

June 16, 1931.

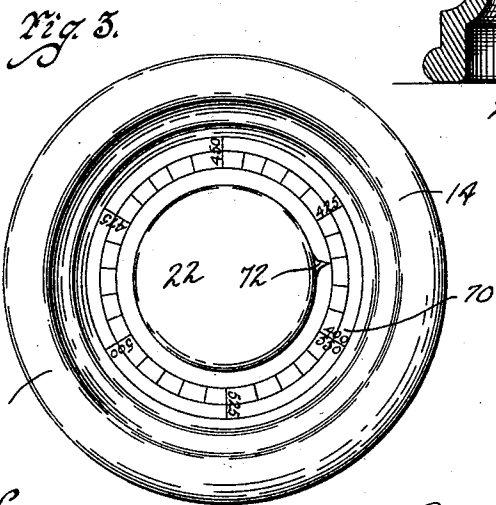
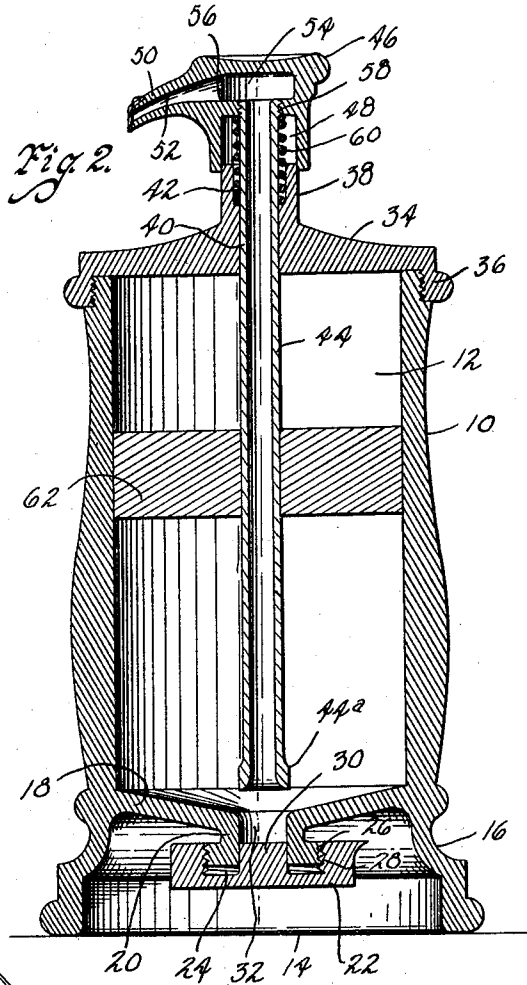
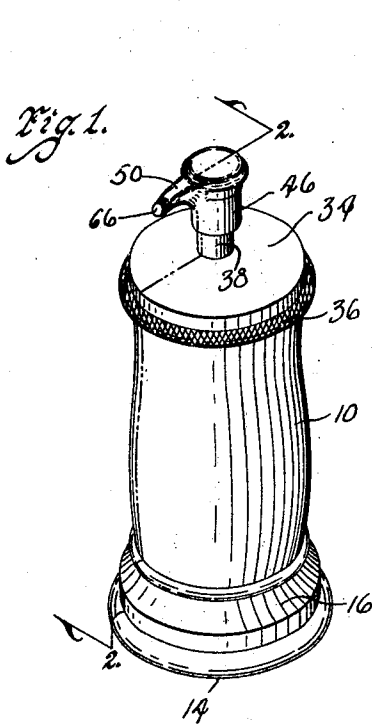
F. W. FITCH

1,810,135

CREAM DISPENSER

Filed Feb. 4, 1929

2 Sheets-Sheet 1



*Witness
Dated Feb.*

*Inventor
- Fred W. Fitch -
by Bair, Dreeman & Sinclair
Attorneys-*

June 16, 1931.

