United States Patent [19]

Brainerd et al.

[11] **3,881,628**

[45] **May 6, 1975**

[54] **AEROSOL CAN HOLDER**

[76] Inventors: **Andrew W. Brainerd; Kent H. Brainerd; Stuart W. Brainerd,** all c/o 1 N. Lasalle St., Winnetka, Ill. 60602

[22] Filed: **Mar. 21, 1973**

[21] Appl. No.: **343,544**

Related U.S. Application Data

[60] Division of Ser. No. 129,006, March 29, 1971, Pat. No. 3,722,021, which is a continuation-in-part of Ser. No. 39,275, May 21, 1970, abandoned.

[52] **U.S. Cl.** ..... **220/17**; 206/229; 220/85 H; 222/183

[51] **Int. Cl.** **B65d 83/14**

[58] **Field of Search** ..... 401/190; 15/107; 220/17, 220/85 H, 9 F, 14, 69; 215/12 R, 13 R, 100 R; 222/105, 129, 142.3, 142.5, 173, 175, 182, 183, 325, 465, 538

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Primary Examiner—William I. Price
Assistant Examiner—Stephen Marcus
Attorney, Agent, or Firm—Olson, Trexler, Wolters, Bushnell & Fosse

[57] **ABSTRACT**

A device integrating into a single hand-operated unit of convenient size, the expendable material and accessory equipment needed to provide, apply, distribute, brush and buff a wax or similar polish on the shoe, during which entire process the hand holding the shoe is not caused to relinquish its grip thereon. Additionally, new and useful means of insertion, retention and removal of an aerosol can into and from proposed housings serving as integrated shoe cleaning-polishing devices, and identification window apertures in the backing shell of such housings, are described.

6 Claims, 47 Drawing Figures

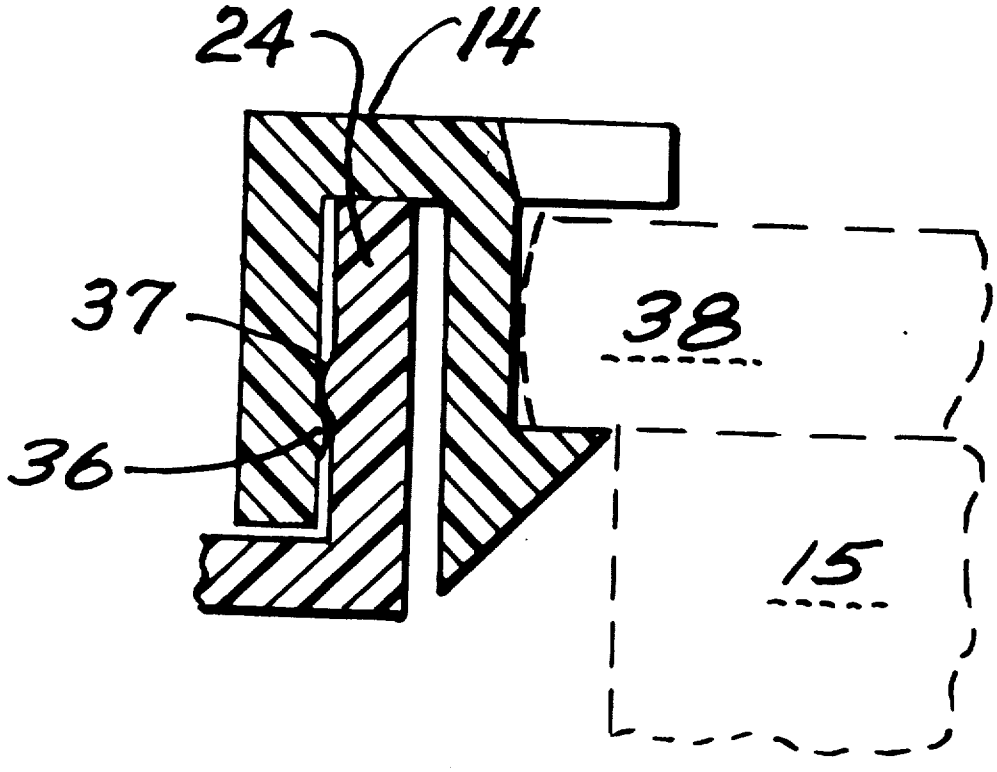


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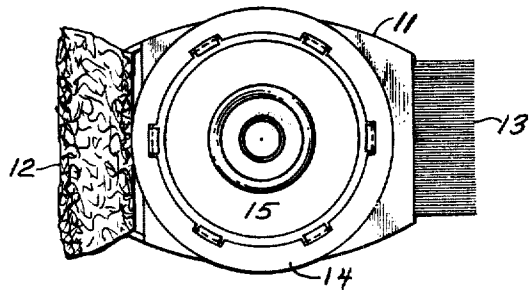


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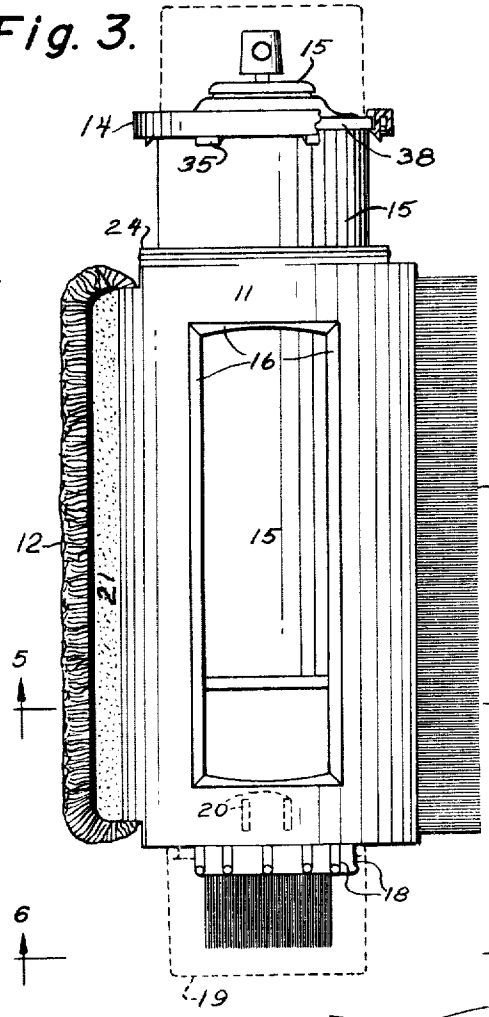


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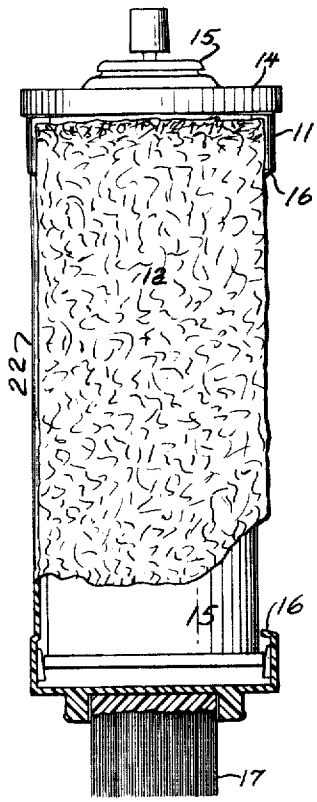
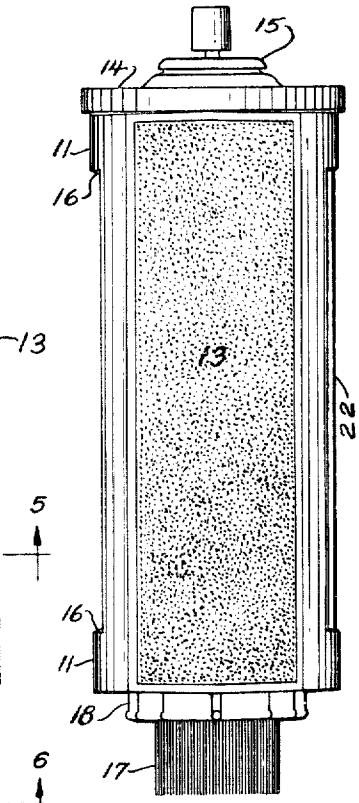


Fig. 4.



