No. 734,238. PATENTED JULY 21, 1903.

A. W. OTTIGNON.

DEPURATOR.

APPLICATION FILED MAY 27, 1902.

NO MODEL.

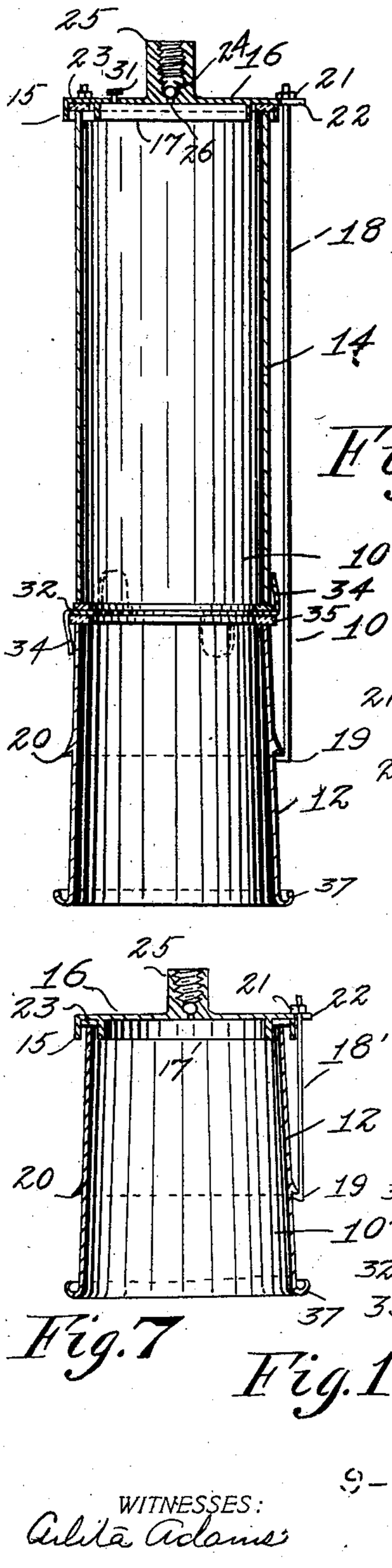

Fig. 2

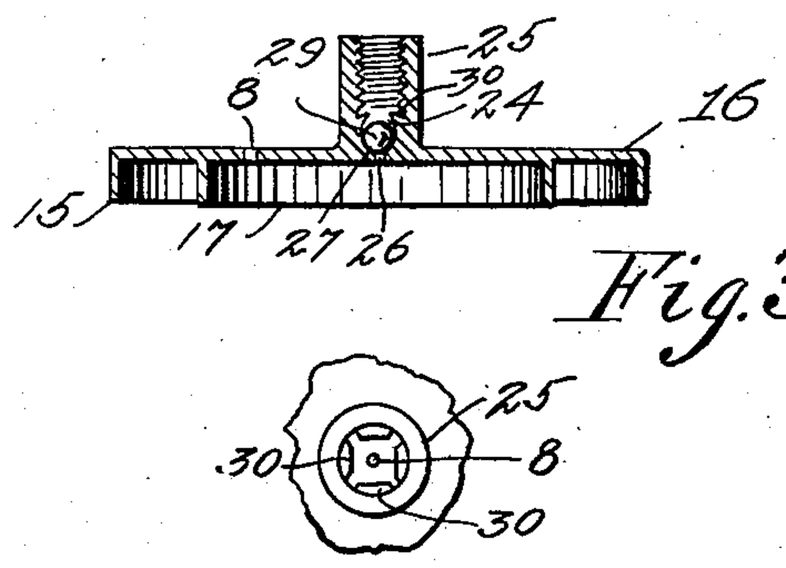

Fig. 3

Fig. 4

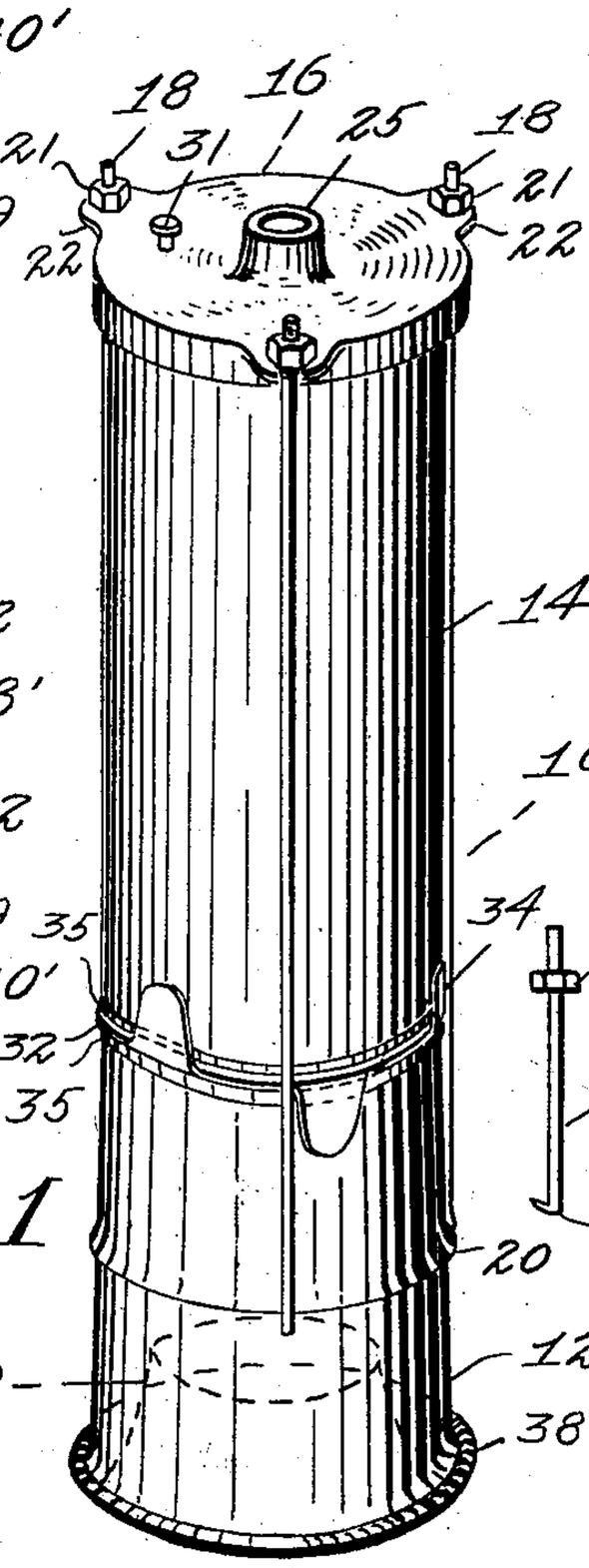

Fig. 1

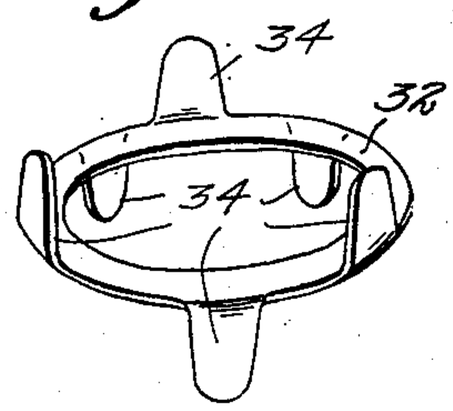

Fig. 5

Fig. 7

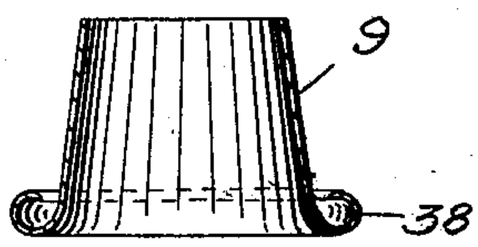

Fig. 6

WITNESSES:

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No. 734,238. Patented July 21, 1903.

UNITED STATES PATENT OFFICE.

AUGUSTUS W. OTTIGNON, OF SEATTLE, WASHINGTON, ASSIGNOR OF ONE-HALF TO THEODORE T. BELKNAP, OF SEATTLE, WASHINGTON.

DEPURATOR.

