Oct. 18, 1955 P. MESHBERG 2,721,010

AEROSOL CONTAINERS AND VALVES THEREFOR

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Fig. 1

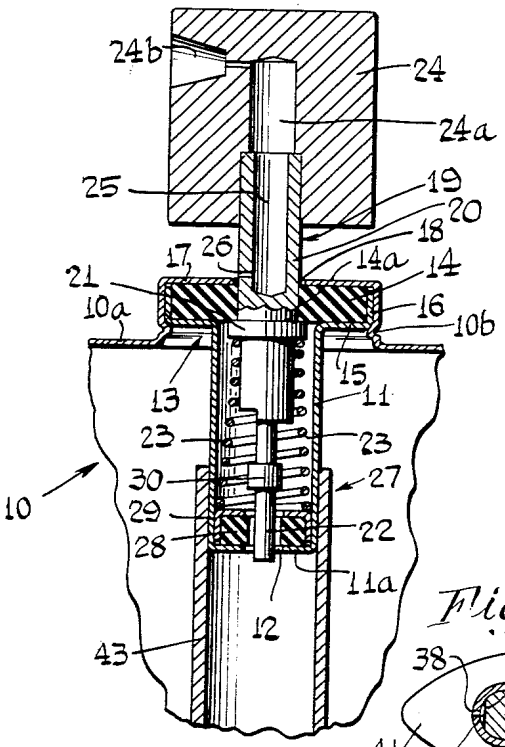


Fig. 2

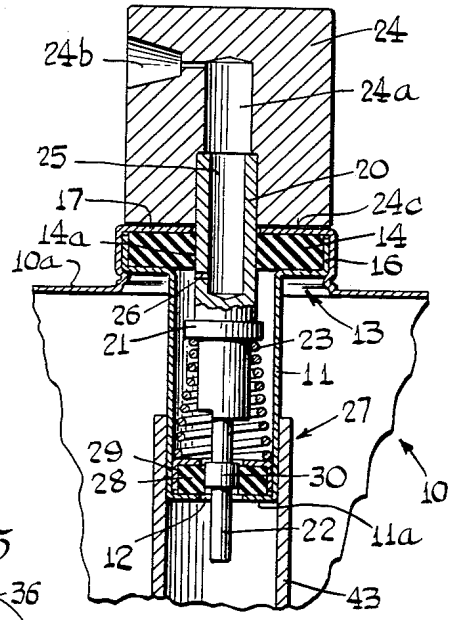


Fig. 5

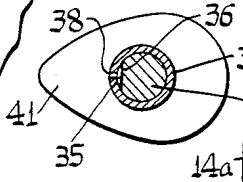


Fig. 4

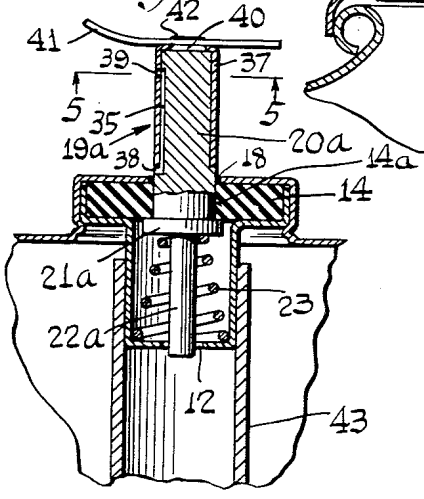
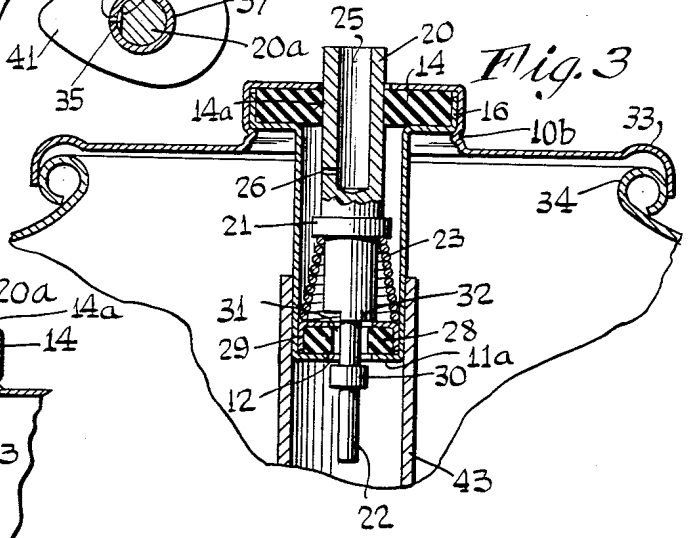