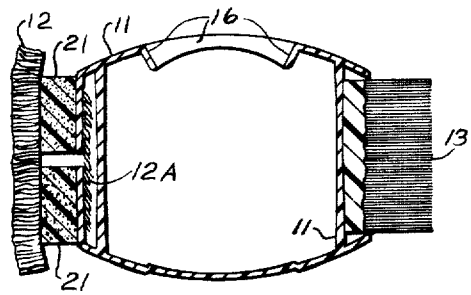


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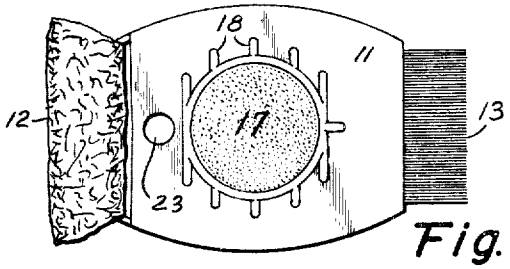
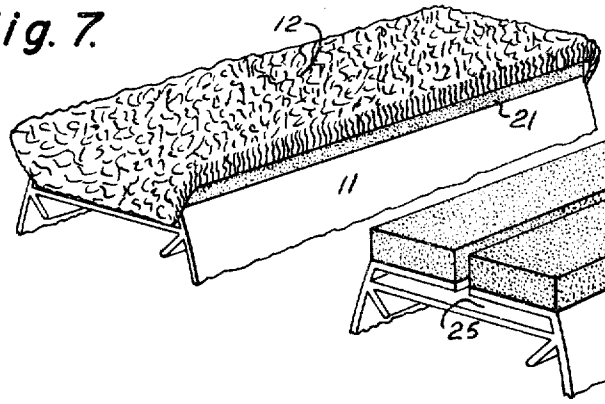


Fig. 6.

Fig. 7.



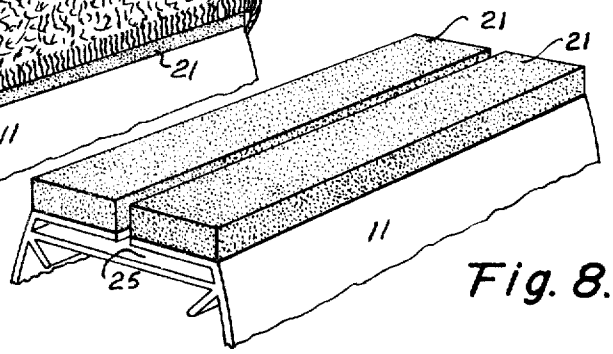
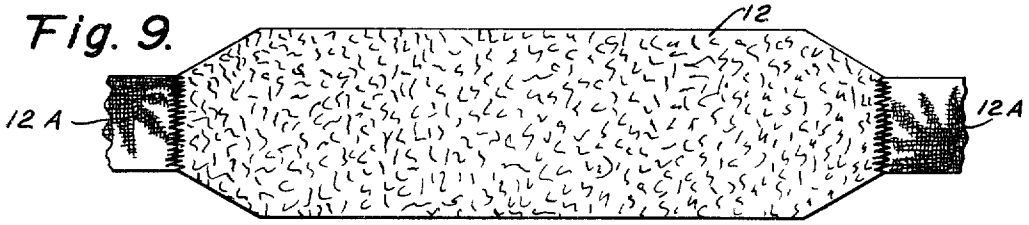


Fig. 8.

Fig. 9.



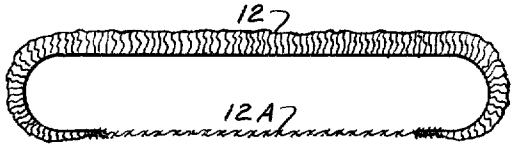


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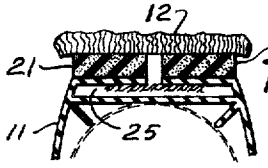


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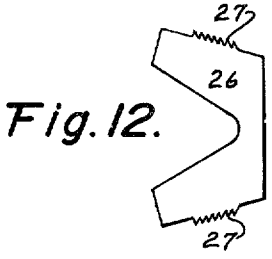
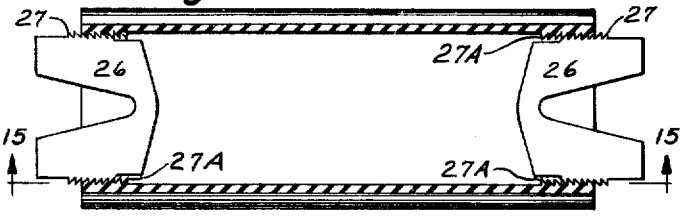


Fig. 12.

Fig. 13.



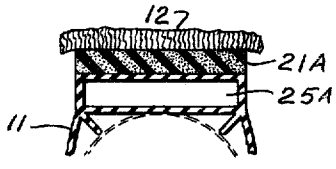


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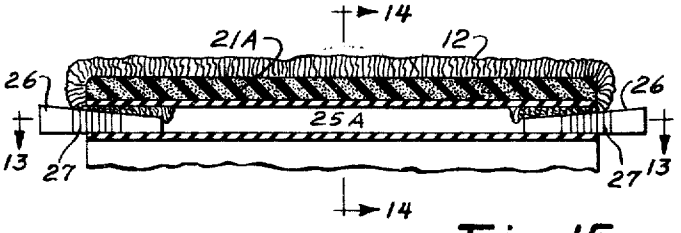


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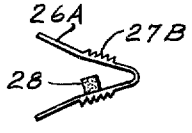


Fig. 16a.

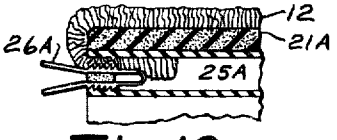


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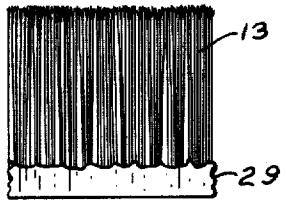


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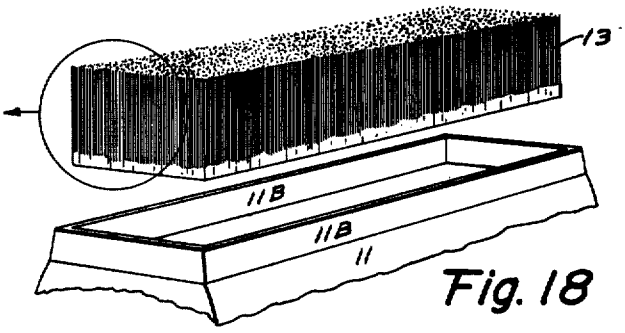


