

No. 869,915.

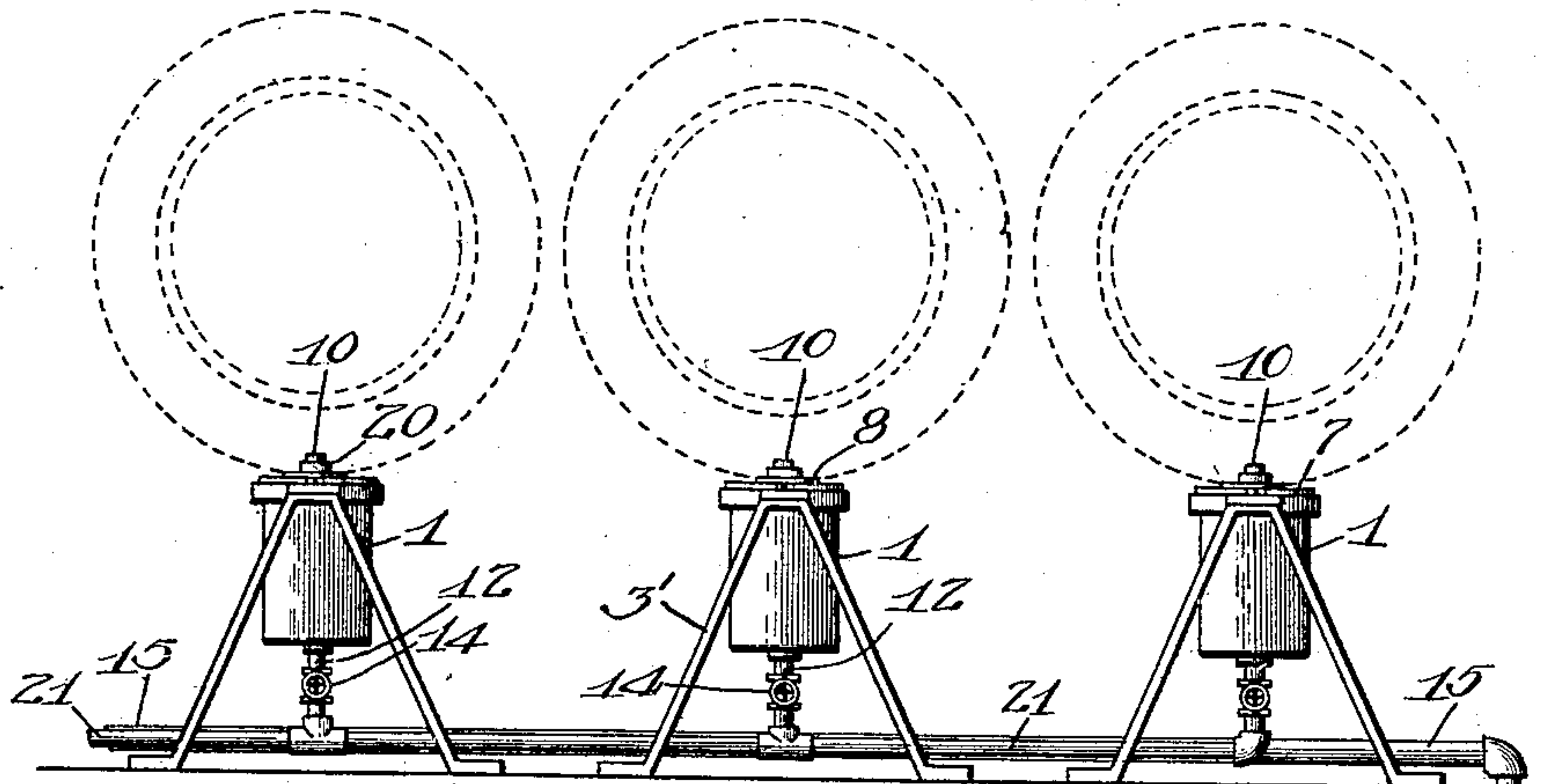
PATENTED NOV. 5, 1907.