Fig. 3



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AEROSOL CONTAINERS AND VALVES THEREFOR

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13 Claims. (Cl. 222—394)

The present invention relates to valves for aerosol containers.

It is an object of the present invention to provide a valve for an aerosol container which is simple of construction, easy to assemble and inexpensive to manufacture.

Another object of the invention is to provide an aerosol container and/or valve therefor for dispensing measured quantities of aerosol material, which valve is capable of being utilized in pressure filling the container.

A still further object of the invention is to provide a novel mounting for the valve to produce a substantially flat top on the container.

In carrying out the present invention the valve stem is carried by a valve housing and is slidably mounted in a valve disk and provided with a collar engaging the valve disk so that two points of sealing, namely at the bore of the disk and on the surface of the disk, are obtained. The valve stem has a discharge passage therein communicating with a lateral passage normally located outside of the seal and movable longitudinally through the bore to the interior of the valve housing when it is desired to dispense the aerosol material. Should it be desired to dispense a measured quantity of fluid for each operation of the valve, a second valve means is provided in the valve housing of impervious material which is adapted to seal off the housing from the interior of the container prior to the movement of the lateral passage into communication with the interior of the housing, thereby permitting only the entrapped aerosol material in the housing to be discharged. When the aerosol containers are to be pressure filled, means is provided to by-pass the second valve during the filling operation.

The valve of the present invention is formed from simple components which can be readily manufactured and assembled which are inexpensive to manufacture and which are efficient and effective in use.

A feature of the invention resides in the provision of a double seal for the container which effectively prevents any aerosol material from escaping from the container until the valve stem has been moved a substantial distance so as to move the lateral passage from the exterior to the interior of the container.

Another feature of the invention resides in the provision of guide means for guiding the valve stem so as to prevent tipping thereof which might unintentionally cause discharge of the material around the valve.

Other features and advantages of the invention will be apparent from the specification and claims when considered in connection with the drawings in which:

Figure 1 shows a sectional view through the valve in one form of the invention with the valve in normal position.

Fig. 2 is a view similar to Fig. 1 showing the valve in discharge position.

Fig. 3 is a view of the valve of Figs. 1 and 2 in filling position.

Fig. 4 shows a longitudinal sectional view of the valve of another form of the invention in normal position.

Fig. 5 is a detailed sectional view along the lines 5—5 of Fig. 4.

The invention is shown in Figs. 1 to 3 as applied to a valve for dispensing measured quantities of aerosol or fluid material under pressure and is particularly useful in dispensing cosmetics or the like material where limited quantities are required.

As shown in Fig. 1, an aerosol container **10** has a valve housing **11** mounted therein and, while the housing may be made of any suitable impervious material, it is at present preferred to form it of a sheet metal stamping or drawn piece of tubular construction having an aperture **12** in inner wall **11***a* at one end, and an enlarged mouth **13** at the other end adapted to receive a sealing gasket and a valve disk **14** of suitable resilient sealing material.