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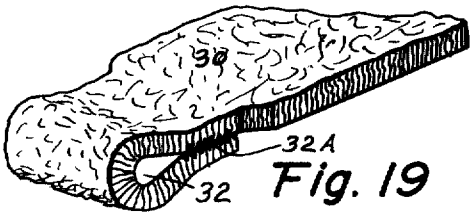


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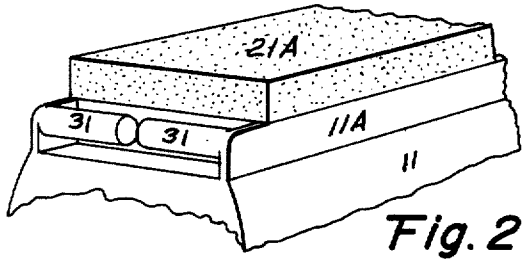


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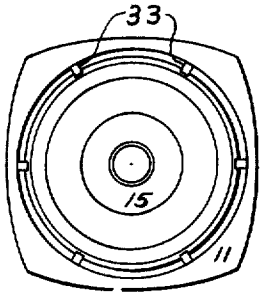


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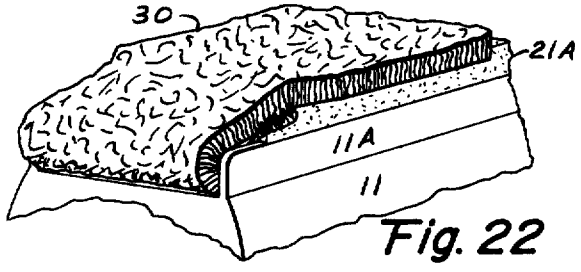


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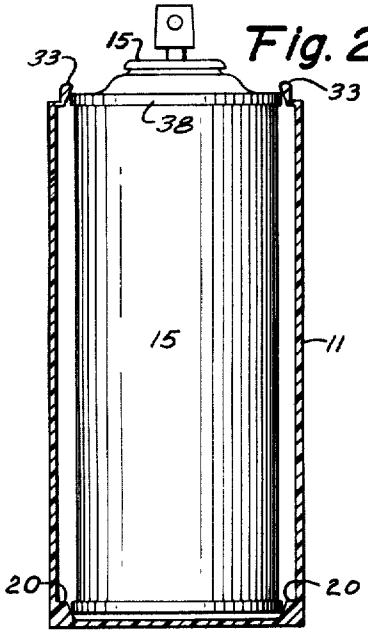


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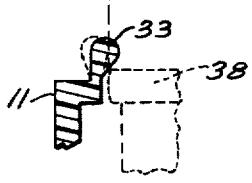


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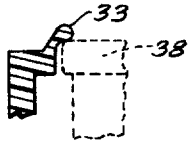


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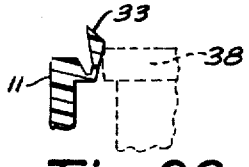


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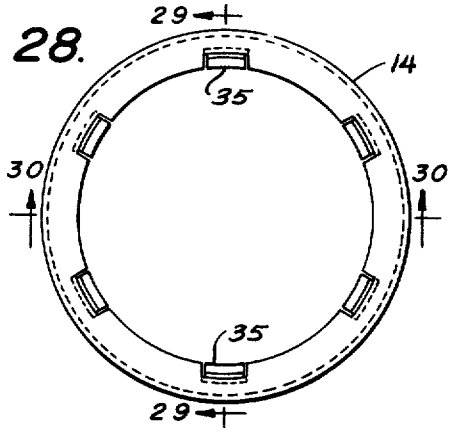
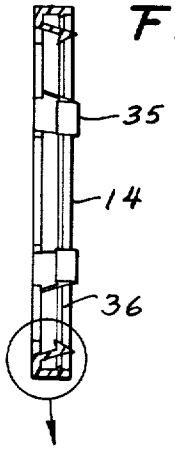


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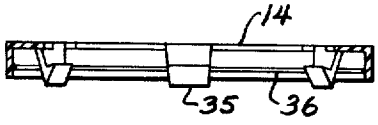


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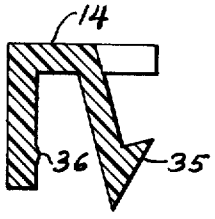


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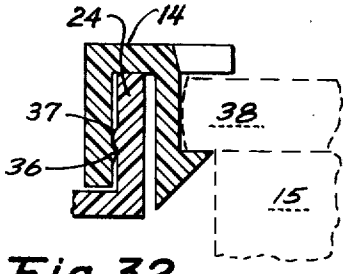


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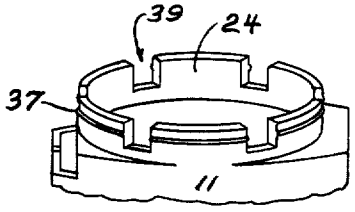


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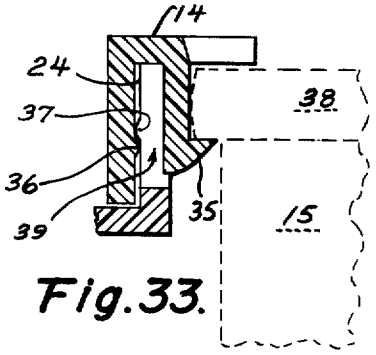


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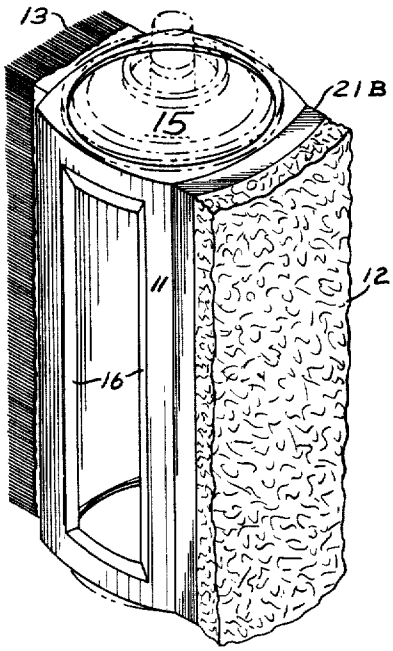


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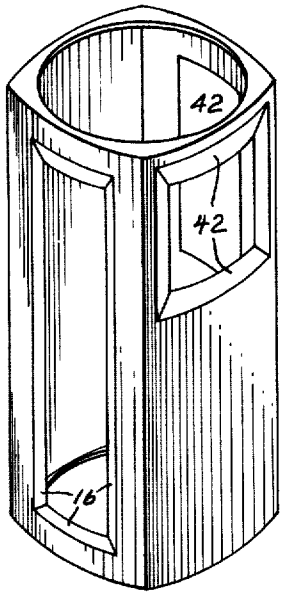


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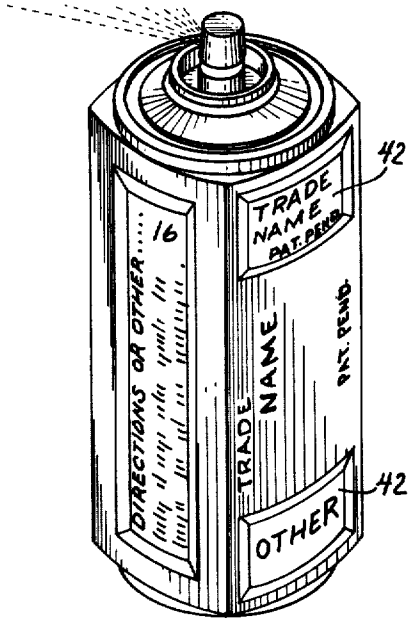


