

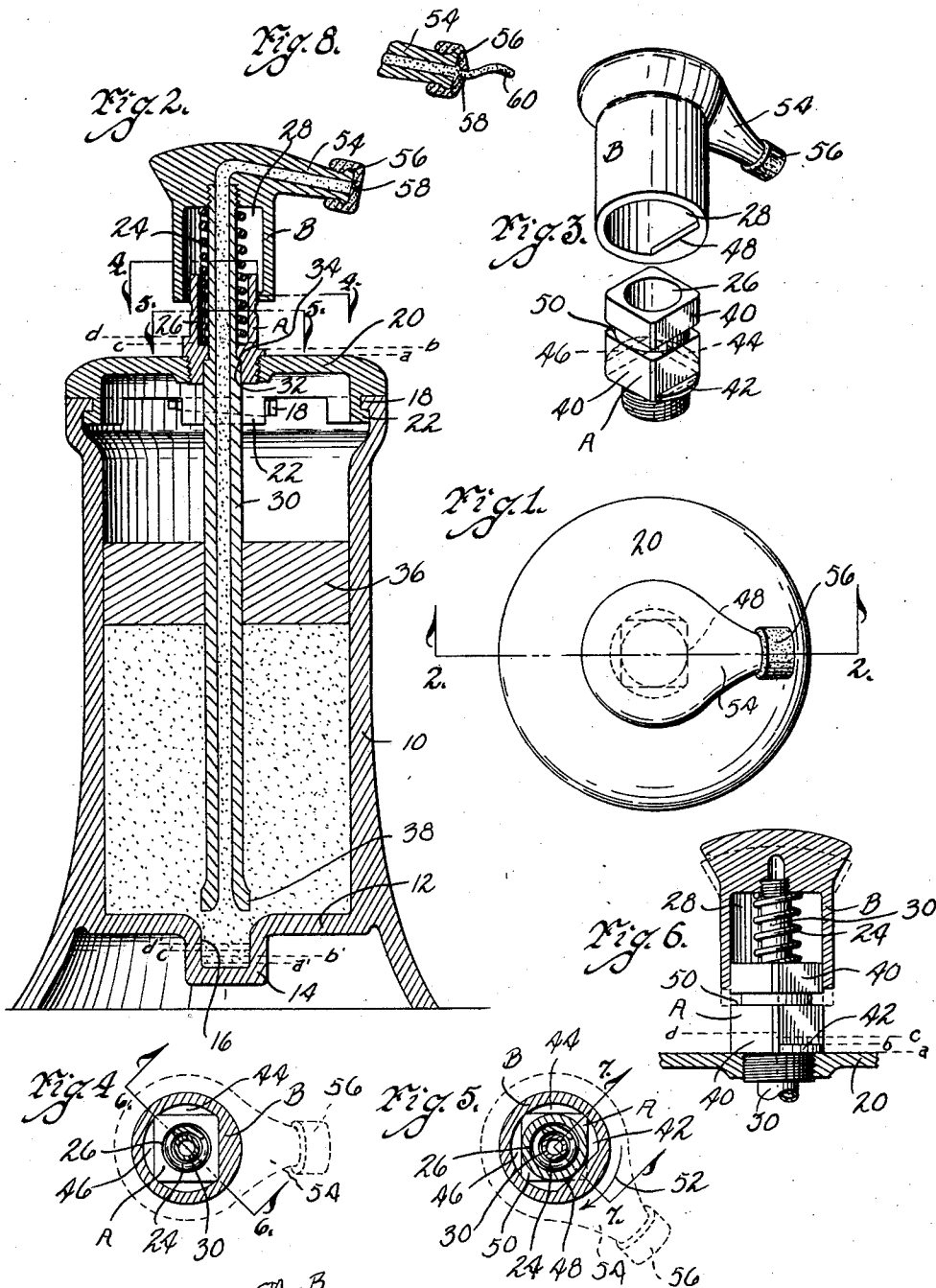
Dec. 2, 1930.

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1,783,419

DISPENSER CHARGE REGULATING DEVICE

Filed April 30, 1929



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DISPENSER CHARGE-REGULATING DEVICE

Application filed April 30, 1929. Serial No. 359,273.