In the illustrated form of the invention the enlarged mouth is formed by providing the housing with a lateral flange **15** having on its periphery a cylindrical flange **16** forming, in effect, a cup into which the disk **14** can be inserted. Although the housing may be mounted in any suitable way, in the illustrated form of the invention the mounting means is formed on the top **10***a* of the container by providing it with an outwardly extending, dished portion **17** into which the enlarged mouth of the valve is inserted. While the housing may be held to the mounting means by any suitable means, such as a press fit or the like, it is herein illustrated as being held in position by an indented portion **10***b* extending under the large mouth to securely hold it in position. This construction not only mounts the housing on the container but also secures the valve disk in the enlarged mouth.

As shown in the drawings the valve disk is provided with a substantially cylindrical bore **14***a* and the mounting means is provided with an aligned aperture **18** through which a valve stem **19** projects. The valve stem is preferably formed as a unitary member and, while it may be made as a hollow member on an eyelet machine, it is at present preferred to form it as a solid member by means of a header or screw machine. As shown, it is provided with a cylindrical portion **20** adapted to be slidably mounted in the bore **14***a* in the valve disk so as to project through the aligned aperture **18** in the dish-shaped portion of the mounting means to the exterior of the container. The bore of the disk is of such a diameter that it frictionally engages the cylindrical portion **20** and provides a seal therewith, yet readily permits it to be longitudinally moved therethrough from the sealing position of Fig. 1 to the discharge position of Fig. 2.

At the inner end of the cylinder portion **20** of the valve stem there is provided an enlarged section or collar **21** adapted to extend outwardly from the stem so as to engage the undersurface of the valve disk. Preferably, the collar is of a dimension larger than the aperture **18** in the mounting means so that as the valve is held in sealing position the valve disk will be clamped between the collar and the wall of the dish-shaped portion to produce a second seal for the device. The stem below the collar is provided with a portion **22** of reduced diameter which is adapted to pass through the aperture **12** in the inner wall of the housing. The valve stem so positioned will be guided adjacent each end by the aperture **18** in the mounting means and the aperture **12** at the inner wall of the housing, which apertures are in alignment and hold the stem against tilting movement and restrict it to substantially longitudinal movement so that there can be no leakage between the walls of the bore in the disk and the cylindrical portion.

The valve stem is urged to normal sealing position by any suitable means. In the herein illustrated form of the invention a spring **23** is positioned within the

housing so as to press against the collar to urge the stem to projected position and the collar into sealing relation.

As shown in the drawings, the upper end of the stem has mounted thereon an actuating button **24** so as to be an extension thereof. The button has a centrally disposed recess **24***a* which aligns with and forms a continuation of a longitudinally extending passage **25** formed in the cylindrical portion of the valve stem. Adjacent the inner end of the passage **25**, there is provided a lateral passage **26** extending through the wall of the stem, which lateral passage is normally located on the exterior of the container as shown in Fig. 1. The upper end of the longitudinal passage connects with a second lateral passage **24***b* formed in the button so as to communicate with recess **24***a* and which forms the discharge aperture for the device. As shown in Fig. 2, the bottom **24***c* of the button engages the top wall of the dished portion and forms a stop for the valve stem when the inner lateral passage has been moved into communication with the interior of the valve housing so that fluid under pressure in the valve housing will pass therefrom through the lateral passage **26** to the longitudinal passage **25** to the outer lateral dispensing passage **24***b*.

In order to dispense measured amounts of fluid under pressure in accordance with the present invention, a second valve means **27** is provided for sealing off the housing from the interior of the container so as to trap a predetermined quantity of material therein prior to the movement of the inner passage into communication with the valve housing. While this may take many forms, in the illustrated form of the invention a second sealing disk **28** is inserted in the bottom of the housing and held in place by a suitable retainer **29**. The sealing disk **28** has a bore therethrough and the valve stem has a cooperating valve member **30** provided on the section of reduced diameter in such a location that when the stem is moved longitudinally inwardly the valve member will engage the bore in the second disk and seal the interior of the housing from the container prior to the movement of the inner lateral passage to communication with the valve housing. Thus, only the aerosol material which is trapped in the valve housing will be dispensed for each operation of the valve. As will be noted in Fig. 2, the button will stop the stem in this position to insure the proper location of the second valve means during the dispensing operation.