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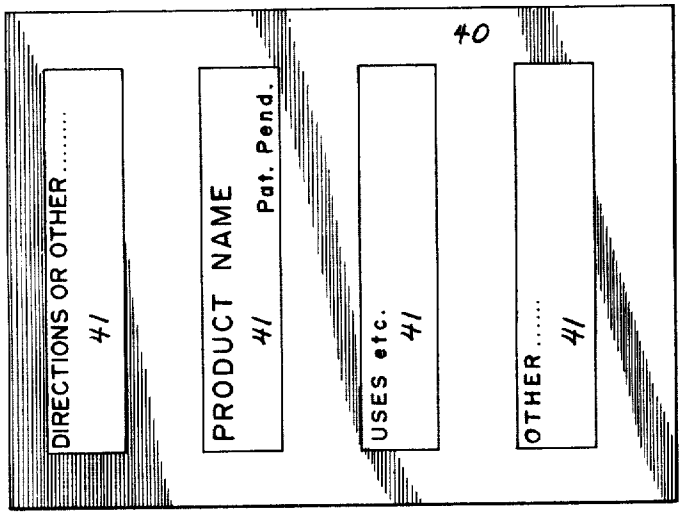


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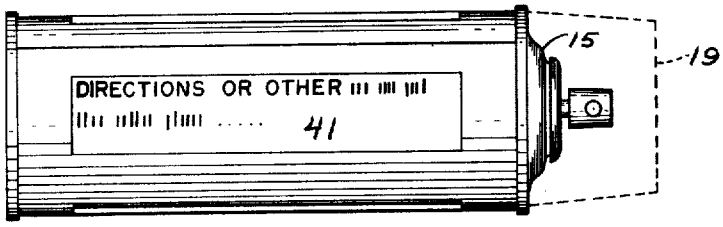


Fig. 40

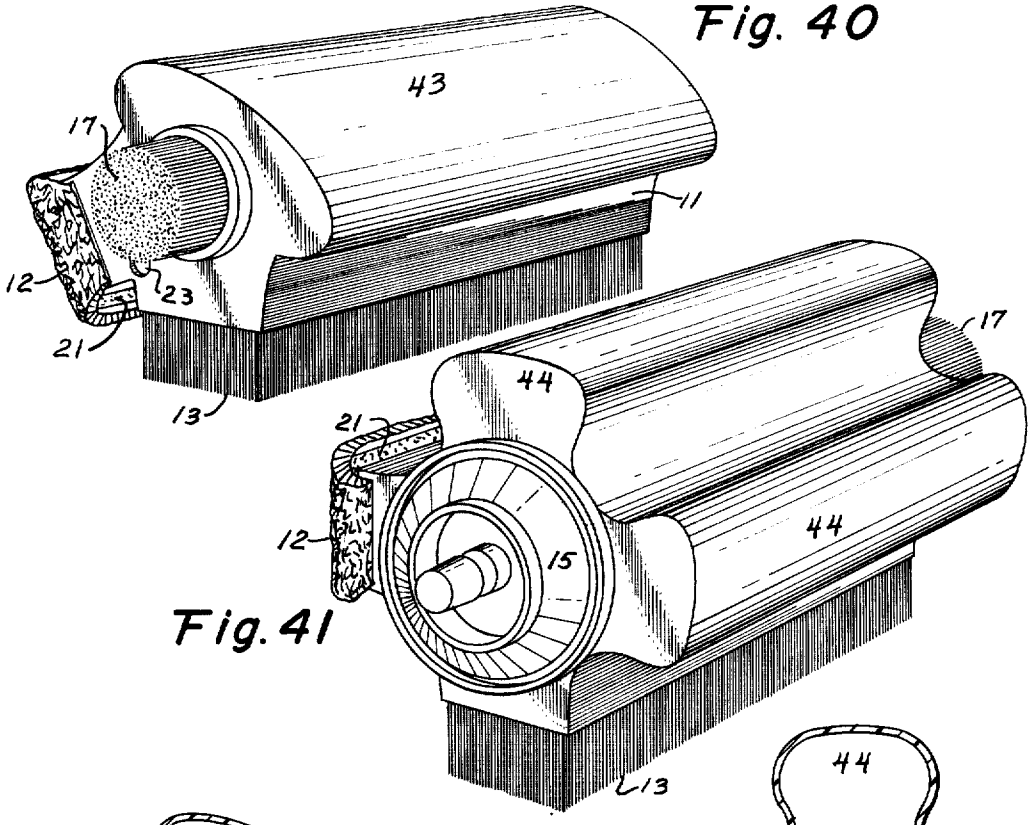


Fig. 41

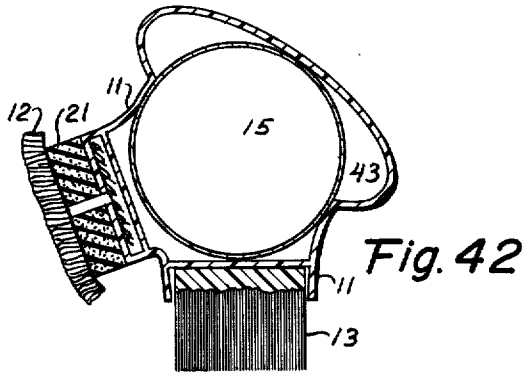


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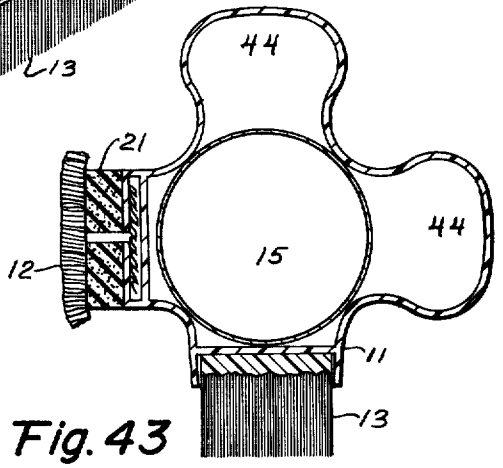


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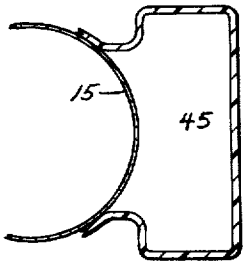


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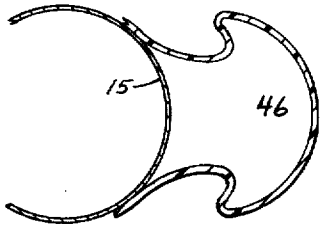


Fig. 45

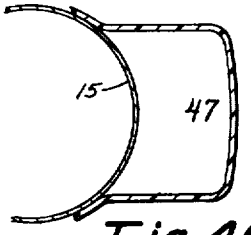


Fig. 46

AEROSOL CAN HOLDER

RELATED APPLICATION

This application is a divisional application of a co-pending application Ser. No. 129,006, filed Mar. 29, 1971, entitled "Shoe Cleaning-Polishing Device and Method of Making Same," now U.S. Pat. No. 3,722,021; which application was in turn a continuation-in-part of application Ser. No. 39,275 filed May 21, 1970, now abandoned.

BACKGROUND OF THE INVENTION

One of the most disagreeable household tasks yet unaided by the advance of science, is the shining of shoes, a fact believed to result from the lack of creativity and invention contributed to date in the field.

