

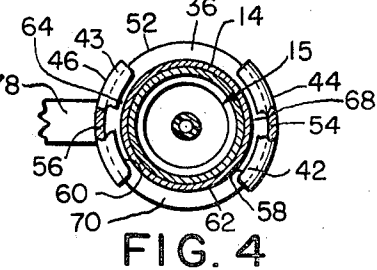
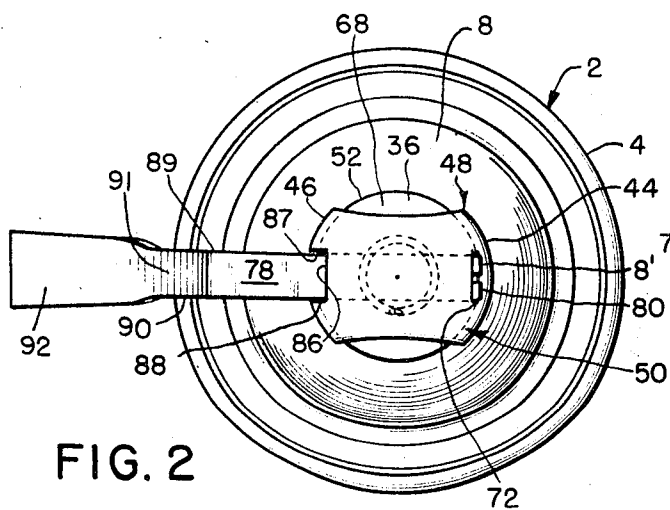
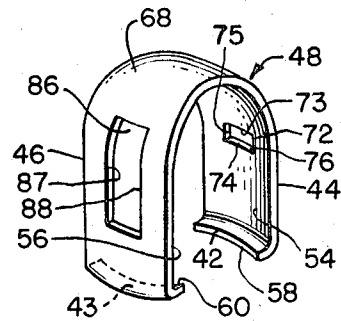
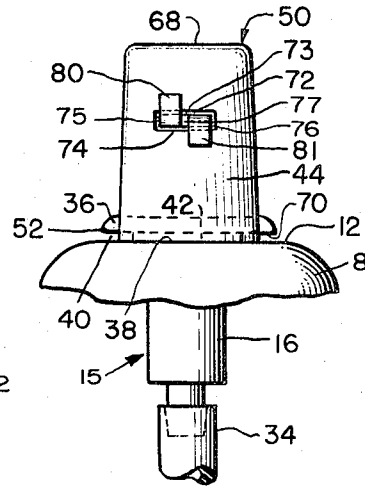
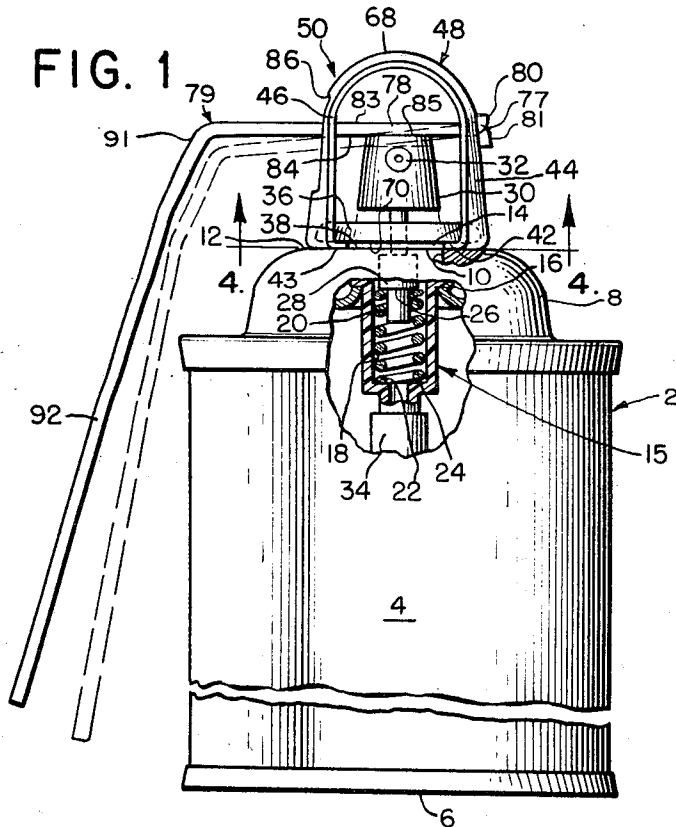
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3,429,484

