Cleansing Attachment For Elevated Spray Device


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ABSTRACT

A cleansing attachment for an elevated spray device in which a U-shaped ball supports an aerosol spray container in position to be discharged at elevated locations such as in the eaves of buildings, high windows, and the like. The attachment comprises a U-shaped member having legs adapted to be connected to the legs of the U-shaped ball by readily connectible means, and a cleaning device is connected to the eftportion of the U-shaped member, the cleaning means comprising selectively either a scraping blade, squeegee blade, brush of suitable type, or a mop.

9 Claims, 9 Drawing Figures
CLEANING ATTACHMENT FOR ELEVATED SPRAY DEVICE

BACKGROUND OF THE INVENTION

The convenience of utilizing an elevated spray device in locations such as the eaves of high buildings, including barns and similar structures, windows disposed at a substantial height and the like, is set forth in said co-pending application referred to above. Said application pertains primarily to a device adapted to support at various elevations an aerosol spray container which is capable of dispensing any of a relatively wide range of different substances, such as paint, window cleaning solutions, insect repellents, and the like. Especially, in connection with the discharge of paint, it is sometimes found that rust or loose paint which has formed upon or peeled or partially flaked from a surface to be spray-painted preferably should be removed by brushing or scraping before the surface is painted. Similarly, in washing windows disposed at high elevations by means of spraying window-cleaning solutions against the window, to achieve the best results in cleaning the window, the sprayed solution should be wiped from the window surface, such as with a squeegee blade. Also, it may be that certain types of material which may have accumulated upon the window require scraping, brushing or mopping in order to assist in loosening and removing the same incident to spraying it or otherwise applying a suitable window cleaning solution.

It is recognized that the additional cleaning functions referred to above might be achieved by using independent tools also provided with long handles similar to the handle upon the elevated spray device comprising the subject matter of said co-pending application. However, this requires the handling of a number of different tools and especially the elongated handles thereof. Further, supplying the additional elongated handles adds to the cost of the equipment employed in the operation in which the elevated spray is employed.

SUMMARY OF THE INVENTION

It is the principal purpose of the present invention to provide an attachment which may preferably be quickly and readily as well as securely connected to an elevated spray device of the type comprising the subject of said aforementioned co-pending application, said attachment comprising auxiliary cleaning means basically in the form of a scraping blade to which a brush, such as a wire brush, or a squeegee blade may be connected for certain auxiliary cleaning operations, especially associated with the cleaning of windows at relatively high elevations, and with the removal of rust and loose paint from areas to be painted.

It is another object of the invention to form the attachment so as to be U-shaped, the legs thereof closely interfitting with the legs of a U-shaped bail by which an aerosol spray container is maintained in operative position within the spray device.

It is a further object of the invention to preferably form the U-shaped attachment member from strip type channel stock material, the dimensions of the channel preferably providing along the inner faces of the legs of the attachment elongated spaces which closely accommodate the outer portions of the legs of the U-shaped bail of the elevated spray device to prevent relative angular movement between the U-shaped member and bail.

It is still another object of the invention to provide connecting means in the form of complementary recesses and projections respectively formed on the legs of the bail and U-shaped member which, when interengaged with each other, prevent relative longitudinal movement between the legs of the bail and U-shaped member.

DETAILED DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation of an exemplary elevated spray device to which an attachment embodying the principles of the present invention is connected in operative relationship. FIG. 2 is an enlarged elevation of the upper portion of the elevated spray device and cleaning attachment shown in FIG. 1, but illustrated on a larger scale than employed in said figure and showing additional details of the structure.

Still another object of the invention is preferably to form the U-shaped member from resilient material adapted to maintain the aforementioned interengangeable recess and projection connecting means in interengaged relationship.

Details of the foregoing objects and of the invention, as well as other objects thereof, are set forth in the following specification and illustrated in the accompanying drawings comprising a part thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Details of the elevated spray device per se which are shown in the various figures, especially FIGS. 1, 2, 4, and 7, are described fully in said co-pending application, Ser. No. 86,760, to which attention is directed. For purposes of illustrating the function and convenient results provided by the present invention, however, the following brief description of the elevated spray device is included herein for ready reference.

The elevated spray device comprises an elongated tubular handle 10, the upper end of which fits within a socket 12 which extends downwardly from a cup-like base 14 within which a pressurized, aerosol-type spray container 16 is seated. In FIG. 2, the container 16 is shown as having a spray nozzle member 18 connected thereto. The nozzle member 18 is of conventional type and is supported by the upper end of a discharge tube connected to either a spring or pressure operated valve of conventional type, not shown, which is within the upper portion of the container 16. The upper end of the nozzle member 18 is seated within the lower portion of an adaptor 20, the central portion 22 of which extends through a suitable hole in the arcuate bight portion 24 of a U-shaped bail 26.