The present inventions relate generally to the use and refinement of manually operated shoe polishing devices employing an aerosol can containing shoe polish. Though obvious in concept, utilization of the aerosol can as such in this context does not, to applicants' knowledge, reflect in any prior invention, although Petion, U.S. Pat. No. 2,972,768, issued on Feb. 28, 1961, does refer to a "pressurized container" which in the drawings resembles a small cylinder tank with a novel escape valve. However, in Petion the need to use both hands to (a) depress a knob (No. 54 on Sheet 1) on the cover and (b) to simultaneously turn the elongate base plate from one position to another, made it impossible for a person to perform all of the traditional operations in the polishing of a shoe without causing the hand holding the shoe to repeatedly divert its grasp to engage in extrinsic tool manipulations. The inventions claimed in our co-pending Application, as further improved by novel and useful additions and changes now to be described, permit the hand holding the shoe at all times to retain its grip firmly on the shoe while the hand holding the device never loses contact with it during the entire sequence of traditional cleaning and polishing operations.

In a context in which millions of persons can be immediately assisted at low cost to conserve time and strength, any useful improvement admittedly novel should warrant serious patentable consideration. Each of the novel features now to be discussed contributes to make more accessible (because of their economical cost), more convenient and more useful, shoe shining devices containing an aerosol with polish. It is believed that taken as a class these devices stand as the first significant technological advance in the art for centuries.

SUMMARY OF THE INVENTION:

It is a general object of this invention to provide novel integrated shoe cleaning-polishing devices which may be held in one hand through the traditional sequence of cleaning and polishing procedures while the other hand at all times retains its original fast grip on the shoe, completing all of said tasks in a simplified and economical manner, and some embodiments of which devices accomplish all of the foregoing steps without allowing the motor hand to be dirtied by direct contact with the dauber, brush or buffer.

A purpose of the inventions claimed is the disclosure of new means of securing a fabric (lambswool, cloth, etc.) shoe polishing buffer onto a housing contoured to the circumference of an aerosol can containing shoe polish, contributing to create thereby an integrated device for the polishing of shoes.

It is a further specific object of this invention to suggest means of attaching a shoe polishing brush to said device, by which the device may be more expeditiously constructed and an improved aesthetic appearance achieved.

Yet another object teaches means of receiving and retaining aerosol cans in durable housings formed and contoured to the approximate circumference of said cans, allowing their insertion and removal without undue pressure or other strain on said housings.

Yet another object of the inventions here described is the use of identification windows within a sleeve-housing utilized as a shoe cleaning-polishing device, providing a means of contents-identification as well as economy in manufacture.

DESCRIPTION OF THE DRAWINGS

A better understanding of the inventions herein described, their organization and construction, may be had by referring to the description below in conjunction with the accompanying drawings, of which:

FIG. 1 is a top view of one major embodiment of the integrated shoe cleaning-polishing device, showing the housing, the aerosol can and the compensator ring (otherwise sometimes described as coordinate ring-collar), all in assembled relationship;

FIG. 2 is a side view of the same integrated assembly, with the lower portion thereof in cut-away sectional way to disclose the inner position of the aerosol can and lower construction;

FIG. 3 is a front view of the same embodiment of the invention, but with the aerosol can raised to show the manner of its insertion;

FIG. 4 shows a further side view of the same embodiment of the device pictured in assembled relationship with coordinate ring-collar and aerosol can;

FIG. 5 shows a sectional view taken along line 5—5 of FIG. 3;

FIG. 6 shows a bottom view of the same device taken along line 6—6 of FIG. 3;

FIG. 7 shows a perspective view of the buffer portion of the aforesaid sleeve-housing device cut away from the lower balance of the integrated unit;

FIG. 8 shows the same perspective view as FIG. 7, but with the buffer 12 removed;

FIG. 9 shows the buffer in its extended length sewn at each end to an elastic strip to form an endless belt which has been cut in this figure to better show the construction;

FIG. 10 shows the buffer in side view, duly sewn to the elastic strip to form an endless belt;

FIG. 11 shows a partial sectional view of the buffer side (approximately half) of the main housing;

FIG. 12 shows one embodiment of a wedge to be employed as an alternate means of securely attaching the buffer strip to the housing device;

FIG. 13 shows a longitudinal sectional view taken along lines 13—13 of FIG. 15;

FIG. 14 shows an alternate construction of the buffer portion of the housing, providing a through passageway or channel to accommodate the buffer and securing wedges, taken along the line 14—14 of FIG. 15;

FIG. 15 shows a sectional view of a portion of the housing and means for securing the buffer to the housing, taken along lines 15—15 shown in FIG. 13;

FIGS. 16 and 16a show a different type of wedge and means of employing same within the passageway to accommodate and secure the ends of the buffer strip;

FIG. 17 is a blown up view of that portion of the brush identified in circle in FIG. 18;

FIG. 18 shows the side of the device devoted to the longitudinal brush with its said corresponding brush placed above it to indicate positional relationship;

FIG. 19 shows one end of one embodiment of the buffer strip, duly sewn in readiness to be placed over the two pins 31 indicated on FIG. 20;

FIG. 20 shows a portion of the buffer side of the housing isolated to more clearly show the placement of pins and cushioning material;

FIG. 21 is a top view of a housing which, by adding brush and other elements becomes an integrated shoe cleaning-polishing device, into which an aerosol can may be placed and made secure by the protrusions pictured;

FIG. 22 shows an enlarged view of one end of an alternate buffer, cushioning material and housing in assembled relationship;

FIG. 23 is a sectional view of the housing shown in top view in FIG. 21;

FIGS. 24, 25, 26 and 27 show sectional views of various embodiments of the protrusions or nibs pictured in FIGS. 21 and 23;

FIG. 28 is a top view of the plastic compensator ring;

FIG. 29 is a sectional view of the compensator ring taken along line 29—29 of FIG. 28;

FIG. 30 is a sectional view of the compensator ring taken along line 30—30 of FIG. 28;

FIG. 31 is a blown-up sectional view of the ring taken from the encircled portion of FIG. 29, showing the nature of the hooks suspended from the inner circumference of said ring;

FIG. 32 shows a blown-up sectional view of the compensator ring, the chime of the aerosol, and the jointure with the neck of the housing device;

FIG. 33 is a blown-up sectional view of another embodiment of the plastic compensator ring invention showing a hook coordinated with a machicolation in the neck of the housing;

FIG. 34 shows the housing's neck with machicolations cut to coordinate with hooks on the inner circumference of the compensator ring;

FIG. 35 is a view in isometric projection of a housing with identification window aperture coordinated to the trade dress appearing on the label of the can shown in FIGS. 38 and 39;

FIGS. 36 and 37 show views in isometric projection of abbreviated housings containing identification window apertures of various sizes and placements;

FIG. 38 shows a flat view of an aerosol can's trade dress coordinated to the housing depicted in FIG. 35;

FIG. 39 is a front view of an aerosol can having affixed or printed on it the trade dress shown in FIG. 38;

FIG. 40 is a perspective view of a novel shoe cleaning-polishing device having one handle and three coordinate cleaning-polishing elements (brush, buffer and dauber);

FIG. 41 is a perspective view of a novel shoe cleaning-polishing device having two handles and three cleaning-polishing elements;

FIG. 42 is a cross-sectional view of the device otherwise shown in FIG. 40;

FIG. 43 is a cross-sectional view of the device otherwise pictured in FIG. 41;

FIGS. 44, 45 and 46 show alternate handles for use on the devices shown in FIGS. 41 and 40.