L. LANGE.  
BARREL CLEANER.

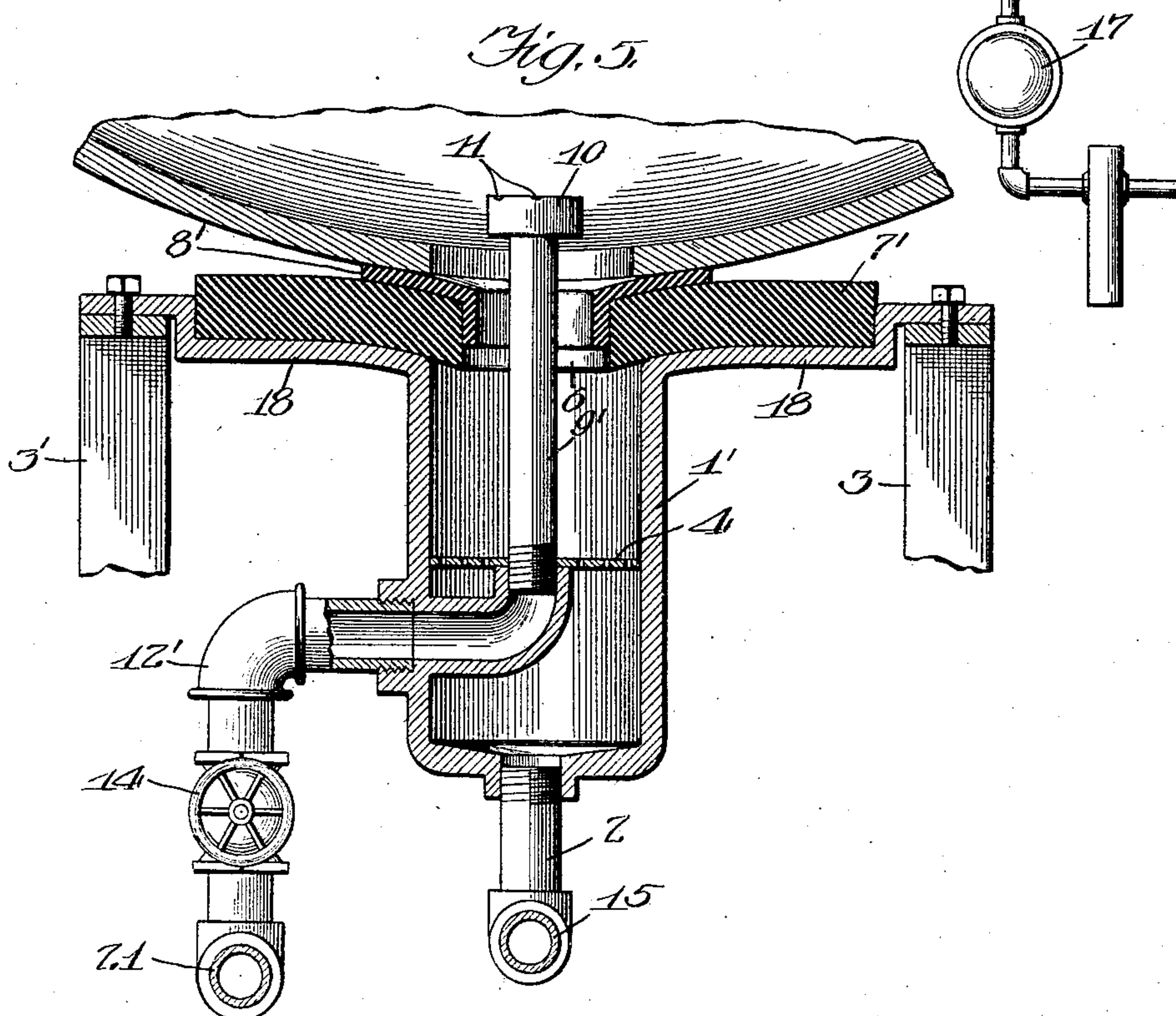
APPLICATION FILED MAR. 19, 1906.

2 SHEETS—SHEET 1.

*Fig. 1.*



*Fig. 5.*



*witnesses:*

*Robert H. Weir*  
*G. V. Dornan*

*Inventor:*  
*Leopold Lange*  
*By Hill & Hill*  
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2 SHEETS—SHEET 2.

Fig. 2.