SPECIFICATION forming part of Letters Patent No. 734,238, dated July 21, 1903.

Application filed May 27, 1902. Serial No. 109,246. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS W. OTTIGNON, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Depurators, of which the following is a specification.

My invention relates to improvements in depurators, and has special reference to an apparatus of this nature which is convertible for either topical or general use.

Among numerous objects attained by this invention and readily understood from the following specification and accompanying drawings, included as a part thereof, is the production of a simplified and inexpensive depurator embodying essential features of adjustment and adaptability which render it readily convertible for use either as a cupping device or developer.

The above-mentioned and other objects equally as desirable are attained by the constructions, combinations, and arrangements of parts as disclosed on the drawings, set forth in the specification, and succinctly pointed out in the appended claims.

With reference to the drawings filed herewith and bearing similar reference characters for corresponding parts throughout, Figure 1 is a perspective view of my improved depurator as arranged for use as a developer and indicates at the side one of the short fender-bolts used to secure the cup when the device is converted for cupping. Fig. 2 is a longitudinal diametrical section of same with the elastic diaphragm removed. Fig. 3 is a diametrical section, on large scale, of the removable cap, indicating the preferred manner of forming the valve-seat. Fig. 4 is a plan view of the center portion of said cap, disclosing said seat with the valve removed. Fig. 5 is a perspective view of the coupler preferably employed between the sections of the depurator to facilitate the connection thereof. Fig. 6 is a diametrical section of the elastic diaphragm, and Fig. 7 is a similar section of the apparatus as converted for use as a cupping device.

This apparatus includes a longitudinally extensible and contractible vacuum-chamber 10, embodied in a tubular cylindrical column, as 10', preferably composed of a metallic base or cup section 12 and a removable section 14, adapted to extend the column and preferably composed of transparent material, as glass, a removable organ-receiving diaphragm 9, and a suitable removable cap 16, adapted to fit the top end of either section comprising said chamber. This cap is removably fixed in such positions by suitable bolts, as 18 and 18', the former being rendered of proper length to engage the base 12 and cap when the sections are combined to extend the chamber 10 for use as a developer for topical use and the latter of suitable length to likewise engage the base and cap when the extension-section is removed to contract the chamber 10 and convert the apparatus into a cupping device for general use.

In the present embodiment the bolts 18 and 18' are rendered of identical shape and are made, preferably, with hook-heads 19, adapted to engage a suitable shoulder 20 on the base part and which consists of a peripheral flange disposed substantially midway the height of the base and having the lower surface undercut to offer more secure engagement for the bolt-heads and preferably extended entirely about the base to facilitate setting of the bolts. These bolts have screw-threads on the outer ends, by which clamping-nuts, as 21, can be brought to bear upon the top surface of suitable ears 22, secured on the periphery of cap 16 and arranged with U-shaped notches in the outer ends to receive the bolts, and thereby facilitate their placement and removal.

As now considered, cap 16 is rendered of suitable plate metal and is made with an outer and inner depending annular flange 15 and 17, adapted to form therebetween a seat for an annular gasket, as 23, by which the joint between the cap and either section 12 or 14 is packed and whereby it can be hermetically sealed by action of the clamping-nuts 21. This cap is also provided with a centrally-located valve-seat 24, preferably formed integral therewith and disposed in the base of a nipple-seat 25, arranged on the cap for the attachment of a suitable air-exhausting apparatus, whereby a vacuum is created in the

depurator and a screw-threaded vent-aperture 8 normally closed by a thumb-screw 31, by the removal of which the vacuum may be dispelled, as desired.

The valve-seat 24 is preferably made by first drilling a duct, as 26, and then forming a concave 27 in the metal at the base of the bore of the nipple-seat concentric with said duct and of suitable size and shape to receive loosely a ball-valve 29, which is then inserted, and portions of the metal of the wall of said bore just above the ball are upset at diametrically opposite points by gouging into the metal to force portions thereof, as 30, at separated points into the path of outward and opening movement of the ball, and thereby insure it from displacement or loss in a most inexpensive manner and at the same time afford air-exhaust passages between these upset portions.