Under some circumstances, it is desired to pressure fill the aerosol container. This can be accomplished by the present invention by providing a by-pass around the second valve means. In the illustrated form of the invention this is accomplished by providing a by-pass passage **31** located inwardly of the valve member **30** on the reduced portion of the stem and providing a shoulder **32** to stop the movement of the valve stem when the stem is in by-passing position as shown in Fig. 3. Thus it will be seen that by moving the valve stem to the position shown in Fig. 3 prior to the application of the actuating button **24** and connecting a charging nozzle (not shown) to passage **25**, the container can be readily charged by forcing the material under pressure through the longitudinal passage **25** of the stem, through the inner lateral passage **26**, the by-pass passage **31** to the interior of the container. As soon as the container is charged, the stem is returned to the position of Fig. 1 and the button applied thereto in the manner shown which will prevent movement of the valve member on the stem beyond the second sealing disk as shown in Fig. 2.

Another feature of the invention resides in the fact that the top for the container, as shown in Fig. 3, is substantially flat and is provided with a channel rim **33** into which sealing compounds may be flowed or preformed seals can be provided and the top then curled over into sealing relation with bead **34** on the container in the usual manner. This provides a top which is free of the usual depressions which may collect foreign material, is sanitary and of an attractive appearance.

In Figs. 4 and 5 the invention is shown as applied to a normal dispensing valve. In this form of the invention the housing **11** is a shorter housing since it does not have to accommodate the second valve means, but otherwise it is of the same construction as shown in Fig. 1. The valve stem **19***a* cooperates with the valve disk **14** in the same manner as heretofore described, though it may be shorter than stem **19**. It has the cylindrical portion **20***a*, the enlarged portion **21***a* and a portion **22***a* of reduced diameter cooperating with the aperture **12** in the valve housing. The spring **23** urges the valve to sealing position. In order to provide the longitudinal passage in the portion **20***a*, according to this form of the invention, a section **35** thereof is made of reduced diameter and a flat surface **36** is formed thereon as shown in Figs. 4 and 5. A sleeve or tubular member **37** is slipped over the end of the stem to provide the cylindrical exterior of the stem to be slidably received in the valve disk. The sleeve is provided with spaced apertures **38, 39** for communicating with the longitudinal passage, the inner aperture **38** being located adjacent the outside of the container and the outer aperture **39** being the dispensing aperture located at the other end of the passage.

In order to facilitate movement of the valve stem the sleeve is provided with an embossed center **40** at the end thereof and a suitably shaped fingerpiece **41** having an aperture to receive the embossed center which is headed over at **42** to secure it in place. In the form of the invention shown in Fig. 4 when pressure is applied to the fingerpiece **41** the valve stem is moved inwardly against the spring **23** and will slide through the bore **14***a* in the valve disk **14** and the inner passage **38** will be moved into communication with the interior of the housing to permit discharge of the material from the container through passages **37, 38** and discharge aperture **39**. The apertures **12** and **18** in the housing and mounting member will maintain the stem against tipping movement and the spring when fully compressed will form a stop limiting the inward movement of the valve stem.

If desired, in all forms of the invention, a siphon tube **43** may be connected to the housing to extend to the bottom of the container in the usual manner.

It is to be understood that the features disclosed in the two forms of the invention shown herein may be interchanged as desired.