DETAILED DESCRIPTION

Referring now to the drawings more in detail wherein like numerals designate like elements throughout the various figures, FIGS. 1 through 6 show a preferred embodiment of the present invention reflecting improvements contained in this Continuing Application. It will be noted that this device is in effect a sleeve housing 11 in which a replaceable aerosol can 15 is lodged. The lower end of the sleeve-housing is closed, and protruding from said end a dauber 17 is positioned under a removeable protective cap 19 to be conveniently used also as a base. As FIGS. 1 through 6 incorporate most of the novel features claimed herein as invention, they will now, following this initial general disclosure, be examined in greater detail as the subsequent drawings and explanation make this preferred embodiment the more easily understood.

In FIG. 1 we look down at the same device pictured frontally in FIG. 3 as it stands in an upright position on its lower dauber-protective cap 19. In FIGS. 1 through 4, an aerosol can 15, containing an expressible shoe polish, is shown in planned conjunction with the housing: The broken-away portion of FIG. 2 illustrates the manner of firmly lodging the can within the housing, namely by employing bosses 20 in wedging relationship with its lower chime 38.

One notes in FIG. 3 the cut away portion of the compensator ring (coordinate plastic ring-collar) 14. Once this compensator ring 14 is placed upon the aerosol can's upper chime 38, the can is in condition to be inserted into the sleeve housing 11. It is in this closed position that the can, the ring and the housing appear in assembled relationship in FIGS. 1, 2 and 4.

Affixed to this sleeve housing 11 are a buffer 12 and a longitudinal brush 13 as well as dauber brush 17. In some embodiments it will not be necessary to utilize the dauber brush 17, which would in turn obviate the necessity for dauber protective cap 19: Under such circumstances, the added diameter footings 18 permit the unit to stand upright freely without additional support. The inventions contained in FIG. 5 are explained in greater detail in the multiple blown-up Figures appearing hereinafter.

Buffer Attachment Means

The attachment of a buffing surface to a buffer handle has been traditionally achieved thusly: A lambswool or other fleecy material is positioned over a cushioned under-bed, then fixedly attached at both ends of a rectangular, flat backing. In the case of a plastic sleeve-housing into which neither nails, staples nor screws can be reliably fastened, different means must be supplied by which to fasten the buffing material to the housing, it being operatively insufficient that said ends be simply glued or sewn onto the top and ends of the under-bed. Several such novel means are now described, without attempting thereby to limit the scope of the invention as hereinafter claimed.

FIG. 7 shows the buffer 12 on its traditional underbed 21: FIG. 8 shows a cushioning material split equally into two parts 21 longitudinally, placed over a plastic under-bed in the nature of a platform which is similarly

split longitudinally and raised above the level of the upper wall of housing **11**. This leaves a passageway or channel **25** between the raised plastic underbed and the housing shell, as well as a slight separation between the divided underbed halves. This divided resilient support remains capable of cushioning the buffing fabric **12** despite the presence of the center air strip running its entire length.

A strip of buffing material **12** (FIG. **9**), somewhat longer than the whole length of the buffer bed, is made into an endless belt (FIG. **10**) by sewing to each of its two ends, one end of a piece of elasticized material **12A**. Taking the buffer shown in FIG. **10** in two hands, with the thumb and forefinger of each layer the sewn joint, it can be seen that the elastic **12A** may be pulled apart a sufficient distance to allow it to pass between the divided plastic under-bed platform of the sleeve-housing, over each side of which the sponge rubber strips **21** have been placed. As thus extended the elastic is moved longitudinally in a sliding motion through the free air space between the sides of resilient supporting material **21**, twisting down into passageway **25** where it is allowed to contact thereby pulling closer together the ends of buffer **12** and creating a snug total relationship with the sponge rubber **21** and plastic under-beds.

This solution provides a convenient and aesthetically refined buffer-attachment by a means requiring a smaller amount of resilient supporting material **21** (due to the dividing air space), and whereby the buffer ends finally are securely affixed in the interior of the housing at a spot not otherwise accessible. The buffer **12** may be removed by again stretching the elastic **12A**, allowing it to be easily slid out between the supporting sponge rubber **21** and plastic under-bed sides. This solution would as a practical matter not be possible if only the lambs wool or other fabric were utilized in an endless belt, due to the difficulty to be encountered in gluing the supporting resilient material onto the plastic bed and at the same time achieving a snug fit of the buffer fabric over the resilient supporting material **21**: The passageway **25** dimensions would not only have to be measurably increased to accommodate lambs wool which varies between five-sixteenths to three-fourths inches in thickness, but a long aperture of a depth suitable for such heavy material would be aesthetically unattractive, yet necessary to prevent the crowding of the material.

It will be also noted that upon use many buffing fabrics elongate: Where the ends are fixedly attached at the ends of the buffer bed the growing slack in the material becomes offensive, yet there is no provision for its disposition. The use of elastic **12A** in the buffer **12** under-structure (see FIG. **10**) automatically contracts the exposed buffer surface to obviate this "surplus goods" problem produced by elongation through use.

Other means of attaching buffing material **12** to a plastic base of housing **11**, where a supporting resilient material **21** must cushion the buffer, is shown in FIGS. **12** through **16***a*. Here resort is taken to a plastic wedge **26** having teeth **27** which engage with similar teeth **27A** on the interior sides of the passageway **25A**. By first placing the ends of the buffer in passageway **25A**, then compressing wedge **26** and causing it to pass into the passageway **25A**, the wedge **26**, having increasing width and increasing thickness (see FIG. **15**), securely fastens the fabric at the end of the channel. Once the teeth **27** of the wedge engage with the teeth **27A** of the interior of the passageway, the buffer is held securely by pressure of the wedge. Note that this solution does not contemplate a divided bed of resilient material **21**, but rather a solid bed **21A** over a passageway **25A** which no longer needs to be split to allow longitudinal sliding entry of the elastic.

Another species of wedge **26A** is shown in FIG. **16** and **16***a* in which the teeth **27** of the wedge engage against similar teeth **27A** in the lower bed of channel **25A** (in FIG. **16**), compressing hard sponge-like material **28** between the jaws of the wedge, with the reversed upper teeth **27B** of the wedge preventing the withdrawal or slippage of the buffer fabric once the wedge **26A** is properly positioned. In both this and the preceding embodiments the wedge may be withdrawn and repositioned at any time to take up slack in the buffer **12** created through use.

A further means of attaching buffing material to a plastic housing for use as a shoe polishing device is shown in FIGS. **19** and **20**. Lambs-wool **30** or similar fleecy fabric is cut to a width slightly greater than that of the under-bed **21A**, and a length greater than that of its bed **11A**, with the excess goods at both ends being turned under and sewn transversely at **32A** into an open loop **32** (FIG. **19**). Such a loop, when slid over the end pins **31** shown in FIG. **20**, provides a solid means of affixing the buffer to the device, and permits easy replacement of the buffer when it has become worn.

Each of the aforesaid means of attaching the buffer to the device performs useful purposes not otherwise nor previously achieved by any buffer or similar device known to Applicants.

Brush Attachment Means

The attachment of a polishing brush to a sleeve-housing of this character, purposing to achieve thereby a shoe polishing device at least partially integrated, presents a fastening or adherence problem aggravated by the active use to which the brush will be put.

Reference is made to a commercial product sold under the trademark BRUSHLON (FIG. **17**), consisting of an underlayment of urethane **29** into which are adhered thousands of bristles **13** in intensive placement thereon. The BRUSHLON underlayment **29** is of uneven height; viewed from the side (FIG. **17**) its base presents an undesirably irregular appearance when used as a basic part of a consumer product such as a shoe shining device for personal use. However, the use of BRUSHLON in the present integration is otherwise advantageous because it may be easily cut to any size, and may be readily glued.

