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3,565,541

TREATING FLUID CONTAINER WITH APPLICATOR UNIT

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2 Sheets-Sheet 1

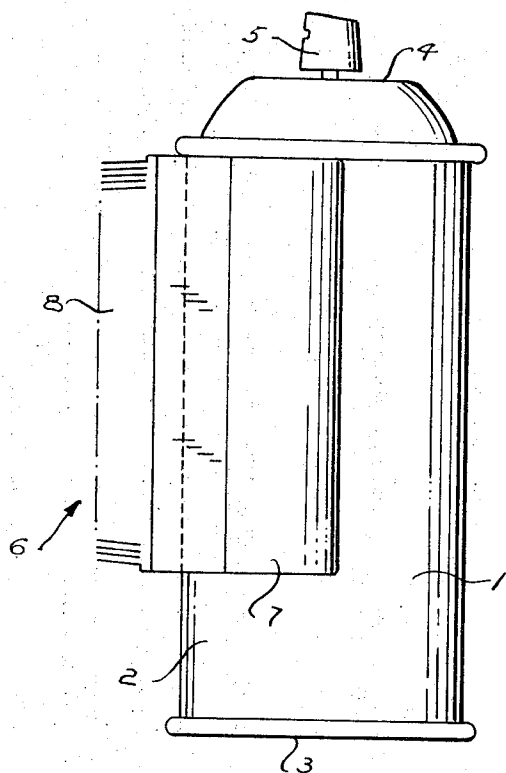


FIG. 1

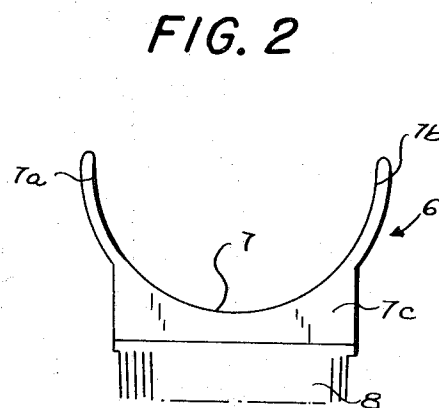


FIG. 2

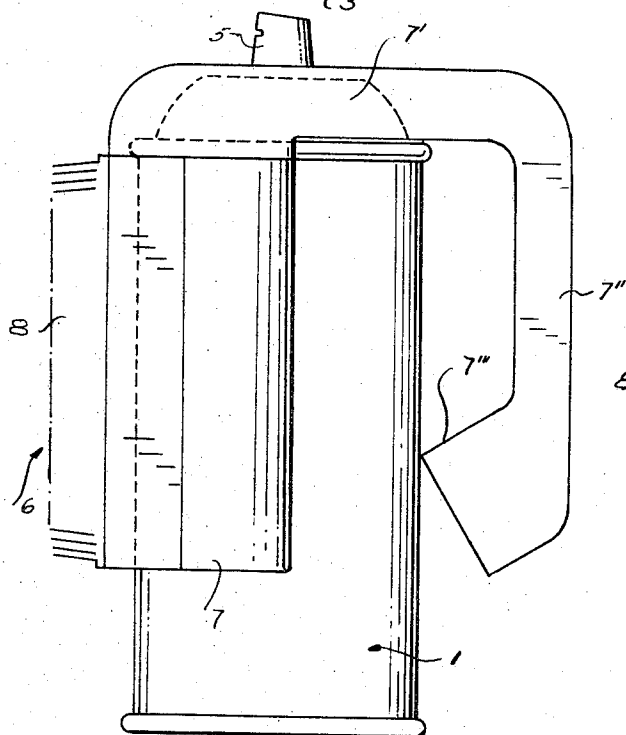


FIG. 3

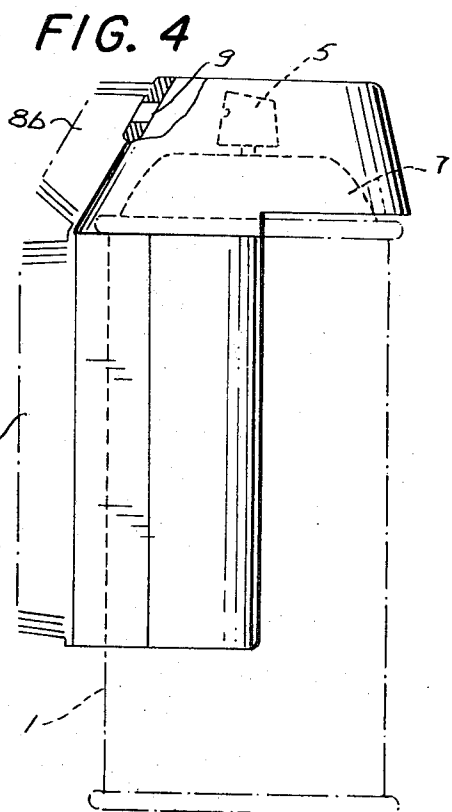


FIG. 4

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FIG. 5

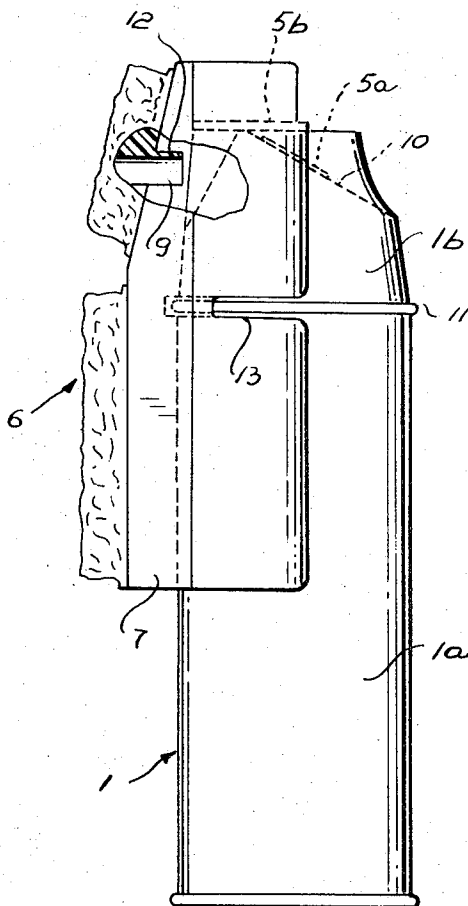


FIG. 6

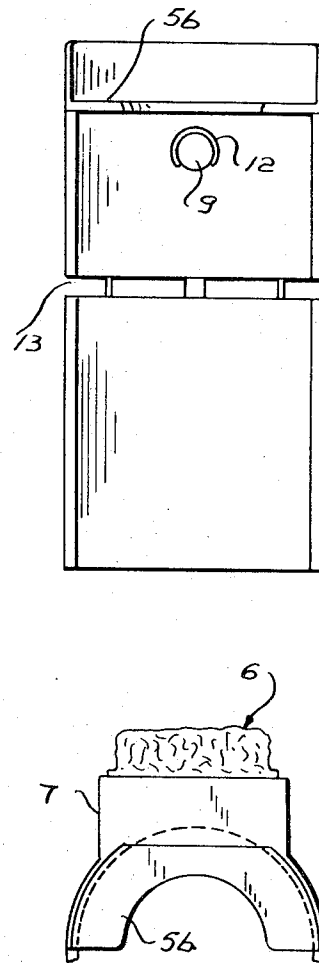


FIG. 7

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TREATING FLUID CONTAINER WITH APPLICATOR UNIT

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7 Claims

ABSTRACT OF THE DISCLOSURE

A pressurized can includes a spray nozzle operative for discharging quantities of the pressurized treating fluid contained in the can onto a surface to be treated. A brush unit is coupled with the can and includes a clamping sleeve of substantially C-shaped cross section clampingly engaging the circumferential wall of the can, and at least one brush which is carried by the clamping sleeve and with which the treating fluid may be brushed after discharge onto the surface to be treated. The brush may be of one piece with the clamping sleeve, or it may be separable so that it may be replaced with another brush.

BACKGROUND OF THE INVENTION

The present invention generally relates to an arrangement for utilizing a treating fluid, and more particularly to an arrangement for discharging a pressurized treating fluid onto a surface to be treated, and for a brush with which such treating fluid may thereupon be brushed.

There are applications where it is desirable to first spray a pressurized treating fluid onto a surface to be treated, and subsequently to subject this surface, and the treating fluid thereon, to a brushing. This is for instance the case in cleaning of upholstery where a cleaning fluid must initially be discharged onto the surface to be treated, and subsequently be brushed to loosen dirt and to work the cleaning fluid into the upholstery so as to assist in the loosening of dirt. Another instance of such an application is the polishing of shoes, where it is possible to spray or atomizing nozzle 5 of the type conventional in subsequently to brush the shoe to distribute the cleaning and polishing fluid and to cause it to remove dirt and to be buffed. The present invention provides a highly versatile and convenient arrangement for accomplishing both of these functions in a most simple and advantageous manner.

