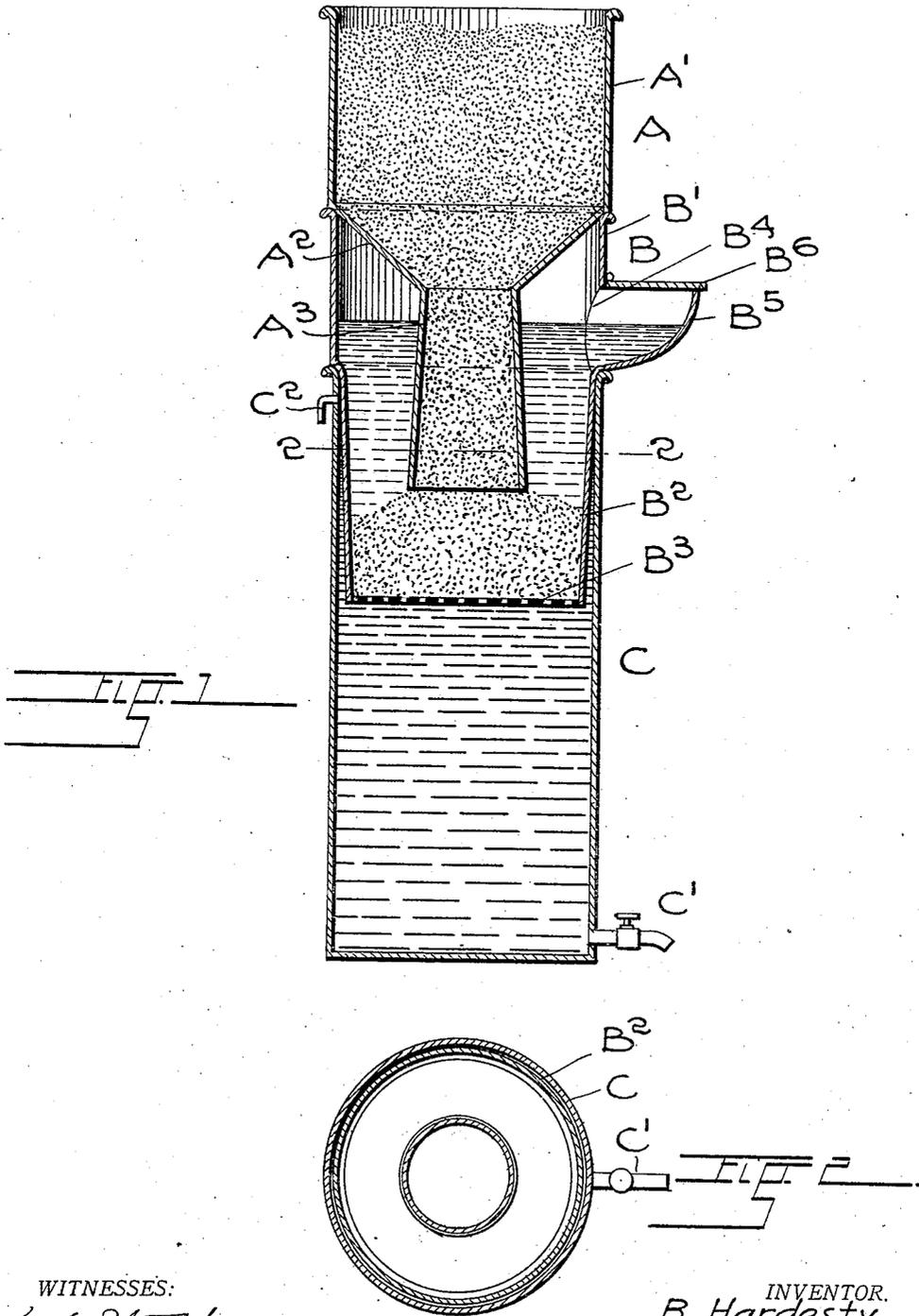


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PERCOLATOR.

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928,966.

Patented July 27, 1909.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

RUDD HARDESTY, OF DENVER, COLORADO.

## PERCOLATOR.

No. 928,966.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed April 8, 1908. Serial No. 425,935.

*To all whom it may concern:*

Be it known that I, RUDD HARDESTY, a citizen of the United States of America, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Percolators, of which the following is a specification.

My invention relates to improvements in percolators and more particularly to the class of devices employed in the manufacture of syrups and its object is to expedite the process of producing saccharine solution by providing an apparatus of the class named in which the solvent employed to dissolve the sugar filters through comparatively small quantities of the latter which are successively and automatically supplied from the mass with which one of the compartments included in the contrivance, is filled.

Other objects of my invention will be brought out in the course of the following description reference being had to the accompanying drawings in the various views of which like parts are similarly designated and in which—

Figure 1— represents a central vertical section through the percolator and Fig. 2— a transverse section taken along a line 2—2, Fig. 1.

The device as illustrated in the drawings is composed of three detachably connected sections A, B and C, which when assembled one within the other, provide three compartments which, in the practice of the process for which the apparatus is designed, respectively contain the sugar, the solvent and the solution.