FIG. **18** shows a cut-away upper portion of a sleeve-housing **11** running the approximate length of a coordinate aerosol can. The gallery **11B** surrounding its upper perimeter is believed to be both novel and useful in the following respects: First, it places a wall in front of and slightly above the brush's underlayment **29** around its entire edge, thereby concealing its irregularity as well as the rough jointure of the otherwise flat backing of the device **11** with the flat base **29** of the brush. Second, in the production process where manual or even machine placement of a brush element on an otherwise flat surface is necessary, misplacement may easily occur: Where there is a known recess of fixed dimension and shape into which an object of similar size and contour can be quickly placed, the problem of misplacement is avoided inasmuch as the brush can only be

lodged accurately within the recess if it is to be placed there at all. Third, the capability of the brush, when used, to withstand lateral and longitudinal pressures and movements is greatly increased where its sides are encased within and lodged against firm walls: The gallery 11B provides a solidity without which the effectiveness of the BRUSHLON material for such purposes is significantly diminished. Fourth, a device of this character receives hard handling; while in use it is in almost constant contact with shoes. Were the gallery not utilized, the corners especially of the brush material would receive incessant bumping and knocking; by utilizing the gallery or "shield" around its corners the brush will not be repeatedly thus pried loose from adherence to the base.

Aerosol Can Insertion and Retention Means

It has been found that the sleeve-housing device pictured in FIGS. 21 and 23 may be most economically cast first in two lateral halves as the cost of an injection mold (for quantity production of plastic pieces) is greatly increased by its depth; the halves are then joined by gluing. When a can is inserted into the housing, the upper end of this device (it being there just large enough to admit the can) is subjected to a strong horizontal outward pressure at the moment of the passage of the chimes 38 (the enlarged diameters of metal at top and bottom of can). Unless precautions are taken such lateral force being often reapplied must in time separate the upper portion of the longitudinal halves of the housing at their common joint.

Applicants have devised a novel means of harmlessly diverting this separating force caused by the can's insertion and removal, without impeding the convenience of its use. Reference is made to the six (which number may be greater or less than six) flexible extensions 33 appearing in FIGS. 21 and 23, which extensions are integrally a part of housing 11. A circle may be drawn touching the innermost tips of the aforesaid extensions 33: This circle, being of lesser diameter than the circle formed by the chime 38 of the inserted can 15, must be increased in size in order to permit the can's insertion. At the moment of insertion the angle of force upon the extensions 33 lies in a horizontal plane: However, this force does not act directly on the joint which adheres both halves of the whole housing, but rather simply pushes back the six raised, flexible extensions 33, resulting in a fulchrum or hinge effect at their bases. After the chime passes, the extensions return to their original positions and serve to hold the can firmly within the housing.

The profile construction of the extensions 33, as shown in FIGS. 24, 25 and 26, discloses that their thickness increases generally as they ascend, then attenuates at their tip. Upon upward removal of the can the lateral pressures commence just above the level of the housing top; these grow more severe as the can rises, reaching their most destructive force at the upper level of the extensions 33 where the sideward force is imparted least of all to the main device's common longitudinal joint, being spent instead in the flexing of the extensions.

FIG. 27 discloses a type of protrusion or extension different from the others pictured in that the "nib" or plastic extension points downward rather than up. This configuration operates especially well if the sleeve housing has an open lower end on which similar protrusions have likewise been placed so that the can is retained by such protrusions at both ends serving to retain it snugly from within.

As an alternate construction, the extensions 33 may be affixed to an annular upstanding neck such as neck 24 pictured in FIG. 34 (but without machicolations), or as integral parts of a separate ring affixed to the said neck.

Compensator Ring (Coordinate Ring-Collar) to Accommodate Varying Can Diameters

The importance of the aforesaid destructive force is greatly aggravated by one condition which prevails generally in the United States today within the can industry. For reasons peculiar to their own stell procurement and manufacturing processes, the large "tin" can companies such as American Can Company and Continental Can Company refuse to warrant the outer dimensions of the chimes of cans of the general sizes here under discussion. Not only will these can companies not assure purchasers of a responsible tolerance in said diameters, as, for example, plus or minus one thirty-second inch; but the can companies will in fact not warrant or even express these outside dimensions within any tolerance whatever.

It is obviously difficult to design plastic sleeve-housings to snugly accommodate cans of great potentially varying diameter; if such housings are merely designed for cans of the "usual" external dimensions, a minority of cans might be of a width, say, one-eighth inch greater than the average and these few could critically damage the sleeve-housings upon their forced insertion and removal. One novel and useful method of achieving secure retention of the can yet with a flexibility sufficient to allow cans of varying external chime dimension to be reliably inserted into a sleeve-housing having a neck of constant circumference, involves the utilization of a compensator ring as now described. See FIGS. 28—34.

A ring 14 made of a flexible plastic-like material is affixed to the top chime 38 of the can of polish by means of multiple hooks 35 which descend at planned intervals from the ring's inner circumference. These hooks are of a length and shape such as to flexibly accommodate the forced insertion of cans of varying diameters, said hooks 35 gripping the can 15 from underneath the upper chime 38 when the ring is forced solidly down over the top of the can. See FIG. 32. The can is prevented from moving upward relative to the ring 14 by arcuate lips integrally a part of said ring.

Whereas the housing neck 24 is greater in diameter than the inner circumference of the compensator ring 14 and then the circle (of flexible diameter) of hooks descending therefrom, it is less than the diameter of the ring's outer circumference from which a side wall descends. (FIG. 32) When assembled, an annular protrusion 36 on the inside of the outer wall of the ring forms an interference fit with a similar raised circumference 37 on the outside of the neck of the housing; both pieces preserve a constant diameter and their respective raised circumference 36 and 37 co-act compatibly to insure the can 15 being held securely within the device.

As alternatively shown in FIGS. 33 and 34, the neck 24 of the housing 11 may be of a slightly lesser diameter, but slotted with machicolations 39 of a size, shape, placement and number determined by the size and po-

sitions of the hooks **35** descending from the inside circumference of the snap ring compensator. When the ring is positioned on the can and the can inserted into the housing (FIG. **33**), the backs of the hooks protrude laterally from the can's upper circumference into their respective slots cut out of the neck specifically to accommodate such protrusions. Where an unusually large chime diameter **38** forces the hooks far backward, the machicolations in the neck easily accommodate the excess by permitting the backs of the hooks to further enter the cut-out voids **39.**

Under both alternatives described above, whereas the tips of the hooks **35** (normally but not necessarily spaced equidistant about the inner circumference of the ring) can create circles of different diameters depending upon the diameter of the inserted can, by means of the novel comparator ring described the can is lodged solidly within the ring (by its circle of hooks) and the ring itself is thereafter lodged firmly over and on the housing by means of its outer rim of constant diameter interacting with the constant diameter neck **24** of housing **11** being both unaffected by variances in chime **38** diameter.

Identification Window for Aerosol Housing

Reference is made to FIG. **35** in which an aerosol can (**15,** in dotted line) has been packed within a sleeve-housing **11** which provides circumferential backings upon which the polishing tools (brush **13** and buffer **11**) are conveniently placed. The use of such a housing normally creates a problem of contents-identification in that, if made solidly, the walls of the housing preclude the user or viewer from reading or otherwise learning the contents of the enclosed can as described on the can's label. This defect is better understood in the knowledge that the sleeve-housing is designed to accommodate easiest insertion and withdrawal of random aerosols, thereby encouraging it to serve as a vehicle to dispense and to apply polishes of different colors, e.g. black, brown. Thus one utilizing the device occasionally with different aerosol inserts would not be able to know from looking at the outside of the device, what the color then contained in it might be. To alleviate this problem and achieve other useful purposes now described, an identification window is disclosed in FIG. **35** by which the viewer or user may at once determine the nature of the contents simply by looking "through" the window of the device at the contained can's trade dress.

