No. 731,615. PATENTED JUNE 23, 1903.

H. REDLICH.

TINCTURE EXTRACTOR.

APPLICATION FILED MAR. 4, 1902.

NO MODEL.

Fig. 1.

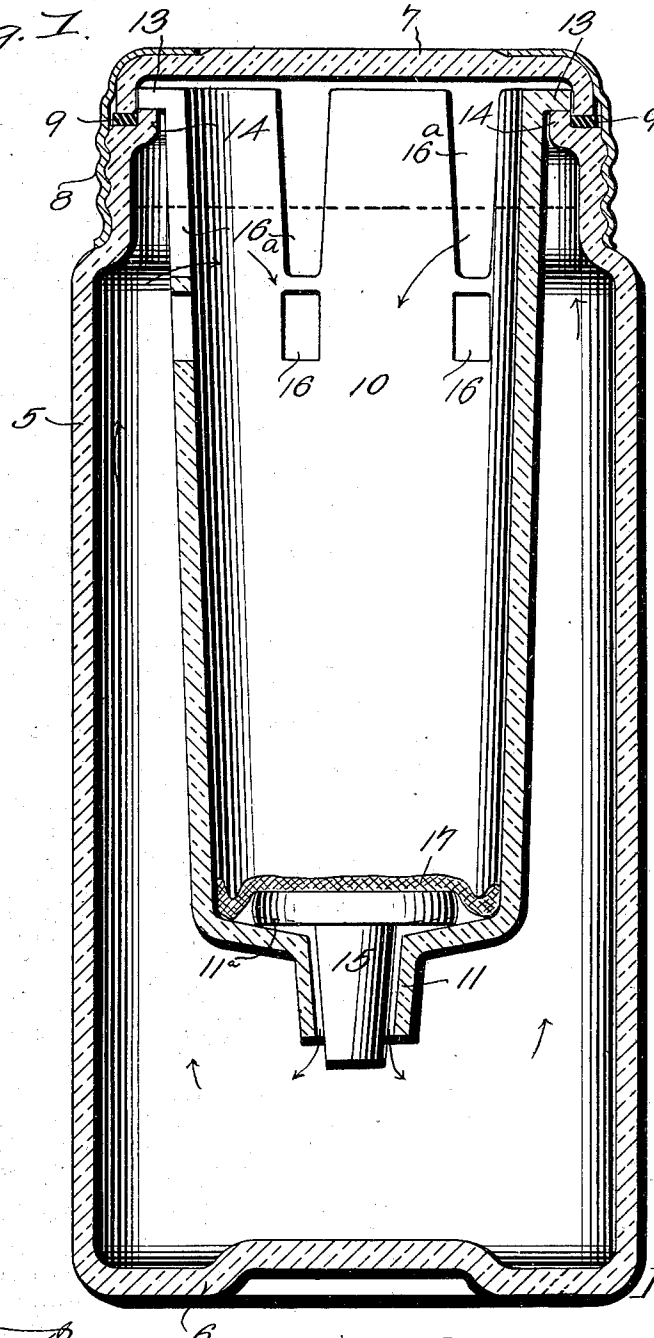
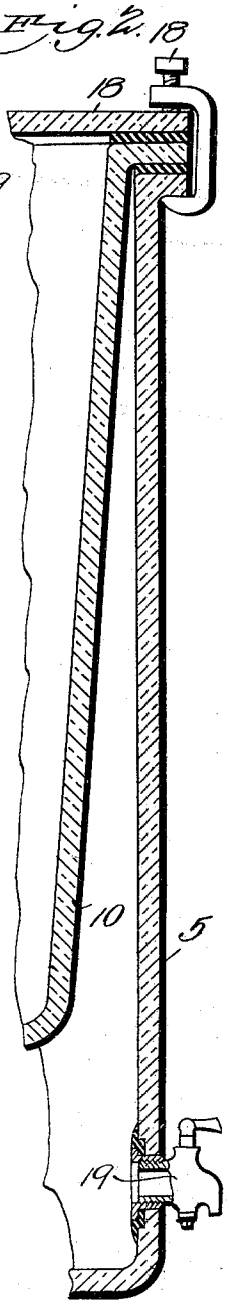


Fig. 2.



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No. 731,615. Patented June 23, 1903.

UNITED STATES PATENT OFFICE.

HENRY REDLICH, OF CHICAGO, ILLINOIS.

TINCTURE-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 731,615, dated June 23, 1903.

Application filed March 4, 1902. Serial No. 96,686. (No model.)

To all whom it may concern:

Be it known that I, HENRY REDLICH, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Tincture-Extractor, of which the following is a specification.

This invention relates to devices employed in extracting tinctures from various substances and compounds, and has for its object the construction of a simple, inexpensive, easily-operated, and economical apparatus which may be constructed of any capacity and erected in any locality and which will not require the services of skilled or professional operatives.