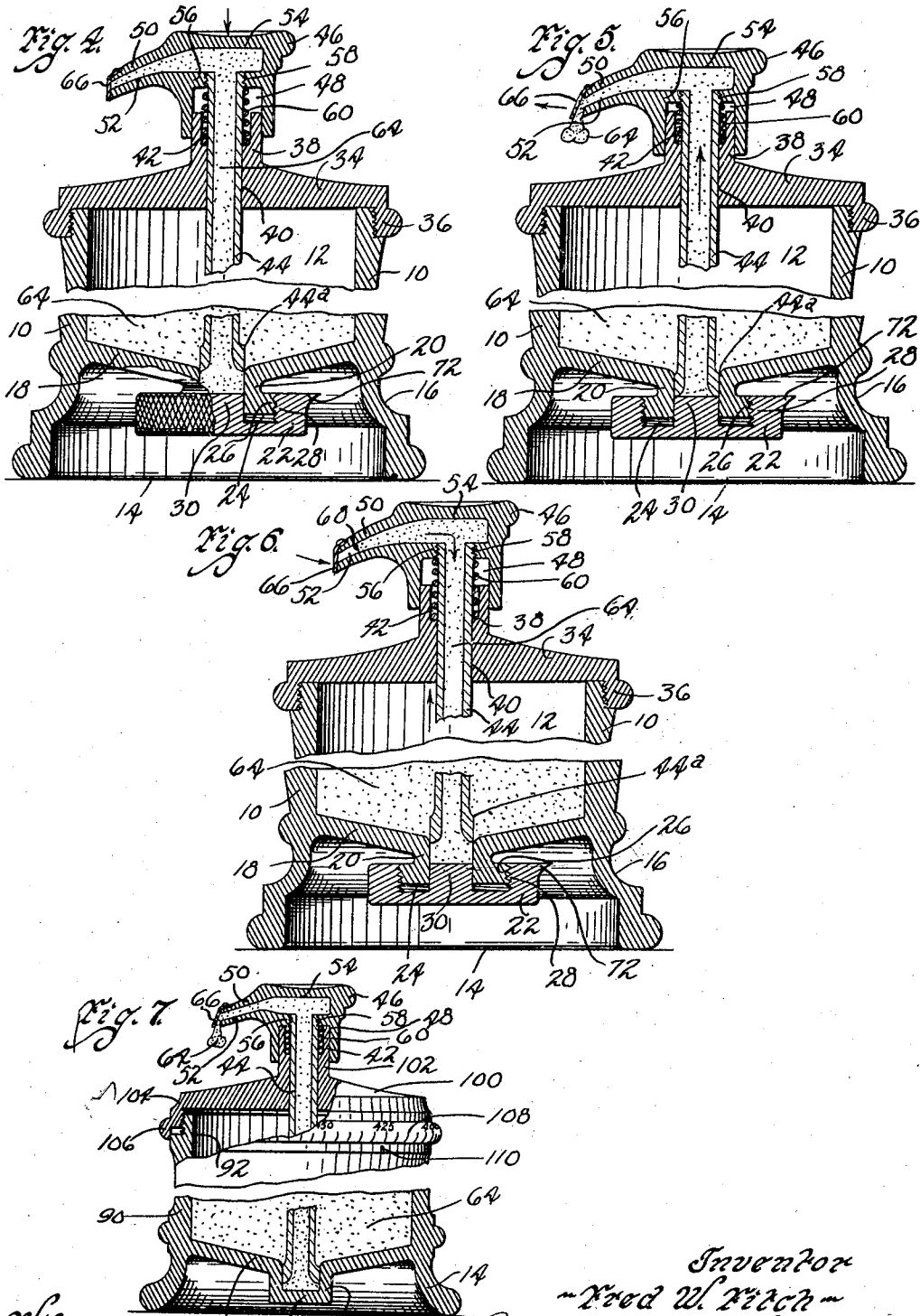
F. W. FITCH

1,810,135

CREAM DISPENSER

Filed Feb. 4, 1929

2 Sheets-Sheet 2



Witness
United States.

Inventor
Fred W. Fitch
by Law, Dreeman & Sinclair
Attorneys

UNITED STATES PATENT OFFICE

FRED W. FITCH, OF DES MOINES, IOWA

CREAM DISPENSER

Application filed February 4, 1929. Serial No. 337,345.

My invention has to do with a dispenser for shaving cream and the like.

The purpose of my invention is to provide such a dispenser of simple, durable and inexpensive construction which will be accurate and positive in its operation.

Some difficulties are encountered in making cream dispensers because of the fact that shaving cream varies somewhat in consistency, depending upon weather and temperature conditions and upon its age. It therefore becomes of great importance that any device for dispensing it in small quantities should be such as to positively effect the discharging operation.

It is therefore particularly my purpose to provide a dispenser by which a given amount of cream can be dispensed by positive action of some movable part.

Still another purpose and important purpose is to provide in such a dispenser means for accurately regulating and varying and controlling the amount of charge discharged at each operation.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my cream dispenser, whereby the objects contemplated are attained, as herein-after more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Figure 1 shows a perspective view of a dispenser embodying my invention.