The cost of devices of this character, manufactured for consumption on a mass basis, is in large measure determined by the weight of plastic used therein. By creating a window in one (or more) side of the device, a significant amount of plastic is saved without sacrificing strength or function. A further economy is achieved in that by utilizing the trade dress already on the can anyway, it is unnecessary to place lettering or an identifying label on that side of the shoe device. Labels of a type appropriate for this usage cost in quantity from one to three cents each, possibly more depending upon the material used: But even the most durable commercial labels, e.g. printed foil, do not withstand the expected heavy manual use of this type of device, as after even mild use these become tattered. Cost-savings directly flowing from the omission of such a label on the device and from the reduction in weight of the plastic material required, are such as justify the use of such an identification window on an economic basis alone, quite apart from the functional contribution of the window.

The window pictured in FIG. **35** does not exhaust the scope or nature of the invention described. The window may thus be long and narrow, or there may be two or more windows critically placed on the housing device to disclose information or serve other express purpose. See FIGS. **36** and **37.** The identification window concept can be also embodied on a second or even three or four sides of any housing in which an aerosol can is contained for storage or utilitarian purposes. It is clear that the scope of the invention in relation to housings for aerosol cans goes farther than reference solely to shoe cleaning and polishing devices.

A full explanation of the identification window must include reference to the trade dress used upon the can placed within the device. It will be noticed that the dimensions of the window in FIG. **35** are of a specific, known size: In the unrolled, flat representation (FIG. **38**) of the trade dress (which in production would be either printed directly on or in the form of a label wrapped around the aerosol can as in FIG. **39**), these same dimensions are directly adopted for correlation with the window aperture. The trade dress pictured in FIG. **38** is divided laterally into segments of equal size; the size of the segments is determined by the size and text requirements of the label interacting with the window shape and configuration of the housing. It is stressed that the correlated trade dress or label and identification window are co-equal features of the invention and coordinate parts thereof.

Aerosol Shoe Shine Device With Dirt-Free Handle

It will be noticed in FIGS. **2, 3** and **4** of this Continuing Application, for one to clean and polish shoes utilizing the devices there pictured presents the possibility of dirtying the motor hand (i.e. the hand holding the device) by its contact with longitudinal brush or buffer. It has been found through extensive experiment that with aerosol devices employing buffer, brush and dauber virtually no dirt does in fact reach the hand when holding the device from either the brush side or the buffer side. However, some persons will no doubt dispute this, and large numbers of persons will conclude, however erroneously, in considering the use of these devices, that their hand would become dirty by touching the brush or the buffer.

A perhaps unreal, but nevertheless practical problem therefore tends to thwart public acceptance of this device, in that there is a natural disinclination on the part of many persons to permit their hands to fall in contact with a surface which, rightly or wrongly, they consider to be dirty. The inventions pictured in FIGS. **40** and **41** solve this problem. A person grasping handle **43** has at his immediate control without changing the hand's position on the device, both brush and buffer: In neither case does the hand come in contact with an offensive surface.

A further embodiment of the "aerosol side handle" concept is pictured in FIG. **41,** in which to obtain a slightly more comfortable working position than is available in the configuration shown in FIG. **40,** two handles have been constructed, each directly opposite a working surface. Hand contact with any working surface is again totally avoided. Although this device becomes somewhat more cumbersome in its employment,

it nonetheless presents the same dramatic capability of the other devices pictured in this entire Application, in which it is possible for one hand alone, without for an instant losing physical contact with the device, to perform all of the multiple steps in the polishing of a shoe while the other hand at no time relinquishes its grip upon the object shoe.

FIGS. **44, 45** and **46** show alternative handle designs that may be employed with the embodiments of FIGS. **40** and **41.**

The scope of the inventions described is set forth in the claims hereinafter following, and is not confined merely to the precise alternatives described above.

Invention claimed is:

1. An elongate housing device designed to receive an aerosol can or the like, said housing device having at least one open end defined by an axially extending neck portion, permitting an aerosol can to be disposed therein, and means for retaining an aerosol can body in said housing, said means including a ring member capable of being mounted on an upper region of a can body and including means for attachment to said neck portion, which comprises axially extending wall means formed on said ring and having an effective inner diameter greater than the outer diameter of said neck portion, protrusion means on the inner surface of said wall means and corresponding protrusion means on the axial outer surface of said neck portion over which said protrusio means on said outer wall means are engaged in a snap-fit relation thereby retaining said ring on said neck portion.

2. An elongate housing device designed to receive an aerosol can or the like, said housing having at least one open end defined by an axially extending neck portion, which open end permits an aerosol can to be disposed within said housing device, and means for retaining an aerosol can body in said housing, said means including a ring member capable of being mounted to an upper region of a can body and including means for attachment to said neck portion, said ring member being engageable with a chime formed on an upper portion of an aerosol can and includes mounting means adapting said ring for the accommodation of an aerosol can having a chime diameter of potentially varying tolerance, said mounting means including a plurality of flexible hook members extending axially downward of said ring member, each said hook member being joined to the ring member at a location disposed radially outward of the inner periphery of said ring member and said inner periphery having a diameter less than that of the can chime, such that upon assembly, the hook members may flex radially outward to permit a can chime to pass into engagement with said ring, with said hook members returning to a position where they are engaged beneath said chime.

3. A device as defined in claim **2** further including a plurality of slots formed in said neck portion, said slots being sized and positioned to receive said hook members when the diameter of a can chime is such that it would dispose the hook members outwardly of the inner peripheral wall of said neck portion.

4. In combination, an aerosol can containing an expressible product, and a housing device within which said can is mounted, said housing device having at least one open end which includes an axially extending neck portion, said open end permitting an aerosol can to be disposed therein, and means for retaining said can within said housing, which means includes a ring member mounted upon an upper region of said can and including means for attachment of said ring member to said neck portion wherein said means for attachment of the ring to the neck portion comprises axially extending wall means formed on said ring and having an effective inner diameter greater than the outer diameter of said neck portion, protrusion means on the inner surface of said wall means and corresponding protrusion means on the axial outer surface of said neck portion over which said protrusion means on the outer wall means are engaged in a snap-fit relation thereby retaining said ring on said neck portion.

5. In combination, an aerosol can containing an expressible product and a housing device within which said can is mounted, said housing device having at least one open end which includes an axially extending neck portion, said open end permitting an aerosol can to be disposed within said housing device, and means for retaining said can within said housing, which means includes a ring member mounted to an upper region of the can body and having thereon means for attachment to said nut portion, said ring member being engageable with a chime formed on the upper portion of an aerosol can and includes mounting means adapting said ring for the accommodation of cans having chime diameters of varying tolerances, said mounting means including a plurality of flexible hook members extending axially downward of said ring member, each said hook member being joined to the ring member at a location disposed radially outward of the inner periphery of said ring member and said inner periphery having a diameter less than that of the can chime, such that upon assembly the hook members flexing radially outward to permit the can chime to pass into engagement with said ring, with said hook members engaged at rest beneath said chime.

6. The combination as defined in claim **5** further including a plurality of slots formed in said neck portion, said slots sized and positioned to receive said hook members when the diameter of the can chime is sufficiently large that the hook members are thereby disposed outwardly of the inner peripheral wall of said neck portion.

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