The opposite legs 28, as best shown in FIG. 6, preferably are channel-shaped for purposes of receiving vertical ribs 30 extending along opposite sides of the base 14. The legs 28 also are provided with longitudinally extending slots 32, see FIG. 3, of limited length which receive clamping bolts 34 which preferably have wing nuts 36 threaded thereon. This arrangement is for purposes of providing and maintaining desired longitudinal adjustment of the bail 26 relative to the base 14 and the nozzle member 18 so that when a push rod 38, which is fragmentarily shown in the lower portion of FIG. 2, is moved
upwardly by means fully described in said co-pending application, the container 16 will be elevated a limited distance relative to base 14, toward adaptor 20, so as to open the valve and effect a spray from the nozzle member 18. The attachment comprising the present invention is composed of a U-shaped supporting member 40, which, as shown in FIG. 6, preferably is channel-shaped in cross-section and the inner surfaces of at least the legs 42 thereof are so dimensioned as to closely receive the exterior surfaces of the legs 28 of the ball 26. By such arrangement, no relative angular movement between the U-shaped ball 26 and the U-shaped supporting member 40 is possible with respect to a horizontal axis extending commonly through the parallel legs of said elements. The supporting member 40 may be formed from any suitable material but preferably from material which is resilient such as an appropriate aluminum alloy or other non-corrodirible metal, or metal which has been protected against corrosion by applying a suitable coating thereto. If desired, however, the supporting member 40 may be formed from synthetic resin of appropriate type which is resilient and dimensionally stable. Although the legs 42 of member 40 preferably are substantially parallel when connected to the ball 26, at least when the member is disconnected from said ball, the legs of member 40 may extend at their outer ends slantly toward each other from a true parallel relationship so as to insure a close fit of the channelled configuration of said legs with respect to the legs 28 of ball 26 when the attachment comprising the present invention is connected to said elevated spray device.

For purposes of preventing relative longitudinal movement between the legs of the ball 26 and supporting member 40, relatively simple interengaging means are provided which are best illustrated in detail in FIG. 6. It will be seen that said figure is taken on the line 6-6 of FIG. 4. Preferably, the interengaging means are the quick detachable type that require no tools to operate. Also, in FIG. 3, it will be seen that the ball 26 is provided in the opposite legs 28 thereof with recesses or holes 44 at predetermined locations with respect to slots 32 therein. The lower portions of the legs 42 of supporting member 40 are provided with inwardly extending projections 46 which are complementary to the recesses or holes 44 and are received therein. The projections 46 are very inexpensive and effectively formed by simply stamping the same by a suitable press operation into the wall surfaces of the legs 42. If desired however, screws, screws, self-locking projections, or the like, may be provided to said legs. Such interfitting connecting means are highly suitable to prevent relative longitudinal movement between the ball 26 and U-shaped supporting member 40. If desired however, threaded thumb bolts or bolts and wing nuts, and the like, may be used in lieu of the holes 44 and projections 46 to detachably secure member 40 to ball 26. From the foregoing, it will be seen that very effective, inexpensive and extremely simple means are utilized to interconnect the cleaning attachment comprising the present invention with the U-shaped ball 26 of the elevated spray device comprising the subject matter of said co-pending application.

The supporting member 40 is provided with a bight portion 46 which, at its central portion, preferably is relatively flat for purposes of providing a seat 48 against which a base member 50 of a cleaning blade 52 is connected by any suitable means such as a pair of rivets 54. The blade 52, as best seen in FIG. 2, is in the form of a trapezoid and is substantially wider at its outer scraping edge 56 than at the base 50. Also, particularly as shown in FIG. 5, the scraping edge 56 may be sharpened, if desired. It will be seen from said figure that the extent of the blade and direction at which it is angularly disposed with respect to base 50 are such that said scraping edge 56 readily may be used to remove loose paint, extraneous material which is stuck to a window for example, or otherwise, either incident to the use of the spray device for spraying purposes, or otherwise. Preferably, blade 52 is of a resilient, relatively stiff synthetic resin resembling ice scrapers for automobile windows and windshields.

In addition to the attachment comprising the blade 52 which has a scraping edge 56, said blade also serves as supporting means for a squeegee device 58 which, for example, may comprise a flat metal channel 60 with which a rubber blade 62 is secured by appropriate means such as a plurality of rivets 64.

The squeegee blade 58 may be secured to the cleaning blade 52 by one of several means. For example, in FIGS. 2 and 4, the connecting means comprises interengaging nuts and bolts 66. However, for more conveniently operated means, attention is directed to FIG. 8 in which a thumb screw 68 is shown in enlarged manner which has a threaded stem extending through a mating threaded hole 70 formed in the squeegee device 58. The thumb screw 68 may be used in lieu of the threaded nuts and bolts 66. Thus, it will be seen that the squeegee blade 58 may be quickly removed from the cleaning blade 52 when a squeegee operation is not desired, such as when only the scraping edge 56 of the cleaning blade 52 is to be used. However, particularly when the spray device is utilized to clean windows or other surfaces at high elevations, such as by using window cleaning solutions which are sprayed against the exemplary surface 72, shown in FIG. 7, the squeegee blade unit 58 is attached to the cleaning blade 52.