The invention consists in a closed hermetically-sealed vessel having suspended therein a receiver for the substance or compound from which the tincture is to be extracted and with means whereby the menstruum may be caused automatically and constantly to flow through the apparatus and without permitting the escape of any portion of either the menstruum, the compounds or substances from which the tinctures are extracted, or the tinctures themselves by evaporation or otherwise.

The invention further consists in certain novel features of the construction of the apparatus, all as hereinafter shown and described, and specifically pointed out in the claims.

In the accompanying drawings, illustrative of the invention, Figure 1 represents a vertical sectional elevation of the apparatus complete. Fig. 2 is a sectional detail illustrating a modification in the construction.

The apparatus may be of any size or capacity from the smaller sizes used for technical purposes in laboratories and for pharmaceutical and chemical uses, but also for the larger sizes employed in the wholesale manufacture of extracts for commercial purposes.

The apparatus consists of an outer casing or shell 5, preferably of glass or other material of a close impervious nature, which will not only resist the action of acids, but which will also be air and moisture proof. The casing will be provided with a closed bottom 6 and with a moisture and air tight cover, the latter preferably formed with a glass or similar portion 7 and a screw-fitting collar 8 with a rubber or other flexible gasket or packing-ring 9. By this means the cover may be fitted closely and held firmly upon the casing and all chance for the entrance or escape of air or moisture obviated.

Suspended within the casing 5 is a vessel 10, which constitutes the receiver for the compound or substance from which the extract is to be obtained, the bottom of the receiver being provided with a centrally-disposed open-ended tubular extension 11, the function of which will presently appear. The receiver is provided with a rim 13 around its upper edge to engage a shoulder 14 on the casing 5 and by which it is supported within the same. The extension 11 is adapted to receive a loosely-fitting plug 15, which is designed to prevent escape of any material from the receiver into the casing or body. The plug 15 will be of glass or other acid-resisting substance or compound. The walls of the receiver 10 are imperforate; but near its upper part the receiver will be provided with a series of perforations 16, which afford communication between the receiver and interior of the casing 5.

If the material which is placed in the receiver is of a nature to require it, a packing 17 will be placed in the bottom of the receiver to prevent the escape of the matter around the plug 15. This packing will be required when some kinds of powdered or otherwise finely-divided material is to be treated and may be of any suitable material—such as felt, glass wool, asbestos, or cloth—the quality of the fabric material depending upon the character of the material placed in the receiver.

When thus constructed, the operation is as follows: The cover 7 and the receiver 10 being removed, the vessel 5 is supplied with the menstruum. This menstruum may be of any suitable substance or compound—such as diluted alcohol, wine, spirit, or vinegar, or water, &c.—according to the substance to be treated. The receiver 10 is then supplied with its plug 15 and fabric packing 17, if one be required, and the substance or compound to be treated placed in the receiver. The latter is then slowly lowered into the vessel 5, giving the menstruum time to enter the re-

ceiver and percolate through the compound, care having been taken that the quantity of menstruum previously placed in the vessel 5 shall be sufficient when it has thoroughly percolated through the compound in the receiver to rise above the perforations, as indicated by the dotted lines. As the menstruum acts on the material or compound in the receiver the extract slowly sinks through the interstices around the stopper or plug 15 and sinks to the bottom of the vessel 5, displacing a certain quantity of the menstruum and causing it to flow over into the upper part of the receiver 10 through the perforations 16, and thus cause a continuous circulation throughout the apparatus and insuring the constant automatic action therein.

The proportions of the inclosing vessel and receiver may be modified and varied to any extent, as circumstances and the nature of the material to be treated may require, and I do not desire to be limited to any specific proportions or form of the apparatus, as these may be modified without affecting the nature of my invention. The apparatus is also very easy to keep clean, as all the parts are separable.

The receiver 10 may be provided with one or more of the per forations 11, as preferred or as the quality of the material being treated may require.

As a convenience in manufacturing the receiver 10, the perforation 16 might be extended upward through the rim 13, as indicated at 16ª.

When apparatus of large capacity is employed, as in manufacturing extracts in large quantities, the form of closure shown in Fig. 1 would not be convenient to handle, and the form of closure shown in Fig. 2 might be substituted, consisting in a closure 18 of a disk or plate form and supported in place by screw or other clamps 18ª. A discharge-spigot 19 might also be connected to the vessel 5 to withdraw the product.

Having thus described my invention, I claim—

1. An apparatus of the character specified, comprising a vessel, means for hermetically sealing the same, a receiver inclosed by the vessel and provided near its upper portion with a plurality of openings and at its bottom with a tubular outlet, and a plug loosely fitting the outlet and operating to prevent escape of any of the substance from which the extract is obtained from the receiver into the vessel.

2. An apparatus of the character specified, comprising a vessel, means for hermetically sealing the same, a receiver inclosed by the vessel and provided near its upper portion with a plurality of openings and at its bottom with a tubular outlet, and a plug loosely fitting the outlet and having a head to rest upon the bottom of the receiver to prevent escape therefrom of the material being treated into the vessel.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY REDLICH.

Witnesses:
WM. C. DETTMERS,
WM. ROHDER.