The object of my invention is to provide a dispenser charge regulating device of simple, durable and comparatively inexpensive construction.

More particularly, it is my object to provide a regulating means for the dispensing nozzle of a dispenser of the type shown and described in my co-pending application Serial No. 337,345, filed February 4, 1929.

A further object is to provide such a regulating means consisting of a fitting having a plurality of stop shoulders of different heights to coact with another fitting which may be adjusted relative to the first fitting to engage the desired stop shoulder.

Still a further object is to provide the first fitting in the form of an angular member having a stop shoulder on each side thereof and the second fitting in the form of a tubular member adapted to slide vertically over the first fitting and having an inwardly extending flange to engage one of the stop shoulders, the flange serving to prevent rotation of the second fitting relative to the first fitting.

Still a further object is to provide an annular groove around the first fitting adapted to receive the flange of the second fitting, whereby the second fitting may be rotated relative to the first fitting for positioning the flange to engage another of the stop shoulders.

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

Figure 1 is a plan view of a dispenser showing my improved type of charge regulating means applied thereto.

Figure 2 is a vertical sectional view on the line 2—2 of Figure 1.

Figure 3 is a perspective view of the first and second fittings, one being a bottom perspective view and the other a top perspective view.

Figure 4 is a sectional view on the line 4—4 of Figure 2.

Figure 5 is a similar sectional view on the line 5—5 of Figure 2, showing the parts in a different position.

Figure 6 is a sectional view on the line 6—6 of Figure 4.

Figure 7 is a sectional view on the line 7—7 of Figure 5; and

Figure 8 is a sectional view of the end of the nozzle shown in Figure 2, showing it in a different position.

On the accompanying drawings, I have used the reference numeral 10 to indicate a cylindrical casing. The casing 10 is provided with a bottom member 12 having a depressed boss 14 at its center. In the boss 14, a socket 16 is formed.

Adjacent the top of the casing 10 I provide a plurality of inwardly extending lugs 18. A top for the casing 10 is indicated at 20 and is provided with a plurality of outwardly extending lugs 22. The lugs 18 and 22 may coact upon rotation of the cover 20, whereby the cover is secured to the casing 10 somewhat similar to a bayonet joint connection.

Secured to the cover 20 is a fitting A, over which a fitting B telescopically fits. The fitting B is constrained to move upwardly, due to a spring 24 interposed between an upwardly opening socket 26 in the fitting A and in a downwardly opening socket 28 in the fitting B.

Within the casing 10 I provide a plunger tube 30, having a shoulder 32 adapted to engage a shoulder 34 formed in the fitting A. Above the shoulder 32 the plunger tube 30 is reduced and its upper end is secured to the fitting B as by a screw-threaded connection.

Within the casing 10 and surrounding the plunger tube 30, I provide a follower disk 36. An enlargement 38 on the lower end of the plunger tube 30 prevents removal of the disk 36 from the tube when the cover 20 and the parts carried thereby are removed from the casing 10. The enlargement 38 is adapted to coact with the socket 16 in certain positions of the plunger tube 30.

The foregoing construction is similar to that shown in my co-pending application,

with the exception of the shapes of the fittings A and B, which will now be described and which constitute the patentable subject matter of this application. The operation of the dispenser is fully disclosed in my co-pending application, but I will briefly refer to it later in this specification.

The fitting A is provided with a plurality of flat sides 40, the fitting being angular-shaped and having as many sides as adjustments are desired. Adjacent the lower end of each side 40 I provide stop shoulders 42, 44 and 46 with the exception of one side 40, on which I provide no shoulder, for which side, the cover 20 acts as a stop shoulder. The stop shoulder 42 is of predetermined height and the stop shoulders 44 and 46 are progressively higher, as indicated by the reference characters *b*, *c* and *d*, the reference character *a* indicating the lid 20 as a stop shoulder.

The fitting B has a circular interior adapted to just fit over the corners of the fitting A. The fitting B could therefore rotate on the fitting A except that I provide an inwardly extending flange 48 to normally prevent such rotation. The flange 48 may engage the cover 20 or any of the stops 42, 44 or 46, depending on which stop shoulder it is positioned above, or in other words, which side 40 of the fitting A it engages.

