

P. FORMAN.  
COMBINED MIXING AND DISPENSING APPARATUS.  
APPLICATION FILED JUNE 24, 1919.

1,336,214.

Patented Apr. 6, 1920.

FIG 2

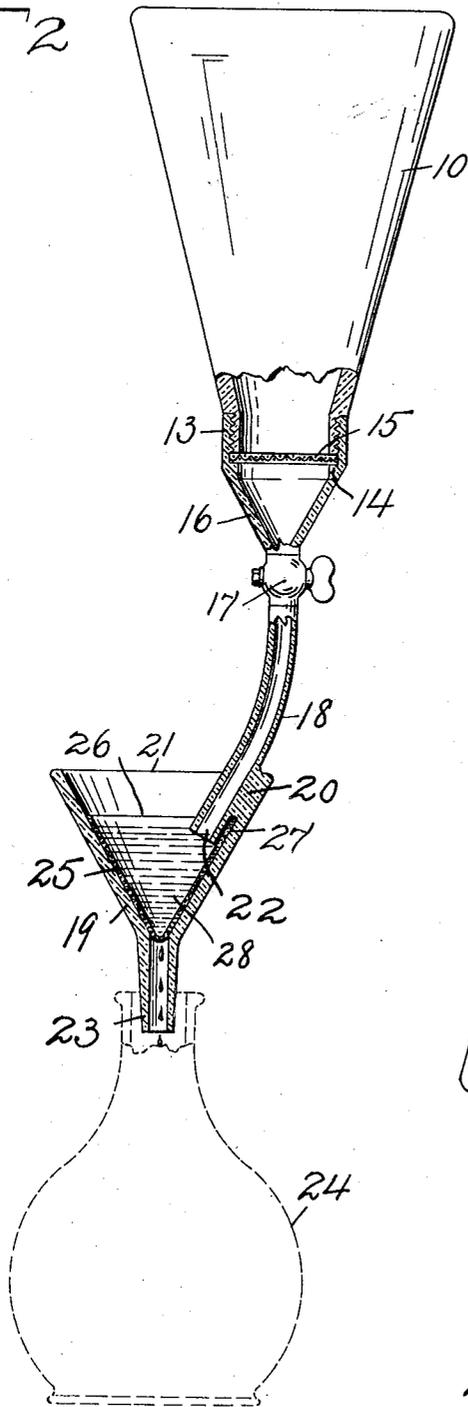
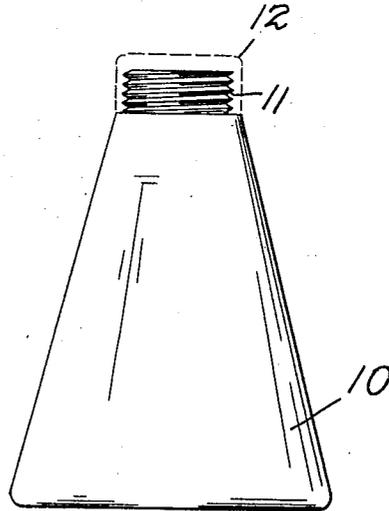


FIG 1



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# UNITED STATES PATENT OFFICE.

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COMBINED MIXING AND DISPENSING APPARATUS.

1,336,214.

Specification of Letters Patent.

Patented Apr. 6, 1920.

Application filed June 24, 1919. Serial No. 306,277.

*To all whom it may concern:*

Be it known that I, PHILIP FORMAN, a citizen of Russia, and a resident of Jersey City, county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Combined Mixing and Dispensing Apparatus, of which the following is a specification.

This invention relates to an apparatus for mixing and dispensing mixtures, the result of such mixture being a fluid, and is designed for a number of purposes and can be used in many situations, but in order to make the invention clear, one particular use is enumerated, and that is the making, for instance, of citrate of magnesia.

In the making of citrate of magnesia, and also in the making of other mixtures, a druggist, when making the mixture for himself, requires an apparatus that does not necessitate his constant attention and which at the same time does not expose the mixture unduly while it is being bottled or put into separate containers.

My invention is therefore designed to provide an apparatus in which fluids can be mixed and thereafter dispensed and part of the contents drawn off as desired, and when so drawn off the mixture is filtered and no large quantity is at any time exposed long enough to be affected by its contact with the atmosphere.