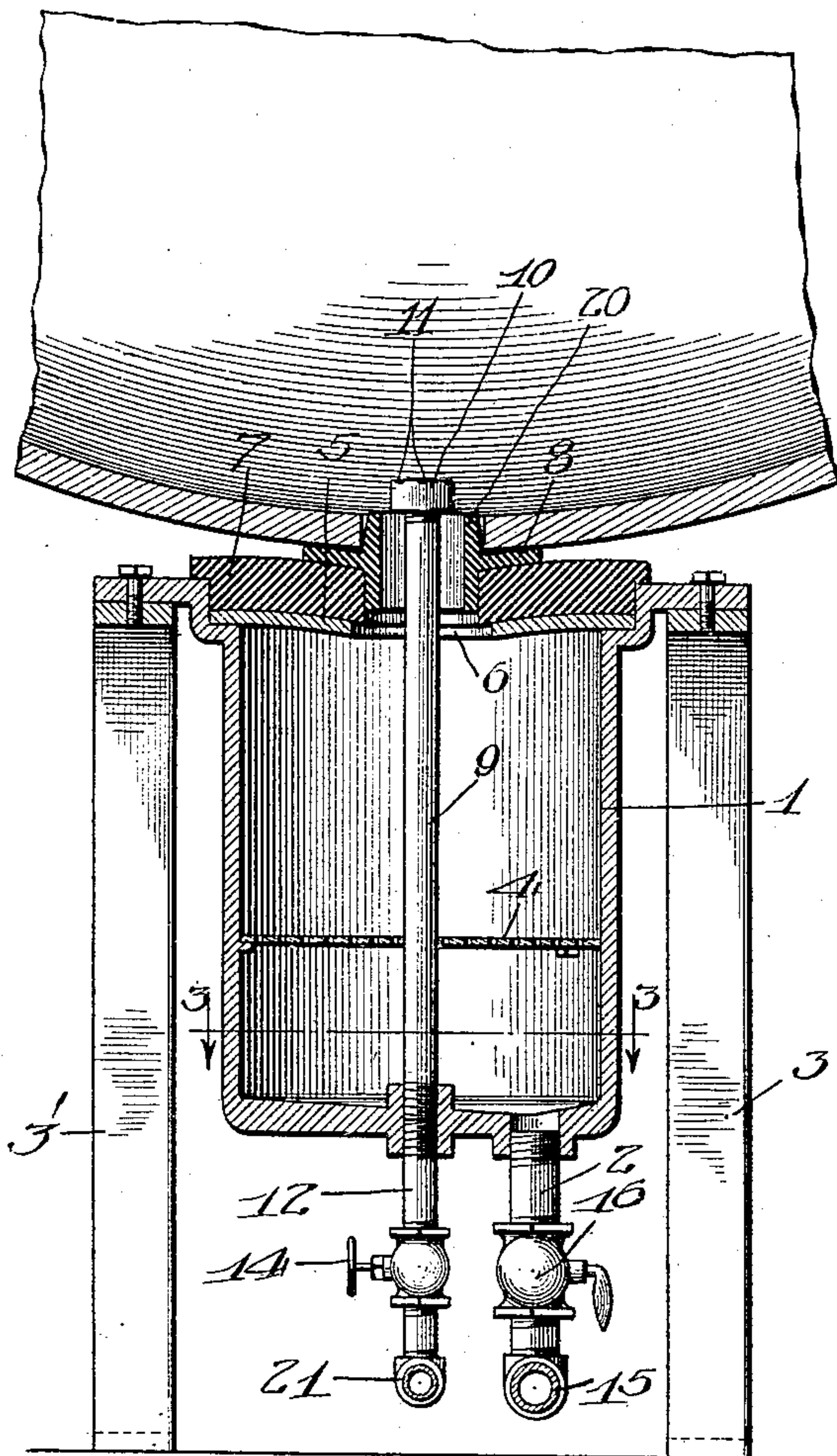


Fig. 3.

