Feb. 17, 1953

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LIQUID SOAP DISPENSER

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Fig. 1.

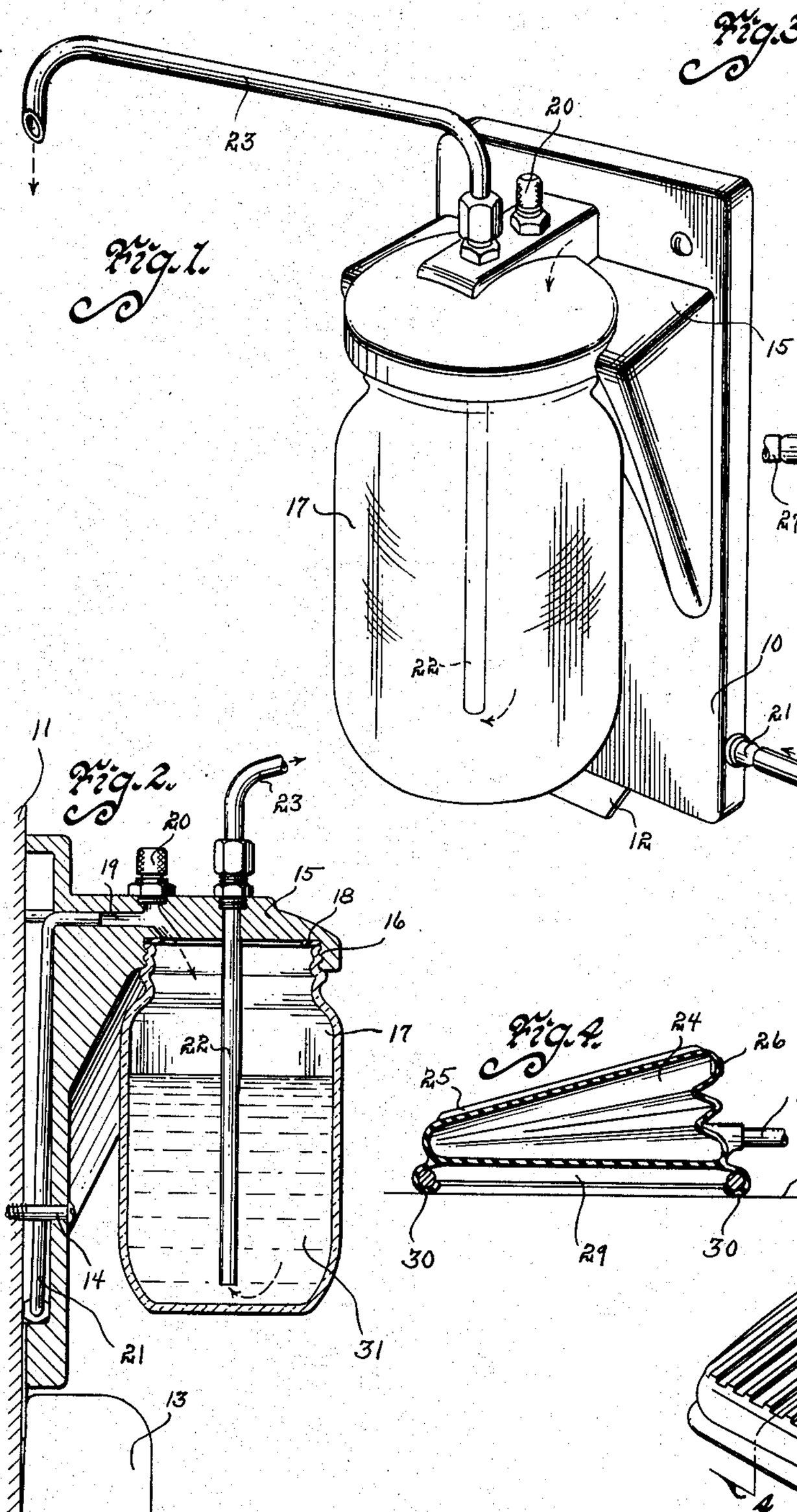


Fig. 3.