SUMMARY OF THE INVENTION

In accordance with one feature of my invention I provide an arrangement for utilizing a treating fluid, which arrangement includes a receptacle having a substantially cylindrical circumferential wall and containing a treating fluid under pressure. The receptacle further includes a spray nozzle operative for discharging quantities of the treating fluid onto a surface to be treated. A brush unit is coupled with the receptacle and includes clamping means clampingly engaging at least the circumferential wall so as to overlie a portion thereof, and brush means which is carried by the clamping means and is connected thereby with the receptacle. In this manner brushing of a surface onto which the fluid has been discharged is made extremely simple, the brush unit being so constructed and arranged as to enable discharge of the fluid and subsequent brushing with the brush unit while the receptacle is gripped by the fingers and the palm of a human hand.

It should be understood that the brush means may include one or more brushes, all or some of which may be of one-piece construction with the clamping means or all or some of which may be releasably coupled with the

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clamping means. With the latter type of construction the brushes may be removed for cleaning after they have become soiled, or they may be removed to be replaced by others if they have become damaged. Such brushes may of course be removed and be replaced with other brushes, for instance with brushes having bristles which are more or less stiffer than the ones originally used, or brushes which differ in other respects, for instance by having bristles of different material. I wish it to be understood that the term "brush" as used in the specification and claims is to be representative of an applicator in general. Thus it is intended to include not only a conventional bristly implement known as a brush, but also applicators of cloth, fabric, sponge rubber or the like in form of layers, pads or other configurations.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a somewhat diagrammatic side-elevational view of a first embodiment of my invention;

FIG. 2 is a top-plan view of the brush unit of the embodiment shown in FIG. 1;

FIG. 3 is a view similar to FIG. 1, but illustrating a further embodiment of my invention;

FIG. 4 is a view similar to FIGS. 1 and 3, but illustrating yet an additional embodiment of my invention;

FIG. 5 is another view similar to FIGS. 1 and 3, showing still an additional embodiment of the invention;

FIG. 6 is an elevational view of the hollow interior of the applicator unit of the embodiment shown in FIG. 5; and

FIG. 7 is a top view of the unit shown in FIG. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Discussing now the drawing in detail, and firstly FIGS. 1 and 2 thereof, it will be seen that my novel arrangement illustrated therein comprises a receptacle 1 and a brush unit 6. The receptacle 1 is in form of a pressurized can containing a treating fluid, for instance a cleaning fluid, a liquid wax or the like, which may be expelled from the receptacle 1 by an aerosol in a conventional manner.

The receptacle 1 has a substantially cylindrical circumferential wall 2, a bottom wall 3 and a top wall 4. The drawing clearly shows that the end portion of the receptacle 1 adjacent the top wall 4 tapers or converges, and the receptacle 1 is provided in the top wall 4 with a spray or atomizing nozzle 5 of the type conventional in aerosol spray cans. Depressing of the nozzle 5, for instance by the fingers of a user, in the direction towards the bottom wall 3 will release the pressurized contents of the receptacle 1 until pressure upon the nozzle 5 is relieved.

Assuming, for instance, that the active contents of the receptacle 1, that is the treating fluid as opposed to the aerosol-type carrier, are in form of a liquid wax which is to be sprayed onto shoes for cleaning and polishing the same, it is thereupon necessary to buff this wax once it is sprayed onto the shoe. For this purpose I provide my brush unit 6 which is clampingly secured to the receptacle 1 with which it constitutes a unit, that is an assembly whose components are always used in conjunction with one another. My brush unit 6 comprises in the embodiment of FIGS. 1 and 2 an elongated clamping sleeve 7 which may consist of synthetic plastic material

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or the like. FIG. 2, the top-plan view of this brush unit 6, shows that the clamping sleeve 7 is of substantially C-shaped cross section and comprises two arms 7a and 7b which clampingly engage the circumferential wall 2 of the receptacle 1, and a portion 7c which serves to carry and retain a brush 8. The arms 7a and 7b are so configured as to extend beyond the center-line of the receptacle 1, that is seen in FIG. 1 where free ends extend rearwardly beyond the vertical plane of symmetry of the receptacle 1. In the embodiment of FIGS. 1 and 2 it is assumed that the brush 8 is of one piece with the clamping sleeve 7 and it may have bristles of the same material of which the clamping sleeve 7 consists, or of another material. It is, however, possible to provide the brush as a separate releasable member, in which case the portion 7c of the clamping sleeve 7 will advantageously be provided with a recess corresponding to the external configuration of the brush 8, the latter being receivable in such recess. Cooperating male and female coupling portions will then be provided on the brush 8 and the portion 7c so that the brush 8 may be retained in the aforementioned recess with a snap action, and may be removed if and when desired. The reasons why the brush 8 may be made separable have already been outlined before.