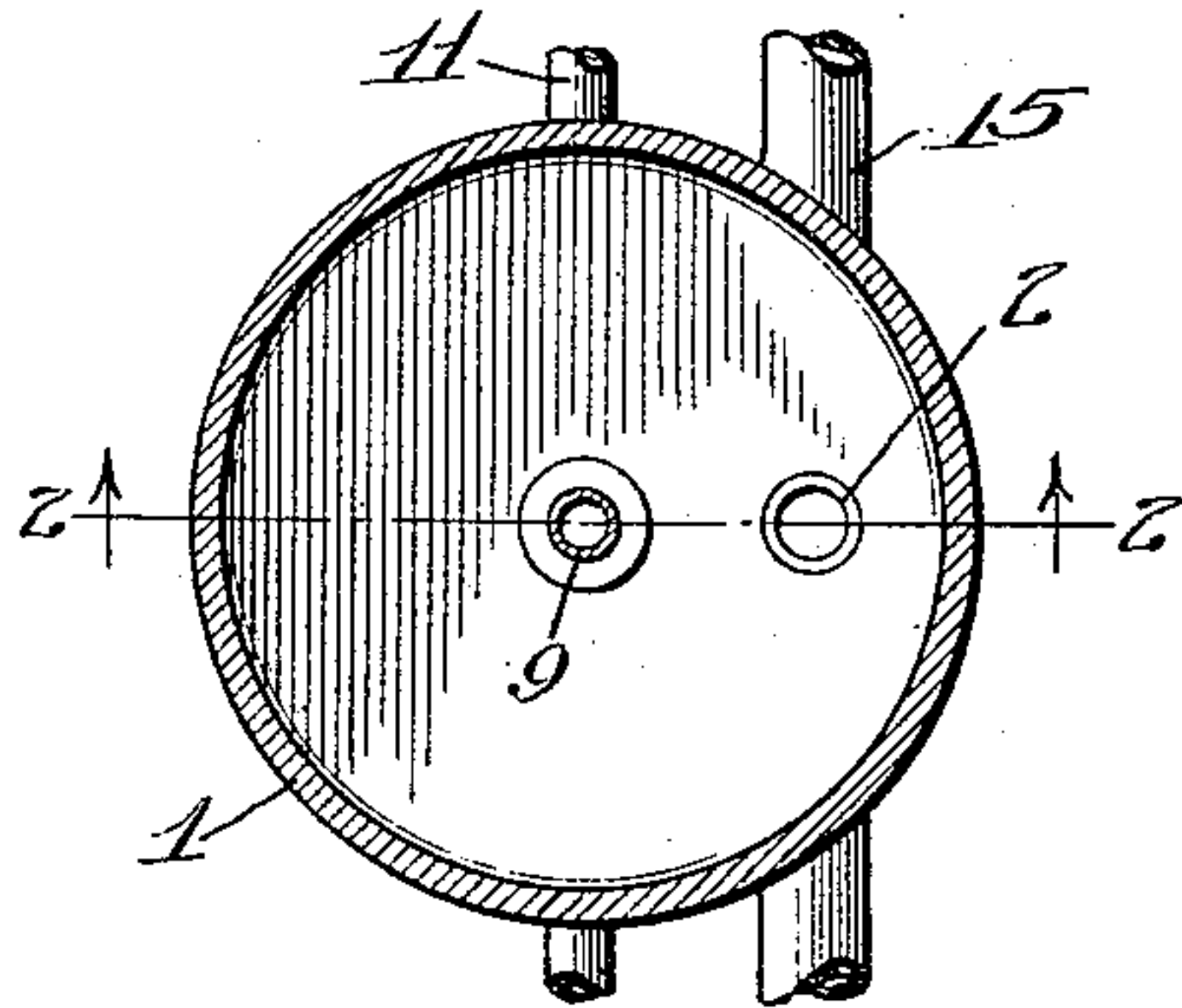
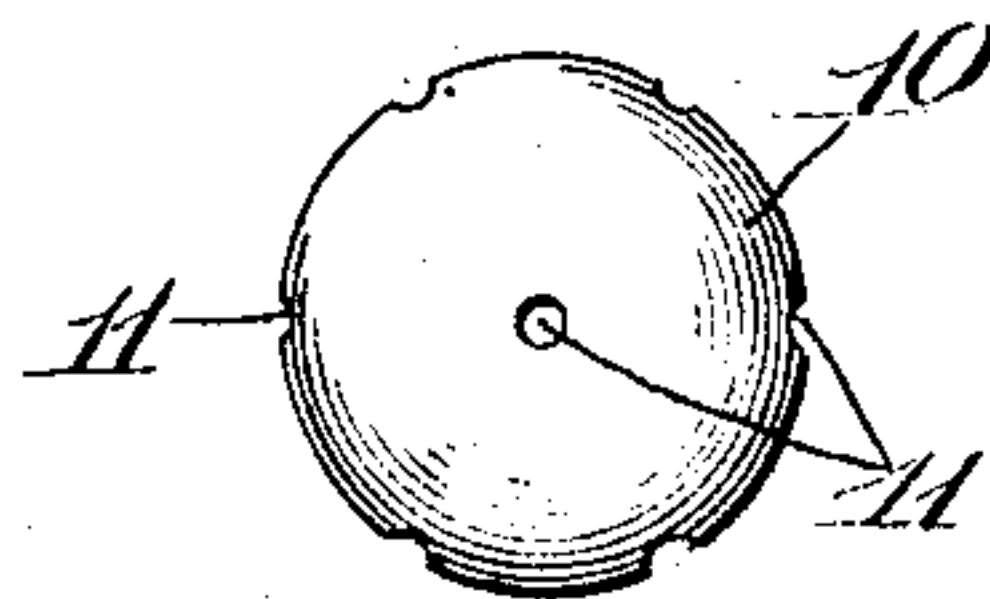