AEROSOL SPRAY HEAD ACTUATOR

Filed Sept. 7, 1967



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## AEROSOL SPRAY HEAD ACTUATOR

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1 Claim

### ABSTRACT OF THE DISCLOSURE

An attachment for an aerosol container of the type having an annular shoulder encompassing a spray head, an inverted U-shaped jaw clamp having side legs with intumed flanges at their lower ends underposed with respect to the shoulder and having an actuator including a portion extending transversely of the legs through apertures therein and pivoted at one end to one leg and superposed with respect to the spray head and having a hand operated handle extending from said portion downwardly alongside the container.

### BACKGROUND OF THE INVENTION

#### Field of the invention

This invention relates to actuators for the spray heads of aerosol containers and more specifically to a novel attachment for such containers to facilitate spraying operation.

#### Description of the prior art

The art known to applicant involves a mechanism which hangs the container from one end and provides a trigger of the type normally used in sprayer equipment. It is an elaborate mechanism requiring extensive tooling to make and is relatively expensive. To minimize the cost such mechanism is made of plastic which is not durable and its attachment to the container is not positive.

A general object of the invention is to provide a simple, efficient and durable novel actuator which may be readily attached and removed innumerable times with respect to a conventional aerosol container.

A further object is to provide a novel actuator which is durable and which is relatively small so that it is easily packaged for shipment and stored when not in use.

Another object is to provide an actuator having only two parts, namely, a clamp and a handle which is carried from the clamp and has an abutment portion overlying the spray head of the container and having an operating handle portion extending from the abutment portion and arranged in such manner that the user may with one hand simultaneously grasp the container and embrace the operating portion and by squeezing the operating portion toward the container depress the abutting portion and thus accurately guide the spray head without unduly tiring the user or messing the fingers of such user.

These and other objects and advantages inherent in and encompassed by the invention will become more readily apparent from the specification and the drawings, wherein:

FIGURE 1 is a side elevational view partly in axial section of a typical aerosol container with the novel actuator applied thereto and shown in edge elevation;

FIGURE 2 is a top plan view of the structure shown in FIGURE 1;

FIGURE 3 is a fragmentary side elevational view the actuator with the container broken away;

FIGURE 4 is a cross-sectional view taken substantially on line 4-4 of FIGURE 1; and

FIGURE 5 is a perspective view of the jaw portion of the novel actuator.

### DESCRIPTION OF THE INVENTION

Describing the invention in detail and having particular reference to the drawings the container 2 is of usual construction containing a pressurized spray of any nature. The container is a closed vessel having a cylindrical portion 4, a bottom 6, and a top 8 of generally frusto-conical form with an opening 10 in its upper end 12 into which is mounted a valve body enclosure 14 with a leak proof seal.

A valve 15 of conventional form has a body 16 tightly mounted within the enclosure 14, said body having a bore 18 enclosing a closure spring 20 which has a lower end 22 seated on an intumed shoulder 24 of the body 16, the upper end of the spring bearing against a shoulder 26 of a valve element 28 which is connected to the spray head 30 which has a nozzle 32 for spraying the fluidized material being propelled from the container through the tube 34 which extends to adjacent the bottom of the container.

The enclosure element 14 which may be an integral part of the container, has an outturned annular shoulder 36 spaced above the upper surface 38 of the top portion of the container to provide an accommodation space 40 into which project a pair of opposed intumed flanges 42, 43 formed on the lower ends of a pair of legs 44, 46 of an inverted U-shaped jaw or clamp 48 of the novel actuator generally designated 50.