The embodiment of FIG. 3 differs from that of FIGS. 1 and 2 in the provision of a cap portion and a handle portion. Like components have been identified with the same reference numerals as in FIGS. 1 and 2. Additionally, however, the embodiment of FIG. 3 comprises a cap portion 7' which is assumed to be integral with the clamping sleeve 7 and which in this embodiment is so configured as to clampingly engage the converging top portion of the receptacle 1. It is to be noted, however, that the cap portion 7' in the embodiment of FIG. 3 is configured so as to provide access to the spray nozzle 5, and more particularly in such a manner that spray discharge of the contents of the receptacle 1 from the nozzle 5 is not inhibited or interfered with in any way. Additionally, the brush unit 6 further comprises a handle portion 7'' which is integral with the cap portion 7' and which may, as illustrated, comprises a section 7''' which abuts against the circumferential wall 2 of the receptacle 1. This serves to anchor the brush unit 6 still more firmly and to prevent undesired loosening or separation, it being evident that now the receptacle 1 is engaged at diametrically opposite sides by the brush unit 6 so that the latter is even more firmly anchored.

The embodiment of FIG. 4, also is reminiscent of that shown in FIGS. 1 and 2. Identical components are again identified with identical reference numerals. The embodiment of FIG. 4 differs from that of FIGS. 1 and 2 in the construction of the brush unit 6. It again comprises the clamping sleeve 7 as shown in FIGS. 1 and 2. Furthermore, the brush unit of FIG. 4 comprises a cap portion 7' reminiscent of the one shown in FIG. 3, but here extending upwardly above the valve 5. Of course, the cap portion 7' in FIG. 4 is provided with an upper open end, or an aperture, so that the valve 5 is accessible for the fingers of an operator. Alternately it is also possible to provide a lever arrangement exteriorly accessible of the cap portion 7' and operatively associated with the nozzle 5 so that pressure upon such lever arrangement at the exterior of the cap portion 7' would actuate the nozzle 5. In this case there would be no need to provide the cap portion 7' with an upper opening.

In any case, however, the cap portion 7' carries an additional brush. The brush corresponding to the brush 8 in FIGS. 1 and 2 is identified in FIG. 4 with reference numeral 8a. The additional brush carried by the cap portion 7' is identified with reference numeral 8b and it will be seen that whereas the brush 8a extends in parallelism with the axis of the receptacle 1, the brush 8b is inclined with reference to this axis and to the brush 8a. Of course, FIG. 4 shows that the wall of the cap portion 7' as well

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as the brush 8b are located in the path of spray issuing from the nozzle 5. For this reason the wall of the cap portion 7' and the brush 8b are both provided with registering apertures 9, so aligned with the outlet of the nozzle 5 that fluid discharged as a spray therefrom will pass through the aligned openings 9 and issue therefrom. The use of the embodiment shown in FIG. 4 is the same as that of the preceding embodiments.

It will be appreciated that in the embodiments of FIGS. 3 and 4 the brush unit 6 will be connected with the receptacle 1 by placing the cap portion 7' at an angle over the converging end portion of the receptacle 1 and pushing downwardly and simultaneously inwardly so that the arms 7a and 7b of the coupling sleeve or clamping sleeve 7 will slide over the circumferential wall 2 of the receptacle 1, embracing the same and being clampingly connected thereto. The cap portion 7' may itself be constructed and configured so as to clampingly engage the upper end portion of the receptacle 1. Alternately it may be sufficient in certain embodiments, for example in the embodiment of FIG. 3 or in the embodiment of FIG. 4, for the cap portion 7' to be the sole clamping connection with the receptacle 1; in this case the sleeve 7 would serve only as a carrier for the respective brush.

In accordance with my invention it is important that the brush unit 6 be so constructed and arranged as not to interfere with the gripping of the entire device in the hand of a user. This is particularly true where no handle is provided so that the entire device may be snugly gripped and lodged between the fingers and the palm of a human hand, one of the fingers serving to depress the nozzle 5. The brush unit must not be so configured or be of such shape or bulk as to interfere with convenient gripping of the device from the side opposite that on which the brush 8, or 8a in the embodiment of FIG. 4, is located extending alongside the circumferential wall 2 of the receptacle 1.