Fig. 4.



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Robert H. Weir  
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# UNITED STATES PATENT OFFICE.

LEOPOLD LANGE, OF CHICAGO, ILLINOIS.

## BARREL-CLEANER.

No. 869,915.

Specification of Letters Patent.

Patented Nov. 5, 1907.

Application filed March 19, 1906. Serial No. 306,767.

To all whom it may concern:

Be it known that I, LEOPOLD LANGE, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Means for Cleansing Used Barrels and the Like, of which the following is a description.

My invention relates to means for removing from the interior of used barrels or similar vessels any portion of their former contents adhering to, or absorbed by the walls of the vessel, and where the material remaining in the cask is of sufficient value of recovering the same.

The object of my invention is to produce a practical, economical and efficient device of the kind described, wherein the cleansing operation may be carried on until the vessel is in condition to be employed substantially for the same purposes as a new vessel of the same kind, without in any manner injuring the vessel or fouling or damaging the residual portion of its former contents by contact with the hoops or other interior or exterior portions of the vessel.

To this end my invention consists in the novel construction, arrangement, and combination of parts herein shown and described and more particularly pointed out in the claims.

In the accompanying drawings wherein like or similar reference characters indicate like or corresponding parts; Figure 1 is an elevation showing means for simultaneously operating upon three barrels. Fig. 2 is a vertical section of a head taken substantially on line 2—2 of Fig. 3. Fig. 3 is a section taken substantially on line 3—3 of Fig. 2. Fig. 4 is a detail showing the preferred arrangement of the openings in the cap for discharging the cleansing medium into the barrel. Fig. 5 is a section similar to that shown in Fig. 2, but showing a modified form of my device.

My method of cleansing barrels or the like consists in providing a single opening in the wall of each barrel, preferably the usual bung-hole, positioning each barrel so that any fluid contained therein will freely escape by gravity, introducing a heating and cleansing medium, preferably steam, and connecting a receiver preferably by means of an air tight connection to the opening into the barrel to prevent the escape of any liquid or vapor during the cleansing operation.

In the preferred form of mechanism for practically carrying into execution the process outlined above, the receiver consists of a receptacle 1, provided with a suitable discharge pipe 2, and with means at its top for forming an air tight connection with the bung hole of a barrel, the whole being preferably rigidly supported in position by legs or standards 3 and 3'.

Obviously the form and size of the receptacle 1 is unimportant provided it is suitable for receiving the washings from the barrels and can be suitably connected to the opening in the barrels for this purpose. As shown in Fig. 2, the receptacle is of comparatively large diam-

eter, open at its upper end to permit of convenient cleaning and provided with a screen 4 to prevent chips or lumps of any kind from clogging the entrance to the pipe 2.

A removable plate 5 provided with a central opening 6 is fitted to the open top of the receptacle and a cushion 7 also provided with a central opening is fitted to the top of the receptacle so that when in place an air tight joint is formed between the margin of the cushion 7 and the walls of the receptacle.

The cushion 7 may be formed of any suitable material but for many purposes a comparatively hard grade of rubber has been found very desirable as it is easily kept clean and very readily conforms to the general outline of the vessel resting upon it, and in many cases may be depended upon to form a suitably tight joint with the barrel.

In the drawings a pad 8 is shown resting upon and encircling the central opening of the cushion 7. This pad is preferably formed of soft rubber so as to accurately conform to the surface of the barrel at the opening and insure an absolutely air tight joint under all conditions.