Figure 2 is a vertical, central, sectional view through my dispenser.

Figure 3 is an inverted plan view of the same.

Figures 4, 5 and 6 are vertical, sectional views, parts being broken away illustrating the operative parts of the dispensers in different positions; and

Figure 7 is a vertical, sectional view showing parts broken away, illustrating a modified form of my dispenser.

My improved dispenser as shown in the drawings herewith includes a case or the like indicated generally by the reference numeral 10, the interior of which has the form of a tubular cylinder. The cylinder, as such is indicated by the numeral 12.

The case 10 is raised above the support 14 on which the dispenser rests by any suitable base, legs or the like 16.

The case 10 has a bottom 18, the upper surface of which is concave as shown in Figure 2, so that the lowest part of the bottom is at the center thereof. The bottom 18 has a tubular downward extension 20, which is closed by an adjustable closure 22. The closure 22 is of peculiar construction, having in its upper surface an annular groove 24 to receive the lower end of the tubular extension 20. The lower part of the extension 20 is preferably provided with exterior screw-threads as indicated at 26 to coact with screw-threads 28 provided in the outer wall of the groove 24.

The arrangement of the groove 24 is such as to provide a central post or the like 30, which slides up and down in the passage 32 formed by the tubular extension 20.

It will be seen that by adjusting the closure 22 by means of the screw-threads above mentioned, the post 30 may be raised or lowered for thus varying the size or capacity of the passage 32.

I provide a top 34 for the casing 10. The top 34 is provided with a down-turned peripheral flange 36, which has a screw-threaded connection with the upper end of the casing 10. The top 34 has an upwardly extending cylindrical neck 38.

Extending vertically through the top 34 and neck 38 is a passage 40, the upper part of which is enlarged as at 42. Slidably extended through the passage 40 and 42 is what I may call a plunger tube 44, the lower end of which normally extends downwardly to position near the upper end of the passage 32.

I provide an adjustable nozzle head 46, which has in its lower portion a tubular passage or opening 48 to slidably receive the neck 38. The nozzle head 46 has a projecting spout or nozzle 50 through which extends the passage 52 communicating with a passage 54 in the upper part of the head 46.

Between the passage 54 and the opening or passage 48 is a partition 56. The partition 56 has a threaded opening 58 into which the upper end of the tube 44 is screwed.

A coil spring 60 is mounted on the upper end of the tube 44 and abuts at one end against the partition 56 and extends at its other end into the enlarged portion 42 of the passage 40 and abuts against the bottom thereof, as shown in Figure 2.

Received within the casing 10 and snugly slidable on the tube 44 is a heavy follower disc 62 designed to rest on the top of the cream in the cylinder 12.

Practical operation

I shall now describe the practical operation of my dispenser and in connection therewith will refer to certain features of its construction.

In the use of a dispenser like this, the top 34 is removed. It may be mentioned that the lower end of the tube 44 is somewhat enlarged, as indicated at 44a, so that when the top 34 is removed, the tube 44 can not be withdrawn through the follower disc 62, and the disc 62 may thus be conveniently drawn out of the cylinder 12.

Assuming that the closure 22 has been screwed onto the tubular extension 20, a charge of shaving cream or the like is put into the cylinder 12, leaving sufficient room at the top to receive the follower disc 62. The follower disc 62 is then dropped into the top of the cylinder 12, and the cylinder tube 44 is shoved downwardly, until the top 34 can be screwed into place.

By forcing the nozzle head 46 downwardly for two or three movements, the dispenser can be put into operation.

Assuming that the nozzle head has been worked once or twice for filling the tube 44, then when it is desired to dispense a small charge of cream, the operator, such for instance as a barber, presses downwardly on the head 46, causing it to slide on the neck 38, as illustrated for instance in Figure 4. No substantial effect is had on the cream until the lower end of the plunger tube 44 reaches the upper end of the passage 32. (See Figures 2 and 4). The further downward movement of the head 46 and tube 44 forces that body of cream which was received in the passage 32 upwardly into the tube 44, and of course a charge, such as indicated at 64 in Figure 5 is forced out of the nozzle 50.

At this point, I may explain that a thin

spring cover clip 66 is arranged for normally closing the discharge end of the nozzle 50, as shown for instance in Figure 4. This closure member 66 is sprung away by the discharge of the charge 64.