The legs are of arcuate cross-section as best seen in FIGURE 4 and concentric with the periphery 52 of the shoulder 36 so that they complementally engage on their confronting surfaces 54, 56 said peripheral surface 52 whereby the clamp is held against displacement transversally of the container. The inner edges 58, 60 of the intumed flanges 42, 43 are also concave and concentric with the outer cylindrical surface 62 of the enclosure element 14 and spaced outwardly therefrom as at 64, 66 to insure snug embracement by the legs 44, 46 against the periphery 52.

The legs 44, 46 are interconnected by a curved bight portion 68 and converge slightly upwardly. The legs as well as the portion 68 are formed of resilient steel and in being spread about the shoulder 36 are thus spring biased into tight engagement with the shoulder 36 and held in engagement with the underedge 70 thereof. The parts of the actuator including the clamp could, of course, be made of any other material such as plastic or other metal and the foregoing recitation is not intended to be in any way limiting.

The leg 44 is provided intermediate its ends with a generally rectangular horizontally elongated aperture 72 providing upper and lower edge surfaces 73, 74 and side edges 75, 76.

This aperture 72 loosely admits therethrough a furcated end portion 77 of a generally horizontally extending abutment portion 78 of an actuator or operating element 79. One of the furcations 80 is bent upwardly and the other furcation 81 downwardly to prevent withdrawal of the actuator from the clamp. The loose fit of the furcated end portion permits limited vertical pivotal movement of the actuator and the flat upper and lower edges 72, 74 of the aperture 72 cooperate with the top and bottom sides 83, 84 respectively of the portion 78 to prevent rotation of the portion 78 to insure that the bottom side 84 rests flat upon the flat top side 85 of the spray head 30 which is biased upwardly to closed position.

The portion 78 extends on the spray head and projects endwise through a vertically elongated aperture 86 in the leg 46 of the clamp. Aperture 86 has vertical side edges 87, 88 in guided engagement with the lateral side edges 89,

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90 of portion 78 adjacent to its distal end 91 to prevent lateral displacement of the operating element off the spray head. The vertical elongation of aperture 86 accommodates pivotal movement of the actuator as shown in dotted lines in FIGURE 1.

The distal end 91 of abutment portion 78 merges into the upper end of a downwardly and outwardly projecting handle portion 92 which extends alongside the container in position for the user to grasp the handle and cylindrical portion of the container simultaneously upon the operator squeezing his hand, the actuator pivots downwardly and depresses the spray head. The handle arrangement is conveniently located so that the operator can readily position the container and the spray head and control the spray to the work.

It will be understood that a preferred form of the invention has been disclosed illustrating the broad aspects of the invention and is not intended as limiting the scope of the invention in any way except as set forth in the appended claim.

I claim:

1. For use with a pressurized container of the type having at its upper end a depressable upwardly biased spray head and means on the container providing a shoulder below the spray head, an attachment for actuating the spray head comprising an inverted U-shaped support including a pair of legs flanking the spray head and a transverse bight portion interconnecting the upper ends of the legs and resiliently biasing the legs into engagement with said shoulder, opposed transverse apertures in each leg, said apertures aligned with each other and disposed in a

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radial plane of said spray head, an actuator comprising an essentially horizontal portion extending diametrically over said spray head and seated thereupon intermediate its ends, one of the ends of said portion projecting through one of said apertures, said one aperture and said one end of said actuator portion dimensioned to loosely interfit to accommodate limited vertical pivotal movement of the actuator, means on said one end of said portion having locking engagement with said one leg to prevent disassembly of said actuator with respect to said support, said actuator having a handle portion extending downwardly from the other end of said actuator portion along a side of the container in laterally outwardly spaced relation thereto, said aperture in the other leg being vertically elongated and having vertical edges in guided engagement with said actuator portion adjacent said other end thereof.

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