In the form shown in Fig. 2 an upwardly projecting annulus 20 is provided upon the pad 8 adapted to fit into the bung-hole of the vessel to accurately determine the relative position of the vessel upon the pad and also aids in forming an absolutely tight joint at the bung-hole.

In Fig. 5 projection 20 is omitted as in some cases the opening in the side of the vessel may be positioned upon the pad 8 with sufficient accuracy merely by inspection or by its relation to the other parts of my device.

In the form shown the steam or other heating medium is introduced into the barrel by means of a steam pipe 9 extending upward through the opening 6 and the corresponding openings in the cushion 7 and pad 8 to a point well within the barrel where a cap is provided upon the end of the pipe and a plurality of small openings 11 are provided to direct the steam, as nearly as possible, uniformly upon all parts of the interior surface of the barrel thus heating and washing the surface and loosening and washing away any gummy or other substance adhering thereto the condensed steam and residue of the former contents of the vessel mingling and together flowing into the receiver from which they are discharged by means of the pipe 2 and may be disposed of as desired.

Where the material remaining in the vessel is of sufficient value it may be recovered by subjecting the mixture discharged through the pipe 2 to a suitable process of eliminating the water condensed from the steam, as the mixture is absolutely clean and free from any injurious substance. For example, where lard, or other oil barrels are treated by my process by



simply conducting the mixture from the pipe 2 into a suitable settling tank the water and lard or oil quickly separate and may be separately removed in any desired manner. Where alcohol, whisky, or other alcoholic liquor barrels are treated the mixture may be passed through a suitable condenser as shown at 17 in Fig. 1, to prevent the escape of any vapor and the mixture then redistilled, or if preferred the mixture may be discharged directly into a suitable still to remove the water of condensation.

In Fig. 1 several receivers are shown, each connected as shown in Fig. 2 to a suitable main 21 connected to the pipe 9 by suitable piping 12, provided with a controlling valve 14. A suitable discharge main 15 is also provided to which the several pipes 2 are connected, a valve 16 being preferably provided in each of the pipes 2 so that any receiver may be cut off from the mains entirely when desired. In Fig. 5 the receptacle 1' is made considerably smaller in diameter and provided with a flange 18 arranged to support the cushion 7' thus dispensing with the plate 5 entirely and slightly simplifying the device.

In the foregoing description I have fully explained my process and a practical device for performing the same, obviously, however, various slight modifications may be made in the form and construction of the device without departing from the spirit of my invention.

What I claim as new, and desire to secure by Letters Patent is:—

1. In a device of the kind described, a receptacle having an opening in its top, a screen extending across said receptacle, a resilient cushion partially covering said opening, and a pad positioned upon said cushion, in combination with a pipe extending through said opening to a point above said pad, and provided at its upper end with a plurality of openings, means for attaching said pipe to a

steam system, and means attached to said receptacle for directing the fluids therein to a suitable discharge point.

2. In a device of the kind described, a receptacle having an open top, a resilient cushion provided with a central opening positioned concentrically in and partially closing the top of said receptacle, means for securing said cushion in position, and a pad positioned upon said cushion with a part extending into said opening.

3. In a device of the kind described, a receptacle having an open top, a plate provided with a central opening positioned concentrically in the top of said receptacle, a resilient cushion positioned upon said plate about said opening, means for retaining said plate and cushion in position, and a pad positioned upon said cushion with a part extending into said opening.

4. In a device of the kind described, a receptacle having an opening at its top, a resilient cushion arranged about, and partially covering, said opening, a pipe extending through said opening to a point above said cushion and provided with one or more openings beyond said cushion, means for attaching said pipe to a steam generator, and means for conducting a fluid away from said receptacle.

5. In a device of the kind described, a receptacle having an opening at its top, a resilient cushion arranged about, and partially covering, said opening and a resilient pad positioned upon said cushion about the margin of said opening, a pipe extending through said opening to a point above said pad, and provided with a plurality of openings above the pad, and means for conducting a fluid away from said receptacle.

6. In a device of the character described, a receptacle having an open top, a resilient cushion closing the top of said receptacle and provided centrally thereof with a relatively small opening therein, and a pad positioned upon said cushion, said pad being provided with an annulus extending downwardly into the opening in the cushion and with an annulus projecting upwardly therefrom.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

LEOPOLD LANGE.

Witnesses:

BURTON U. HILLS,  
CHARLES I. COBB.