From the foregoing it will be seen that the present invention provides a simple container and/or valve construction which is easy to operate, can be readily manufactured and includes a minimum number of parts which can be readily assembled, is efficient in operation, and in the form of the invention shown in Figs. 1 to 3 provides a unique measuring arrangement for aerosol material.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. Valve means for controlling the discharge of fluid under pressure from a container comprising a tubular valve housing having a transverse wall at the inner end having an aperture to communicate with the container and a combined resilient valve disk having a cylindrical bore mounted at the outer end of the housing, means mounting said housing on the container, a valve stem mounted in said housing for solely sliding movement and against tilting and having a cylindrical portion slidable in said bore in the valve disk and projecting from the container, the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, said stem having an enlarged portion at the inner end of said cylindrical portion adapted to engage the undersurface of the valve disk, and means urging the stem into projected

position and the enlarged portion of the stem into engagement with the valve disk to provide a second seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with lateral pasages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located adjacent the mounting member, longitudinal movement of said stem against the urging means from normal sealing position to a discharge position causing said enlarged portion to be moved out of engagement with the valve disk and said inner passage to be moved into communication with the interior of the valve housing to dispense the fluid under pressure therefrom.

2. Valve means for controlling the discharge of fluid under pressure from a container comprising a tubular valve housing having an enlarged disk-receiving mouth at one end thereof and a transverse wall at the other end having an aperture to communicate with the container, a combined resilient sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, a mounting member having a dished portion to receive the enlarged mouth and cooperate therewith to hold said combined gasket and valve disk therein in sealing relation and having an aperture in alignment with said bore and the aperture in the inner wall of the valve housing, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore in the disk and the aperture in the mounting member and to project from the container, the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the inner end of said cylindrical portion having an outer diameter greater than that of the aperture in the dished portion and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, the apertures in the housing and mounting means holding the stem against tilting movement, and means urging the collar into engagement with the valve disk whereby the disk is compressed between the dished portion and collar to provide the seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with lateral passages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located adjacent the mounting member, longitudinal movement of said stem against the urging means for normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing.

3. Valve means for controlling the discharge of fluid under pressure from a container comprising a tubular valve housing having an enlarged disk-receiving mouth at one end thereof and a transverse wall at the other end having an aperture to communicate with the container, a combined resilient sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, means mounting said housing on the container to control the flow of fluid therefrom, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore in the disk and projecting from said container with the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the inner end of said cylindrical portion adapted to engage the disk to form a seal therewith and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, and means urging the collar into engagement with the valve disk to provide the seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with spaced lateral passages, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located out of communication with the housing, movement of said stem against the urging means from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing.

4. Valve means for controlling the discharge of fluid under pressure from a container comprising a tubular valve housing having an enlarged disk-receiving mouth at one end thereof and a transverse wall at the other end having an aperture to communicate with the container, a combined sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, a mounting member having a dished portion to receive the enlarged mouth and cooperate therewith to hold said combined gasket and valve disk therein in sealing relation and having an aperture in alignment with said bore, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore in the disk and to project through the aperture in the mounting member, the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the inner end of said cylindrical portion having an outer diameter greater than that of the aperture in the dished portion and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, and spring means disposed in the housing and urging the collar into engagement with the valve disk whereby the disk is compressed between the dished portion and collar to provide the seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with lateral passages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located adjacent the mounting member, movement of said stem against the spring from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing.

5. Valve means for controlling the discharge of fluid under pressure from a container comprising a tubular valve housing having an enlarged disk-receiving mouth at one end thereof and a transverse wall at the other end having an aperture to communicate with the container, a combined resilient sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, means mounting said housing on the container, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore in the disk and to project beyond the container, the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the inner end of said cylindrical portion adapted to engage the disk to form a seal therewith, means urging the collar into engagement with the valve disk to provide the seal for the container, the cylindrical portion of the stem comprising a section of reduced diameter having a flat surface on one side to form a longitudinal passage, and a sleeve surrounding the stem and having apertures therein communicating with the longitudinal passage to form lateral passages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located outwardly of the seal, movement of said stem inwardly against the spring from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing.

6. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing, a transverse apertured wall at the inner end and a combined resilient sealing gasket and valve disk having a bore mounted in the other end, means mounting the housing on the container, a valve stem mounted in said housing and having a portion at the outer end thereof extending through said

bore in the valve disk and projecting beyond the container, said stem having a sealing portion cooperating with the disk to seal the container and a portion at the inner end and passing through the apertured wall of the housing to guide the stem against tilting, and means urging the stem into sealing relation with the disk, movement of said stem against the urging means a predetermined distance from normal sealing position causing said sealing portion to be moved out of sealing relation, said housing having a second valve means adjacent the apertured wall and means on the stem spaced inwardly from the inner end thereof and controlled by inward movement of said valve stem to cooperate with the second valve means to seal the housing from the container prior to the movement of the first valve means out of sealing relation thereby dispensing only the fluid in the valve housing.

7. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing having an enlarged gasket-receiving mouth at one end thereof and a transverse apertured wall at the other end, a combined resilient sealing gasket and valve disk having a bore mounted in said enlarged mouth, mounting means securing the valve housing to the container, a valve stem mounted in said housing and having a portion at the outer end thereof extending through said bore to project beyond the container and having a sealing portion cooperating with the disk to seal the container and a portion at the inner end thereof and passing through the apertured wall of the housing to guide the stem against tilting, and means urging the stem into sealing relation with the disk, movement of said stem inwardly against the urging means a predetermined distance from normal sealing position to normal discharge position causing said sealing portion to be moved out of sealing relation and to permit discharge of the fluid therethrough from the housing, said housing having a second valve means adjacent the apertured wall, a portion of the stem inwardly from the inner end thereof cooperating with said second valve to seal the housing from the interior of the container in response to inward movement of the stem and prior to the movement of the first valve means out of sealing relation thereby controlling the fluid to dispense only the measured fluid trapped in the valve housing.

8. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing having an enlarged gasket-receiving mouth at one end thereof and a transverse apertured wall at the other end, a combined resilient sealing gasket and valve disk having a bore mounted in said enlarged mouth, mounting means securing the valve housing to the container, a valve stem mounted in said housing and having a portion at the outer end extending through said bore to project beyond the container and having a sealing portion cooperating with the disk to seal the container and a portion at the inner end and passing through the apertured wall of the housing to guide the stem against tilting, means urging the stem into sealing relation with the disk, movement of said stem inwardly against the urging means a predetermined distance from normal sealing position to normal discharge position causing said sealing portion to be moved out of sealing relation and to permit discharge of the fluid therethrough from the housing, said housing having a second sealing disk adjacent the apertured wall, said disk having an aperture to receive the inner end of the valve stem and said inner end of the stem having a portion cooperating with the second valve disk to seal the aperture therein in response to inward movement of said valve stem to seal the housing from the interior of the container prior to the movement of the first valve means out of sealing relation thereby controlling the fluid to dispense only the measured fluid trapped in the valve

housing, and means limiting inward movement of the valve stem in normal discharge position.

9. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing having an enlarged gasket-receiving mouth at one end thereof and a transverse apertured wall at the other end, a combined resilient sealing gasket and valve disk having a bore mounted in said enlarged mouth, mounting means securing the valve housing to the container, a valve stem mounted in said housing and having a portion at one end extending through said bore to project beyond the container and having a sealing portion cooperating with the disk to seal the container and a portion of reduced diameter at the other end and passing through the apertured wall of the housing, and means urging the stem into sealing relation with the disk, movement of said stem inwardly against the urging means a predetermined distance from normal sealing position to normal discharge position causing said sealing portion to be moved out of sealing relation and to permit discharge of the fluid therethrough from the housing, said housing having a second valve means adjacent the apertured wall controlled by movement of said valve stem to seal the housing from the interior of the container prior to the movement of the first valve means out of sealing relation thereby controlling the fluid to dispense only the measured fluid trapped in the valve housing, said stem having means to by-pass said second valve means whereby pressure filling of the container can be achieved.