The lower section C of the device consists of a cylindrical receptacle provided in proximity to its bottom, with a valve- or gate-controlled outlet C' through which the saccharine solution may be drawn and near its upper extremity or rim with an inverted vent pipe C<sup>2</sup> through which the air displaced by the rising fluid, may escape from the interior of the receptacle.

The middle section B comprises a funnel a cylindrical top portion B' of which is adapted to sit upon the rim of the lower receptacle and terminates in a downwardly extending cone B<sup>2</sup> which, in practice, projects within the receptacle C in spaced relation to its inner circumferential and bottom surfaces and whose lower orifice is covered by a screen or foraminated plate B<sup>3</sup> through which the so-

lution formed in the middle compartment, passes into the lower one.

The cylindrical portion of the member B is formed with an opening B<sup>4</sup> which being surrounded by an outwardly projecting lip B<sup>5</sup>, provides an inlet for the solvent with which, in practice, the middle section is continuously supplied. A lid B<sup>6</sup>, hingedly connected with the lip B<sup>5</sup>, is adapted to close the inlet so as to exclude dirt and dust from the interior of the sections.

The upper and innermost section A of the device is composed of a cylindrical top portion A' which when the parts are assembled, is supported upon the upper edge of the middle section and whose lower extremity connects with a conoidal throat A<sup>2</sup>, which terminates into a downwardly extending spout A<sup>3</sup>, the orifice of which extends a predetermined distance above the foraminated bottom plate B<sup>3</sup> of the middle section.

In the operation of my improved percolator, the upper vessel A is filled with sugar, a portion of which is discharged therefrom through the spout A<sup>3</sup>, upon the foraminated bottom B<sup>3</sup> of the middle section, the quantity of the said portion being determined by the distance between the orifice of the spout and the plate B<sup>3</sup>.

The water or other solvent which is introduced into the middle compartment through the inlet B<sup>4</sup>, slowly percolates the quantity of sugar contained therein and carrying a portion thereof in solution, passes through the perforations in the plate B<sup>3</sup> to collect in the lower receptacle C, while the quantity of sugar which is diffused into the said solvent, is synchronously replaced by a similar quantity from the mass contained in the vessel A.

It will thus be observed that by the use of my apparatus the process of producing the syrup is rendered continuous and greatly expedited by reason of the fact that the solvent, instead of passing through the entire mass of sugar with which the upper vessel is filled, is brought in contact with but a small portion thereof.

The solution which collects in the receptacle C, rises therein until its level is even with that of the solvent in the section B, when the supply of syrup automatically ceases until through the instrumentality of the outlet C', all or a portion of the fluid contained in the lower section, is drawn therefrom.

Having thus described my invention what I claim is:—

1. A device of the type set forth composed of a lower receptacle, a middle receptacle composed of a top portion and a downwardly extending cone forming a shoulder supported by the top edge of said lower receptacle, said cone projecting in the lower receptacle and having a perforated bottom spaced from the bottom of said lower receptacle, said middle receptacle having an inlet in its top portion, and an upper receptacle having a top portion, a conoidal throat and a downwardly extending spout which extends into said cone of the middle receptacle and terminates at a point above said perforated bottom of the middle receptacle, said top portion of the upper receptacle seating on the top portion of the middle receptacle.

2. In a device of the type set forth, a solvent receiving receptacle having a perforated bottom, and a sugar receptacle having a spout formed with imperforate sides and an open mouth, said spout being adapted to project into the body of the solvent and discharging the sugar therefrom at points above the bottom of the solvent receiving receptacle.

3. A device of the type set forth, composed of a syrup receiving receptacle, a solvent receiving receptacle disposed above said first receptacle and communicating therewith, and means coöperating with the solvent receiving receptacle to automatically feed but a predetermined amount of sugar to said solvent receiving receptacle to thereby come in contact with the solvent.

4. A device of the type set forth, composed

of a syrup receiving receptacle, a solvent receiving receptacle projecting partly into said first receptacle and having a foraminous bottom, a sugar receiving receptacle provided with an imperforate spout having a contracted mouth projecting into said solvent receptacle, the distance between said mouth and said foraminous bottom of the solvent receptacle determining the maximum amount of sugar automatically fed into said solvent receptacle so as to come in contact with the solvent.

5. A device of the type set forth, composed of a solvent receiving receptacle having a perforated bottom, and a sugar receptacle provided with an open discharge mouth having imperforate side walls spaced from the bottom and side walls of said solvent receptacle whereby but a predetermined quantity of sugar is automatically fed into said solvent receptacle to come in contact with the solvent.

6. A device for the manufacture of syrup, embodying a solvent receiving receptacle having a perforated bottom, a sugar receptacle, and means connected to said sugar receptacle and projecting into the body of the solvent to discharge the sugar at points above the bottom of said solvent receptacle whereby but a predetermined quantity of the sugar comes in contact with the solvent.

In testimony whereof I have affixed my signature in presence of two witnesses.

RUDD HARDESTY.

Witnesses:

G. J. ROLLANDET,  
K. M. STUMP.