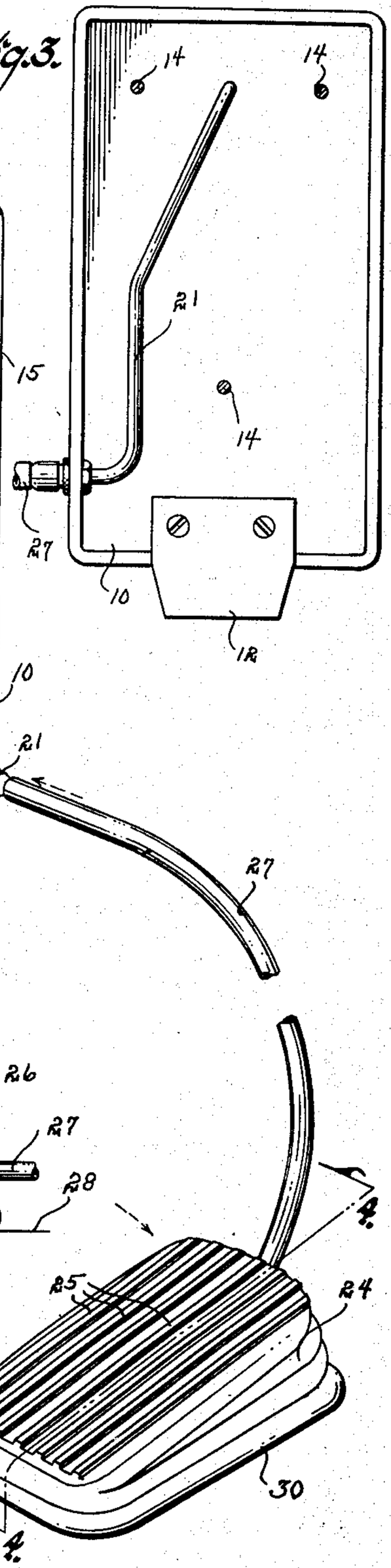
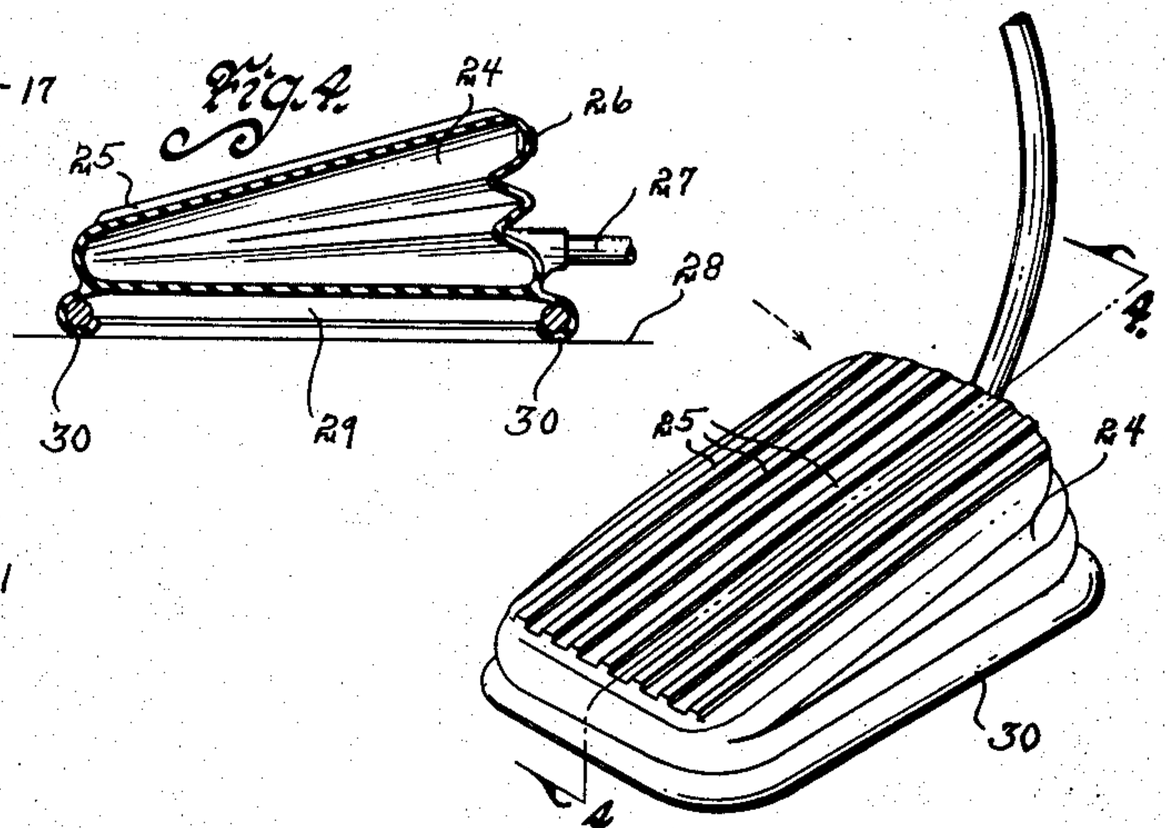