As soon as the pressure on the nozzle head 46 is relieved, the spring 60 will raise the nozzle head 46 and the tube 44 from the positions thereof indicated in Figure 5 to the positions thereof indicated in Figure 6. This movement will tend to create a vacuum in the passage 32, and I find that the pressure on the cream in the nozzle passage 52 will cause the cream to be drawn back into the nozzle passage 52, as indicated at 68 in Figure 6.

The clip closure member 66 will of course close.

It is, of course, understood that one of the important purposes of my dispenser is to provide for the sanitary handling and discharge of shaving cream.

Another important object of my invention is to effect an economy in the use of shaving cream. This can be done by accurately measuring the charge discharged at each operation. I accomplish this accurate control of the charge by means of the closure member 22. It can be screwed to different positions, thus causing the post 30 to fill more or less of the passage 32. When the closure member is screwed up, the amount of cream in the passage 32 is less, and when the closure member is screwed down, the amount is greater.

The amount of cream in the passage 32 determines the amount which will be discharged at each operation of the apparatus, and thus determines the number of charges which can be secured from a pound of shaving cream.

The user can accurately determine the "set" of the closure member 22 by reason of the graduations 70 on the bottom 18 and the indicating finger or the like 72 on the closure member 22.

The barber ordinarily gets about 250 shaves from a pound of shaving cream served from the ordinary tube. With my dispenser and the accurate regulation of the charge for each shave, he can easily double the number of shaves secured from each pound of cream. He can readily regulate the operation of the apparatus, so as to get just the right charge for four hundred shaves to the pound or five hundred shaves to the pound, as he may desire.

The length of the stroke of the tube 44 can also be regulated somewhat by adjusting the top 34 on the casing 10 for securing another adjustment for determining the amount of cream to be secured at each operation.

In Figure 7, I have shown a slightly modified form of my dispenser having the casing 90 with the smooth, interior cylinder 92. The casing has a bottom 94 similar to the bottom 18 with a tubular extension 96 similar

to the extension 20 except that the lower end of the tubular extension 96 is closed as indicated at 98.

5 In the modified form of the device, there is a top 100 having a neck 102 similar to the neck 38 upon which is mounted a nozzle head 46 like that already described. The modified form of the device has the tube 44 and plunger 62 similar to those already described. The top 100 instead of the flange 36, as already described, has a somewhat similar flange 104 arranged with a screw-threaded connection with the top of the casing 90, and having a downwardly hanging cover flange portion 15 106.

The flange 104 is provided with graduations 108 which may be observed in cooperation with an indicating mark 110 on the casing 90.

20 In the form of the device shown in Figure 7, the operation is substantially the same as that already described except that the adjustment for determining the amount of each charge is secured by screwing the top 100 up and down. 25

In the modified form of the device, the adjustment afforded by the closure member 22, of course, is eliminated.

30 A dispenser of this kind has a number of quite important advantages. Because of the arrangement of the plunger tube in cooperation with the passage 32, it is seen that when the device is operated, its action for effecting the discharge of a certain amount of cream is positive. Even though the cream may have somewhat dried out, the determined amount will be discharged at each operation.

The flow of the cream into the passage 32 after each movement of the plunger tube 44 is insured by the heavy follower disc 62.

I find that when the cream is in good shape, the device works under normal conditions quite satisfactorily without the follower disc, but under certain circumstances and conditions the follower disc insures the accurate working of the device. 45

With a device of this kind, shaving cream for each shave can be dispensed under the most sanitary conditions. No cream is left hanging on the nozzle, because the operation is such that there is an inward pressure on the cream in the discharge end of the nozzle when the nozzle head rises, after it has been depressed for forcing out a charge.

55 The spring closure member 66 keeps any dirt or dust out of the nozzle.

The dispenser is economical for the reasons I have already explained.

60 It should perhaps be mentioned at this point that it is simple in the construction and arrangement of its parts and can be built at a reasonable cost.

I claim as my invention:

65 In a dispenser, a casing having a bottom provided with an interiorly smooth tubular

passageway, a plunger tube slidably mounted with respect to said casing, the lower end of said plunger tube being adapted to enter said tubular passageway at the lower end of the casing when moved downwardly relative to the casing, an exteriorally smooth plug longitudinally movable in said tubular passageway, forming a socket bottom therefor and also forming a stop for the plunger tube and means for selectively locking said plug in any of its positions relative to said tubular passageway. 70 75

FRED W. FITCH.

80

85

90

95

100

105

110

115

120

125

130