The present invention relates to an apparatus for tinting of coating compositions, particularly paints.

The present day practice in paint merchandising is directed toward individual blending and tinting for the consumer, rather than the practice of maintaining an inventory of pre-mixed colors. Under present practice, therefore, the paint supplier maintains a substantial inventory of only the white base paint and provides tinting for injecting a tinting paste into aerosol containers. In accordance with the present invention, add an adapter, generally indicated at numeral 2 in FIGURE 1 which permits utilization of this type of injecting gun into an aerosol container. As best seen in FIGURES 2 and 3 the adapter includes a cylindrical body portion 22 which is formed with a relieved annular portion 23 thereby a centrally disposed collar portion. The collar 24 is arranged to be received snugly within the end of the barrel 11, and the relieved annular portion 23 provides a seal for receiving the end of the barrel 11.

At the opposite end, the body member 22 is provided with an annular portion 26 which is arranged to be bottomed against a rim 27 of an aerosol can generally indicated at numeral 28 in the drawings. The aerosol can 28 is of conventional design, including a shell 29 and a mounting cover 31 having a peripheral flange portion joined to a corresponding peripheral flange portion of the shell 29 by rolling the two together to form the rim 27.

Disposed within the mounting cover 31 is an eyeclet 32 which carries a crimped nipple 33 for receiving a conventional polyethylene tube (not shown) which extends to the bottom of the can. Inside the eyeclet 32 there is disposed a called spring 34 on which rides a valve element 36. In the closed position of the device, the valve element 36 extends through and in sealing relation with a gasket 37 confined between the mounting cover 31 and the eyeclet 32.

The valve aerosol dispenser is opened in accordance with the present invention by providing a protuberance 38 having a frusto-conical portion 39 extending below the plane of the annular seating face 26. The frustoconical portion 39 terminates in a flat valve operating portion 41 which is arranged to engage an abutment 42 carried by the valve member 36. The body member 22 and also is provided with an auxiliary inwardly extending channel 43 intermediate the annular sealing portion 26 and the protuberance 38.

The body portion 22 has formed therein an axially extending bore 44 which extends from the region of the frusto-conical portion 39 through the body member 22 and through the collar 24 to communicate with the cylinder 19.

In the form of the invention shown in FIGURES 2 and 3, the axially extending bore 44 communicates with three bores 46, 47 and 48, and 49 which extend in the frusto-conical portion 39 and being equally spaced therearound.

In operation, the tinting gun 19 is first filled with the desired amount of tinting paste by setting the collar 16 to the appropriate scale marking and then operating the sleeve 13 upwardly while the bores 46, 47, and 48 are immersed within a container of the flowable paste material.

The upward movement of the piston 12 thereby fills the cylinder 19 as well as the axial bore 44 and the three bores 46, 47, and 48 with the paste, generally indicated at numeral 51 in FIGURE 2. Then, the tinting gun is placed over the container 28 in which the aerosol paint is disposed, with the annular seating face 26 abutting against the rim 27 of the container 28. In doing so, the flat portion 41 of the protuberance 39 engages the abutment 42 on the valve member 36 and unseats the valve member 36 from against the gasket 37.

The aerosol does not escape from the container 28 in this operation because the protuberance 39 fits tightly within the gasket 37 and reestablishes the seal.

In the next step, the movable sleeve 13 is moved downwardly so that the paste 51 is forced through the axial bore 44 and the bores 46, 47, and 48 against the pressure existing within the aerosol container 28, and flows through the nipple 33 into the aerosol contained within the container 28. When the paste 51 has been injected, the protuberance 39 is disengaged from the gasket 37 so that the valve member 36 reseats itself against the gasket 37 and reestablishes the seal.
After injecting the coloring paste into the aerosol container, it is advisable to flush some clear solvent through the aerosol valve so that there will not be an excessive concentration of the tinting color in the spray issuing from the aerosol container upon first use.

From the foregoing, it will be seen that the adapter of the present invention makes it possible to conveniently and quickly inject controlled, metered amounts of a tinting material into an aerosol container. The entire operation is performed without leakage of the contents of the aerosol container.

It will be evident that various modifications can be made to the described embodiments without departing from the scope of the present invention.

I claim as my invention:

A adapter for injecting metered quantities of tinting material into a container containing an aerosol paint composition under pressure and having an upper peripheral rim and a centrally disposed depressible valve element, said adapter comprising a cylindrical body portion having a relieved annular portion arranged to fit snugly within a tubular dispensing means, said body portion also having an outwardly extending annular portion on the surface opposite said relieved annular portion proportioned to be seated on the rim of said container, said body portion also including a frusto-conical protuberance circumscribed by said outwardly extending annular portion, said protuberance extending beyond the plane of said outwardly extending annular portion a distance such that upon the occurrence of said seating on said rim said protuberance will have depressed said valve element, said body portion having an axially extending bore therein, and said protuberance having at least one bore extending through the conical surface thereof and communicating with said axially extending bore.

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