Fig. 2.

Fig. 4.



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LIQUID SOAP DISPENSER

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Application September 27, 1948, Serial No. 51,353

1 Claim. (Cl. 222—179)

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The principal object of my invention is to provide a liquid soap dispenser that will deposit the desired amount of liquid soap on the hands of the user without the necessity of touching any of the operating mecahnism with the hands.

More specifically, the object of this invention is to provide a liquid soap dispenser that is operated by the foot of the one desiring the soap.

A further object of this invention is to provide a liquid soap dispenser that is easily and quickly installed for use.

A still further object of my invention is to provide a liquid soap dispenser that is easily replenished with soap after it has become depleted of liquid soap.

A still further object of this invention is to provide a liquid soap dispenser that is economical in manufacture, durable in use, and refined in appearance.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement, and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of my device ready for use.

Fig. 2 is a cross-sectional view of the container portion of the device and more fully illustrates its construction.

Fig. 3 is a back view of the base portion of the dispenser.

Fig. 4 is a longitudinal sectional view of the bellows portion of the device.

There have been many soap dispensers placed on the market. However, the chief fault of most such dispensers is that they must be operated by the hands obtaining the soap solution. This not only tends to contaminate the hands, but also the dispenser. Especially, with doctors, it is essential that the obtaining of the soap be accomplished without handling or touching any part of the dispenser. Other objections to present day dispensers are that they quickly become untidy and unsanitary, are difficult to refill, and require a special workman to install. I have overcome such objections as will hereinafter be appreciated.

Referring to the drawings I have used the numeral 10 to designate the base plate portion of my device. This plate may be secured to the wall 11 by any suitable means, such as by an adhesive, suction means, or screw means. In the drawings I show a downwardly extending

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blade 12 secured to the base 10 and designed to extend between the wall 11 and a washbasin 13, as shown in Fig. 2. This will secure and support the lower end portion of the device rigidly, and I secure the upper portion of the device to the wall by screws 14. If desired, these screws 14 may extend into a plate which has been previously secured to the wall by an adhesive. The numeral 15 designates a rearwardly extending shelf portion on the upper face of the plate 10. Formed in the underside of this shelf are screw threads 16 capable of receiving and holding an ordinary standard make glass jar 17. By using a standard make glass jar, such jars are easily replaced in case of breakage. In order that the glass jar will be hermetically sealed when screwed onto the shelf portion 15, a gasket 18 is placed between the upper rim of the jar and the shelf. Obviously, to remove the jar from its hanging position on the under side of the shelf, it is merely necessary to manually rotate it to the left. To replace the jar, it is placed onto the thread 16 and rotated to the right until it has tightened onto the gasket 18. In order to partially protect the jar 17 and strengthen the shelf portion 15, the shelf 15 may have its sides extending downwardly and inwardly to the base and at each side of the jar respectively, as shown in the drawings. In the manufacture of this item this shelf portion may be formed integrally with the base 10, or may be formed separately and then rigidly secured to the base by suitable means. The numeral 19 designates a passageway in the shelf 15, having one end communicating with the forward side of the plate, and its other end communicating with the inside top of the jar 17. A manual regulating valve 20 may be imposed in this passageway. The numeral 21 designates a pipe on the forward side of the plate 10, having one end extending into the passageway 19, and its other end extending through the lower portion of the plate, as shown in Fig. 1. The numeral 22 designates a conduit extending vertically downwardly through the shelf portion 15 and into the bottom portion of the jar 17. The numeral 23 designates a soap dispensing conduit swivelly connected to the upper end of the conduit 22. This conduit 23 extends rearwardly and upwardly a substantial distance and then is curved to extend downwardly, as shown in Fig. 1. By this construction any dripping of the liquid soap after using the device is substantially eliminated. The numeral 24 designates a resilient foot bellows. This bellows normally extends forwardly and upwardly and may have its