10. In an aerosol container having material propelling fluid therein, valve means for controlling the discharge of a measured amount of material under pressure from said container comprising a tubular valve housing of impervious material having a transverse apertured wall at one end and a resilient valve disk having a substantially cylindrical bore at the other end, means mounting the housing within the container, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore in the valve disk and projecting from the container with the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar on the valve stem at the inner end of said cylindrical portion and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, and means normally urging the collar into engagement with the valve disk to provide a second seal for the container, said stem having a longitudinal discharge passage in the cylindrical portion communicating with a lateral passage normally located outwardly of the sealing disk, longitudinal movement of said stem from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved through the bore in the valve disk and into communication with the interior of the valve housing, said housing having a second valve means adjacent the apertured wall thereof controlled by the movement of the valve stem toward discharge position to seal the valve housing from the fluid in the container prior to the movement of the inner lateral passage into communication with the housing whereby only the fluid entrapped in the valve housing is discharged for each operation of the valve stem.

11. Valve means for controlling the discharge of a measuring amount of fluid under pressure from a container comprising a tubular valve housing having an enlarged gasket-receiving mouth at one end thereof and a transverse apertured wall at the other end, a combined resilient sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, means mounting the housing on the container, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore and to project from the container with the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the

inner end of said cylindrical portion and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, and spring means disposed in the housing and urging the collar into engagement with the valve disk to provide the seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with lateral passages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located out of communication with said housing, movement of said stem against the spring from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing, said housing having a second valve means adjacent the apertured wall thereof controlled by the valve stem toward discharge position to seal the valve housing from the fluid in the container prior to the movement of the inner lateral passage into communication with the housing.

12. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing having an enlarged gasket-receiving mouth at one end thereof and a transverse apertured wall at the other end, a combined resilient sealing gasket and valve disk having a cylindrical bore mounted in said enlarged mouth, a mounting member having a dished portion to receive the enlarged mouth and cooperate therewith to hold said combined gasket and valve disk therein in sealing relation and having an aperture in alignment with said bore, a valve stem mounted in said housing and having a cylindrical portion slidable in said bore to project through the aperture in the mounting member, the walls of said bore yieldably gripping said cylindrical portion to form a seal therewith, an enlarged collar at the inner end of said cylindrical portion having an outer diameter greater than that of the aperture in the dished portion and a portion of reduced diameter below the collar and passing through the apertured wall of the housing, spring means disposed in the housing and urging the collar into engagement with the valve disk whereby the disk is compressed between the dished portion and collar to provide the seal for the container, said stem having a longitudinal passage in the cylindrical portion communicating with lateral passages adjacent each end thereof, the outer lateral passage forming the discharge opening and the inner lateral passage being normally located adjacent the mounting member, movement of said stem against the spring from normal sealing position to a discharge position causing said collar to be moved out of engagement with the disk and said inner passage to be moved into communication with the interior of the valve housing, said housing having a second valve disk adjacent the apertured wall and said valve disk having a bore freely receiving the stem end of reduced diameter, and a valve member on the valve stem below the collar and adapted to engage said second valve disk by movement of the valve stem toward discharge position to seal the valve housing prior to the movement of the inner lateral passage into communication with the housing.

13. Valve means for controlling the discharge of a measured amount of fluid under pressure from a container comprising a tubular valve housing, a transverse apertured wall at the inner end and a combined resilient sealing gasket and valve disk having a bore mounted in the other end, means mounting the housing on the container, a valve stem mounted in said housing and having a portion extending through said bore in the valve disk and projecting beyond the container, said stem having a longitudinal passage in the projecting portion communicating with a lateral passage disposed adjacent the outer face of the valve disk and a sealing portion cooperating with the disk to seal the container, and means urging the sealing portion of the stem into sealing relation with the disk, movement of said stem against the urging means a predetermined distance from normal sealing position causing said sealing portion to be moved out of sealing relation and said lateral passage to be moved into communication with the housing, said housing having a second valve means adjacent the apertured wall controlled by a portion of said valve stem and actuated by inward movement of said valve stem to seal the housing from the container prior to the movement of the lateral passage into communication with the housing, thereby dispensing only the fluid in the valve housing.

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