The invention is illustrated in the accompanying drawing, in which one form of apparatus is illustrated, Figure 1 illustrating one form of container when utilized as a mixing or storing receptacle, and Fig. 2 showing the complete apparatus for dispensing fluid from the receptacle.

It will be understood that any suitable material can be employed in manufacturing the apparatus, but in most instances, to prevent contact with metals and subsequent chemical reaction, I prefer to use porcelain or other similar ware.

The receptacle 10 can be of any desired shape but is preferably made as shown, that is, substantially conical, and is provided with a neck 11. In this receptacle the liquid or mixture is placed, and after being thoroughly mixed, if it is desired to defer its dispensing, a suitable cap 12 can be placed on the receptacle to seal the receptacle. When, however, the contents are to be dispensed, the receptacle 10 has the cap 12 removed, and it is provided with a dispensing

fixture consisting of a neck 13 which is screwed on the neck 11 of the receptacle and is provided with a shoulder 14 or other means for supporting a strainer 15 which does the initial filtering to keep small particles from passing into the dispensing fixture.

The dispensing fixture is provided with a reduced portion 16 and has a valve 17 by means of which the amount of liquid issuing from the receptacle can be controlled, and a pipe 18 leads downward therefrom so that when the valve 17 is open, the contents can flow out through the pipe 18. Below the pipe 18 is a funnel 19. This funnel and the rest of the apparatus can be suitably supported, which support is not shown in the drawing as it is no part of this invention, and the funnel 19 can be suitably supported, but in the drawing I show it made integral with the dispensing fixture, being connected by the connection 20.

The top 21 of the funnel 19 is above the outlet opening 22 of the pipe 18, and the outlet 23 of the funnel is placed so that a suitable bottle or other container 24 receives the material from the funnel. The funnel is provided with a filtering material that is comparatively dense, in the illustration the material being illustrated as a cup-shaped lining 25 of filter paper, the top 26 of the cup-shaped lining extending above the outlet 22 of the pipe 18. A recess 27 is provided to permit the insertion of the filtering material behind the outlet 22 so that the filtering material extends all the way around the inside of the funnel without a break.

When the material is to be dispensed from the receptacle 10 into the container 24, the valve 17 is opened to the desired extent and the material flows down through the pipe 18. Its passage through the dense filtering material 25 is slow, usually being reduced to dripping, and as the result of this, the liquid backs up in the funnel, as shown at 28, until it closes the outlet 22 of the pipe 18 and the flow then ceases until enough has trickled through into the container 24 to allow the level of the liquid in the funnel to open the outlet 22 sufficiently to permit air to enter, and fluid again flows into the funnel until the outlet is again sealed.

In this way constant attention is not necessary, and a druggist or other merchant can permit the material to flow while he is engaged in other duties, and his return for at-

tention to the apparatus is only necessary occasionally.

If part of one batch of liquid in the receptacle 10 is to be dispensed, when that amount  
5 has been dispensed the fixture 16 can be removed and the cap 12 again put in place and the rest of the batch saved until some other time when it is to be dispensed as described.

This apparatus provides for an economy  
10 in material, and but little, if any, of the mixtures is spoiled, since only a small proportion of the liquid is subjected for a short time to the action of the atmosphere, and if  
15 oxidation will affect the material, this is an advantage since the exposure is not long enough to permit such action.

I claim:

1. A dispensing apparatus comprising a  
20 receptacle, an outlet fixture comprising a valved pipe with a tapered part to fit the re-

ceptacle, and a funnel on the end of the pipe and integral therewith and inclosing the end of the pipe, the pipe entering the funnel at one side of the top and spaced therefrom at its lower end so that linings of filter paper  
25 can be inserted in the funnel and under the end of the pipe.

2. A dispensing apparatus comprising a receptacle in which compounds can be mixed and having one opening, a fixture compris-  
30 ing a tapered part and a valved pipe, and a funnel, the end of the pipe extending below the top of the funnel and at one side thereof and with its lower end separated from the  
35 wall of the funnel.

In testimony that I claim the foregoing, I have hereto set my hand, this 17th day of June, 1919.

PHILIP FORMAN.