upper surface provided with corrugations **25** to provide adequate traction with the shoe of the user. The numeral **26** designates a valve in the forward upper end of the bellows. The numeral **27** designates a flexible pipe having one end secured to the lower end of the pipe conduit **21** and its other end communicating with the inside bottom of the bellows, as shown in Fig. 4. To properly weight the bellows and hold it in place on the floor **28** below the base **10**, I have provided a heavy metal ring **29**. In the molding of the flexible resilient bellows I form on the bottom peripheral edge of the bellows a curved embracing flange **30** for holding and surrounding the base weight **29**. By this construction the member **29** may be removed or replaced, but by the portion **30** of the bellows extending around the bottom of the member **29** the member **29** will be held out of contact with the floor and sufficient traction will be provided thereby between the floor and the bellows. In order that the pipe **21** will not interfere with the placing of the device on the wall, and will be completely enclosed by the plate **10**, the forward end of the plate may be provided with a central depression.

The practical operation of the device is as follows:

Whenever it is desired to obtain soap solution from the dispensing conduit **23**, it is merely necessary for the user to place one foot on the bellows and collapse the same. This action will close the valve **26** and force air through the member **23**, thence through the member **21**, thence through the passageway **19** and into the jar **17** above the surface of the liquid soap **31**. This pressure on the surface of the soap will cause it to pass upwardly through the conduit **22**, and then into and through the dispensing conduit **23** onto the hands of the user. Immediately upon release of the pressure on the bellows it will expand, opening the valve **26** and relieving immediately the air pressure on the surface of the soap solution, thereby stopping further delivery of the soap from the dispenser. If more soap is needed, it is merely necessary to again compress the bellows with the foot. The amount of soap solution passing from the dispenser with each depression of the bellows may be easily and quickly regulated by the valve **20**. When the jar **17** is depleted of soap solution it is a simple matter to remove the same from its support and either refill it or screw on to the device another jar having a soap solution therein. From the above it will be readily seen that the user may obtain soap at any desired time without ever touching the device with his hands, and that due to the length and design of the dispensing conduit **23** soap drippings from the same will not contaminate the base or jar, but will remain clean and sanitary. It will also be appreciated that soap from my device may be obtained with little effort, instantly and in the desired amount.

Some changes may be made in the construction and arrangement of my liquid soap dispenser without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claim, any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

In a device of the class described, a jar, a bracket detachably engaging and supporting said jar and forming a sealed top therefore; said bracket designed to be secured to a supporting surface, a passageway in said bracket having one end communicating with the inside top of said jar and its other end communicating with the outside atmosphere, a foot operated bellows designed to be supported on a suitable surface, a conduit having one end communicating with the inside of said bellows and its other end communicating with the inside of said passageway, a permanently open liquid dispensing conduit having one end communicating with the inside bottom of said jar, its length passing through siad bracket and its free end terminating beyond the vertical plane of said jar and bracket; said liquid dispensing conduit extending upward and away from said bracket for a substantial distance and at an acute angle relative to the horizontal and having a portion less than one-fourth of its length extending vertically at its free end; the free end of said liquid dispensing conduit being cut on the bias whereby a plane defined by three separated points on the free end of said liquid conduit will form an acute angle with a horizontal plane.

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