Reference character 32 indicates a coupling-ring employed to facilitate connection of the base-section and extension-section and comprising an annulus having a plurality of lugs 34 arranged on each side face at the periphery and of suitable height to securely retain packing-gaskets, as 35, at each face and to embrace the abutting ends of the sections forming the chamber 10. This coupler preferably consists of a single piece of pliable plate metal first formed with six lugs 34, radiating from the annulus and then completed by bending alternate lugs in opposite directions and substantially at right angles to a respective face of the annulus.

The base or cup section 12 is preferably formed slightly conical and rendered with a suitable peripheral flange, as 37, at the lower end, which is outwardly and upwardly curved as viewed in cross-section, so as to provide a smooth bearing-surface to facilitate sliding the apparatus over the surface of the body when operating as a cupping device and to also form a suitable peripheral rim by which the diaphragm 9 is conveniently removably attached when the apparatus is converted for operation as a developer. The diaphragm 9 comprises a tubular section of suitable elastic material, as rubber, conveniently rendered slightly conical, so that the upper end will forcibly embrace the affected organ, and formed with an outwardly and upwardly curving rim 38 at the base adapted to expand sufficiently to receive the flange 37 and be thereby conveniently attached for ready disconnection of the chamber 10 therefrom if desired to leave the diaphragm in place on the organ as a spermatic ring.

A depurator constructed substantially as heretofore set forth is readily adjusted to render the vacuum-chamber of proper size for use as a developer or cupping device and may be expeditiously converted from one to the other. Furthermore, it can be separated for replacement of broken or worn out parts, and also after being used as a developer, when the parts can then be readily and thoroughly cleaned.

When desired to employ the apparatus as a developer, it is assembled in extended form with the diaphragm 9 attached, when it is placed over the organ in the ordinary manner and the air then exhausted as desired, and, if desired, the chamber may be readily disconnected from the diaphragm as the apparatus rests in place by simply stretching the rim 38 from the flange 37, thus leaving the diaphragm on the organ to act as spermatic ring. If it is desired to employ the apparatus as a cupping device, the extension-section, cap, and diaphragm are removed and the cap replaced on the base-section, when the vacuum-chamber will be of proper length for more perfect application as a cupping device and the apparatus can be more readily and expeditiously handled and employed in the well-known manner for general applications.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. In a depurator, a vacuum-chamber comprising a cylindrical tubular base-section and a cylindrical tubular extension-section, means for detachably securing the said extension-section to the base-section, a removable cap for one of the sections and bolts for securing the cap to the section, substantially as described.

2. In a depurator, a vacuum-chamber comprising a tubular base-section and a tubular extension-section, a cap adapted to fit either section, and detachable means for securing the sections together and the cap in place, substantially as described.

3. In a depurator, a vacuum-chamber comprising a tubular base-section and a tubular extension-section, a cap adapted to fit either section, a set of detachable screw-bolts for securing the sections together and the cap on one of the sections, and a second set of screw-bolts for securing the cap on the base-section, substantially as described.

4. In a depurator, the combination with chamber-sections; of a coupler comprising an annulus and section-embracing lugs on each side face thereof adjacent the periphery.

5. In a depurator, a vacuum-chamber comprising two sections, a removable cap for the sections, and means for detachably securing the cap in place, substantially as described.

6. In a depurator; the combination with a chamber-section having a shoulder on the periphery; of a removable cap having ears on the periphery with bolt-receiving slots, bolts having hooked heads adapted to engage said shoulder and clamping-nuts on said bolts.

7. In a depurator; the combination with a chamber-section having an undercut shoulder extending about the periphery; of a removable cap having laterally-extending ears on the periphery with U-shaped bolt-receiving slots in the outer ends, bolts having hooked

heads adapted to detachably engage said shoulder and clamping-nuts on said bolts.

8. In a depurator; the combination with a vacuum-chamber, a nipple-seat on the cap of said chamber and an air-exhaust duct at the base of said seat; of a valve-seat for a ball-valve concentric with said duct, and a ball confined in the valve-seat by upset portions of metal in the wall of the bore of said nipple-seat forced into the path of opening movement of said ball.

Signed at Seattle, Washington, this 13th day of May, 1902.

AUGUSTUS W. OTTIGNON.

Witnesses:
JNO. G. GRAY,
OVID A. BYERS.