Referring to FIG. 7, it will be seen that the spray nozzle member 74 is shown connected to the central portion 22 of the adaptor 20. This is a different arrangement from that shown in FIG. 2 wherein the spray nozzle member 18 is disposed between the adaptor 20 and the top of the spray container 16. Under circumstances where it is found desirable to arrange the arrangement shown as FIG. 7, it will be seen that the dimensions of the upper portion of the supporting member 40 are such that the upper end of the bight portion 46 thereof is spaced a suitable distance from the bight portion 24 of the ball 26 that the spray nozzle member 74 readily is accommodated and may form a spray discharge 76 which extends laterally and is unimpeded in any way. From FIG. 2, however, it also will be seen that the nozzle member 18 likewise may discharge laterally without being impeded.

From the preceding descriptions, it will be seen that the present invention comprises an attachment which permits auxiliary scraping and similar forms of cleaning, as well as squeegee wiping operations which may be conducted at high elevations by being attached by a very simple means to the spray device which also is adapted for operation at high elevations in accordance with the principles described and claimed in applicant's Ser. No. 86,760.

Under circumstances where means other than a scraper may be more suitable to remove loose or foreign material from a surface for any of the above-described purposes, alternate means are illustrated in FIG. 9. In said figure, it will be seen that an exemplary brush 78 is shown secured to cleaning blade 52 by suitable readily operable means such as screws 80 and wing nuts 82. The brush 78 may be relatively stiff, such as by having wire bristles, or it may have softer bristles. Also, the brush 78 may be replaced by a suitable mop, not shown, for dusting purposes, which may be attached by means, such as those shown in FIG. 9, to blade 52.

The cleaning attachment comprising the present invention preferably may quickly be removed from or connected to the ball member of the elevated spray device without requiring the use of tools of any kind. Further, an operator selectively may use the scraping blade of the attachment per se or, when squeegee operations are desired, the squeegee blade unit which comprises part of the attachment structure, quickly and effectively may be attached for that purpose.

While the invention has been described and illustrated in its several preferred embodiments, it should be understood that the invention is not to be limited to the precise details herein illustrated and described since the same may be carried out in other ways falling within the scope of the invention as illustrated and described.

We claim:
3,679,319

1. A cleaning attachment for an elevated spray device having a U-shaped retaining bail extending along the sides of and across the top of said spray device and the legs thereof extending along the sides of a spray container, said attachment comprising a U-shaped member having substantially parallel legs adapted to extend along the legs of said bail of said spray device, means adapted to connect the legs of said member to the legs of said bail, and cleaning means connected to the bight portion of said U-shaped member at a location above said aerosol spray container when such container is supported by said device and said member is connected to said bail.

2. The attachment according to claim 1 in which the legs of said member are channel-shaped and the open faces thereof extend toward each other and are adapted to receive the legs of said bail between the flanges of the channels of said legs of said member.

3. The attachment according to claim 1 in which said cleaning means comprises a blade member connected to the bight portion of said U-shaped member, said bight portion of said member being positioned in use in outwardly spaced position above and beyond the bight portion of said bail of said spray device and the spray head of an aerosol container when supported by said spray device and said blade member being adapted to engage and loosen material desired to be removed from an area where spraying treatment is desired.

4. The attachment according to claim 3 in which said blade extends at an angle forwardly from said member and outward toward one side of a plane extending through the legs of said member.

5. The attachment according to claim 4 in which the outer edge of said blade extends in a direction substantially transversely to said legs of said U-shaped member and said outer edge being shaped for scraping purposes.

6. The attachment according to claim 1 in combination with the bail of said spray device and in which said means to connect the legs of said U-shaped member to said bail of said spray device comprises interfitting means respectively on the legs of said member and bail.

7. The attachment according to claim 6 in which said U-shaped member of said attachment is formed from resilient material and the legs thereof being adapted to urge said interfitting connecting means into connected engagement with each other.

8. The attachment according to claim 7 in which said interfitting connecting means comprise a pair of complementary recess and projection means respectively provided on the co-engageable portions of the legs of said U-shaped member and bail of said spray device, said connecting means being operable to prevent relative longitudinal movement between said member and bail and the flanges of the channels of the legs of said U-shaped member receiving the opposite sides of the legs of said bail of said spray device to prevent relative angular movement between the legs of said member and bail.

9. The attachment according to claim 6 in which the bight portion of said U-shaped member is spaced from the bight portion of said bail of said spray device, whereby the spray nozzle of an aerosol container may be accommodated within said space between said bight portions to permit discharge of sprayed material laterally from said nozzle.

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