It will therefore be obvious that the fitting B will be positioned on the fitting A in any predetermined position when the parts are assembled. However, after they are assembled it is desirable to change the adjustment, which can only be accomplished by rotation of the fitting B relative to the fitting A. The fitting B, however, cannot be removed from the fitting A, due to the shoulders 32 and 34 engaging each other. I therefore provide an annular groove 50 at a predetermined point around the fitting A so that whenever the flange 48 is in registry with the groove 50, the fitting B may be rotated.

The spring 24 normally positions the flange 48 slightly above the annular groove 50, as clearly shown in Figure 2. When the fitting B is pressed downwardly a slight distance so that the lower edge of the fitting B is in alignment with the lower side of the groove 50, as shown in dotted lines in Figure 6, the flange 48 will be in registry with the groove 50 and the fitting B may now be rotated to any desired position.

Figure 5 illustrates the fitting B being rotated in the direction of the arrow 52 from the position shown in Figure 4, the flange 48 of course, being in registry with the groove 50.

From the foregoing construction, it will be obvious that the fitting B will move downwardly a predetermined distance, depending on which stop shoulder the flange 48 will engage. The fitting B will be normally moved

straight down by the barber or whoever is dispensing the material from the casing 10 so that the flange 48 will prevent rotation of the fitting B relative to the fitting A and will merely pass the groove 50, thereby maintaining the adjustment at which the fitting B is made.

Practical operation

I will now describe the operation of the device, wherein it will become obvious why variations are desirable and how variations are accomplished by the coaction of the flange 48 with the stop shoulders 20, 42, 44 and 46. The fitting B is manually engaged and forced downwardly, whereupon the enlargement 38 on the plunger tube 30 will enter the socket 16. Further downward movement of the fitting B, as for instance to the position indicated at *b'* when the flange 48 will engage the stop shoulders 42, as shown in Figure 2, will cause the material in the casing 10 to be forced upwardly through the plunger tube 30.

On the nozzle 54 of the fitting B I provide a rubber cap 56 having a slit opening 58. The pressure of the material through the nozzle 54 will cause the ends of the cap 56 to be forced outwardly, as shown in Figure 8, thereby allowing the material from the nozzle 54 to be discharged in the form of a ribbon indicated at 60.

As the fitting B is released and forced upwardly by the spring 24, there will be a tendency for the material within the tube 30 to remain stationary, thereby pulling inwardly on the cap 56, which closes the opening 58 to the position shown in Figure 2.

When the flange 48 is adjusted to engage the cover 20 the enlargement 38 on the lower end of the plunger tube 30 will be moved downwardly to the line *a'*. Coaction of the flange 48 with the shoulders 44 and 46 will cause the enlargement 38 to be stopped at the positions *c'* and *b'* respectively. Thus, different quantities of the commodity from the dispenser are ejected from the nozzle 54, depending on the position of adjustment of the fitting B.

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

I claim as my invention:

1. In a dispensing device, means for controlling the amount of material dispensed, said means including an angular flat sided fitting and a second fitting of tubular shape adapted to rotate over the first fitting and engage the corners thereof, an inwardly extending flange on the second fitting engaging a side of the first fitting for preventing

such rotation, and means to allow rotation comprising an annular groove in the first fitting adapted to receive said flange.

5 2. In a dispensing device, means for controlling the amount of material dispensed, said means including an angular flat sided fitting and a second fitting of tubular shape adapted to rotate over the first fitting and engage the corners thereof, an inwardly extending flange on the second fitting engaging
10 a side of the first fitting for preventing such rotation, means to allow rotation comprising an annular groove in the first fitting adapted to receive said flange, and stop shoulders on
15 said sides adapted be engaged by said flange.

3. In a dispensing device, means for controlling the amount of material dispensed, said means including a pair of telescoping members, means to normally prevent rotation
20 of said members relative to each other during telescoping operation thereof, means to allow rotation of one member relative to the other at a predetermined position only of its telescoping movement, a stop on one of said
25 members and a plurality of radially spaced stops of different heights on the other of said members to be engaged by the first mentioned stop.

Des Moines, Iowa, March 28, 1929.

FRED W. FITCH.