Evidently, the brush unit 6 can readily be so constructed that itself and/or the brush 8 carried by it may be the same length as, or shorter than the receptacle 1.

The embodiment of FIG. 5 is also somewhat reminiscent of those in FIGS. 1 and 3. The spray can (or receptacle) is again identified with reference numeral 1. Here, however, it is assumed to be another type of construction which is lately becoming more and more prevalent. Specifically, the body 1a of the spray can 1 has connected thereto at its upper end a non-removable cap 1b, with a narrow projecting circumferential bead 11 being provided at the junction of the two. This cap 1b is turnable relative to the body 1a about the longitudinal axis of the latter. In known manner the cap 1b is provided with an upper depression or recess 10 and the actuating button 5a of the spray valve is located in this recess. The actual valve nozzle is identified with reference numeral 5b and provided, also in known manner, in the circumferential wall of the cap 1b. The association between nozzle 5b and button 5a is conventional and not illustrated.

The brush unit 6 of FIG. 5 (see also FIGS. 6 and 7) again includes an elongated clamping sleeve 7 and the cap portion 7', the sleeve being clamped to the body 1a in the same manner as before. It carries the "brushes," here shown as sponge rubber applicator pads 9.

Unlike the other embodiments, the cap portion 7' here is provided with an arcuate circumferentially extending lip 12 (see FIG. 7) which overlies the edges of the cap 1b of receptacle 1 to support and maintain the sleeve 7 in predetermined portion relative to the receptacle 1. The opening 9 corresponds to the one shown in FIG. 3.

Additionally, the sleeve 7 is provided downwardly of the lip 12 with an arcuate circumferentially extending slot or cut-out 13 (see FIG. 6) into which the head 11 of receptacle 1 projects, whereby the sleeve is still further positioned in its predetermined location relative to the receptacle 1. Of course, instead of the slot 13 a pair of ridges could define between themselves a slot-like recess

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for receiving the head 11. In any case, the sleeve 7 is turnable with reference to receptacle 1 about the longitudinal axis of body 1a so that it can be snapped onto the same in any position and then turned until opening 9 registers with nozzle 5b. Conversely, with this construction the cap 1b has its turnable character preserved, so that it may be turned at will without interference from the sleeve 7.

It will be appreciated that it is conceivable to omit the lip 12, just as it is possible to instead omit the slot 13.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of constructions differing from the types described above.

While the invention has been illustrated and described as embodied in an arrangement for utilizing a treating fluid, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims:

1. An arrangement of the character described, comprising a receptacle including a substantially cylindrical circumferential wall and a top wall and containing a treating fluid under pressure, said receptacle further including a spray nozzle provided on said top wall and operative for discharging quantities of the treating fluid onto a surface to be treated; and an applicator unit coupled with said receptacle, said applicator unit comprising clamping means including a first portion clampingly engaging at least said circumferential wall overlying a portion thereof, a second portion overlying said top wall without obstructing said spray nozzle and being rigid with said

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first portion, and a handle portion rigid with said second portion and extending at one lateral side of said circumferential wall, and applicator means carried by said first portion and connected thereby with said receptacle at a side of said circumferential wall which is opposite said one side so as to enable brushing or analogous treating of a surface onto which said fluid has been discharged.

2. An arrangement as defined in claim 1, said first portion being an elongated clamping sleeve of substantially C-shaped cross-section having two arms embracing said circumferential wall in clamping engagement therewith.

3. An arrangement as defined in claim 2, said circumferential wall having a predetermined axial length, and wherein said clamping sleeve has a length at least approaching said predetermined length.

4. An arrangement as defined in claim 3, said circumferential wall having a predetermined axial length, and wherein said clamping sleeve has a length which is smaller than said predetermined length.

5. An arrangement as defined in claim 2, said applicator means including at least one brush carried by said clamping sleeve extending longitudinally of the same and of said receptacle.

6. An arrangement as defined in claim 5, wherein said brush is of one piece with said clamping sleeve.

7. An arrangement as defined in claim 5; and further comprising cooperating male and female coupling portions on said brush and said clamping sleeve for coupling the former to the latter, to thereby enable removal of said brush for cleaning or replacement purposes.

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U.S. Cl. X.R.

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