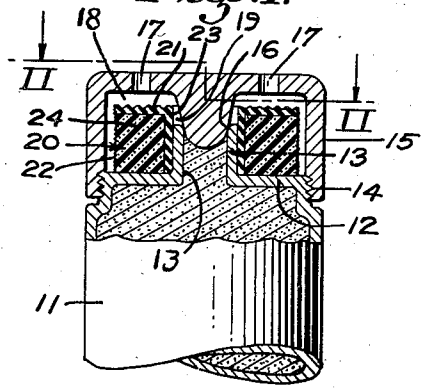
May 24, 1938. H. R. MacMICHAEL 2,118,051

SHOE DAUBER

Filed Feb. 6, 1936

Fig. 1.



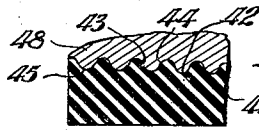


Fig. 5.

Fig. 2.

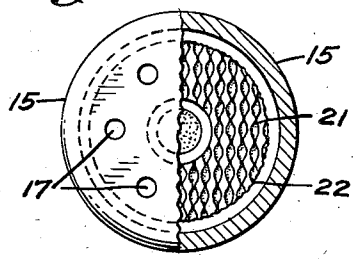


Fig. 3.

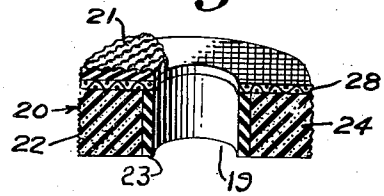


Fig. 4.

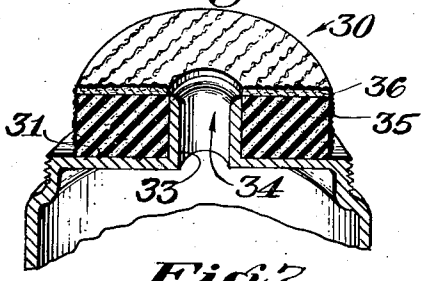


Fig. 6



Fig. 7



Fig. 8



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2,118,051

SHOE DAUBER

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Application February 6, 1936, Serial No. 62,556

9 Claims. (Cl. 15—135)

This invention relates to a dauber adapted for use in combination with a collapsible tube container for paste such as used in the shining of shoes and other like uses.

Daubers as hitherto provided are formed generally with bristle brush, felt or cloth, into the body of each of which the paste readily penetrates with resultant waste and soiling. A bootblack therefore, will frequently use his fingers directly as a dauber for spreading the paste, and in this they appear unexcelled although getting badly soiled.

An object of my invention is to provide a dauber adaptable for use with a collapsible tube container and having the advantageous characteristics of the fingers as a spreader of paste, with a provision also for effectively applying the paste into the shoe sole-to-upper crevice, all without waste or soiling of the hand of the user, and in a cheap device discardable with each exhausted container.

I provide a dauber face having a generally continuous, preferably slightly roughened, highly pliant flexible surface. In its paste spreading effect, it resembles that produced by the skin of the bootblack's finger, and likewise, it is generally nonpenetrable and non-wasteful in respect to its ability suitably to deposit substantially all of the dispensed paste. Said face may be formed of one of several very pliant materials. For instance, very pliant rubber, preferably slightly roughened by having it molded against a removable cloth, provides a satisfactory dauber face for some pastes.

Surrounding and underlying the periphery of said face, I provide a generally-continuous wall adapted to cooperate in spreading paste into the sole-to-upper shoe crevice. This wall functions best with a high degree of flexible pliancy.

Carrying said face and peripheral wall is the body of the dauber having highly pliant compressible and resilient characteristics, providing for the application of a yielding pressure adaptably on the irregular curved surface of a shoe. In use, it is preferably generally resistant to the penetration of paste.

Another object of my invention is to provide a dauber with the aforesaid characteristics that will furnish satisfactory life and service when used with a paste containing solvent such as turpentine commonly present in the better shoe polishes, and which has a swelling and destructive effect on rubber and especially sponge rubber when contacting in sufficient quantity therewith.

Another object is to provide a cap adapted to enclose the dauber mounted on the container, while sealing off and ventilating out the volatile vapor from said solvent.

My invention is illustrated in the accompanying drawing in which:

Fig. 1 is a cross-sectional elevation of a dauber on a container with a closure cap;

Fig. 2 is a plan partly of said cap and partly of said dauber;

Fig. 3 is a cross-sectional and perspective view of a modified design of the dauber (supporting container not being shown) provided with reenforcing fabric;

Fig. 4 is a cross-sectional and perspective view showing the mounted dauber in another mode having a face attached;

Fig. 5 is a greatly enlarged fragmentary cross-section of one form of the dauber face showing entrained paste thereon;

Fig. 6 is similar to Fig. 5 but showing only paste encased in the surface depressions;

Fig. 7, similar to Fig. 6, shows the encased paste partially wiped out of the depressions by rubbing to the right; and

Fig. 8, similar to Fig. 7, indicates substantial freedom from paste following additional rubbing to the left.

Referring to the drawing (see Figs. 1 and 2) a collapsible container 11 is formed with the top disk 12 provided with the outlet tube 13 and the surrounding threaded part 14 adapted to engage with the threaded closure cap 15, the latter having the projecting seat 16 for sealing contact against said outlet tube 13, and the holes 17 for ventilating the enclosed chamber 18.

Mounted on said top 12, surrounding said outlet tube 13 and the perforation 19 is the dauber 20 provided with a pliant, preferably slightly roughened, generally non-penetrable face 21; the pliant, preferably roughened peripheral wall 22; the pliant, preferably non-penetrable and smooth perforation wall 23; all being yieldably supported by the pliant compressible resilient body 24. Said face 21 may be provided with a roughness corresponding to the imprint produced by molding rubber against a cloth having twenty-eight firmly-twisted threads per inch. Said body 24 may be formed of a very fine-celled sponge rubber, a sample of which, three-eighths inch thick may be easily compressed between the fingers to less than one-half its free thickness. Said sponge rubber may be exposed for said peripheral wall 22.

In a modified design (see Fig. 3) I may use a fabric 28 having an open square mesh of about eight threads per inch, said fabric 28 underlying

said face 21 and overlying said body 24, joined with both the latter for their reenforcement against lateral swelling which might otherwise be caused by the effect of shoe paste solvent such as turpentine.

A dauber constructed in somewhat different form is shown in Fig. 4 where the projecting dauber 30 is preferably cemented to the container 31 provided with the projecting tubular outlet 33 providing a non-penetrable tubular lining for most of the height of the hole 34 extending through said dauber 30. The dauber body 35 is made preferably of pliant resilient highly compressible material for which sponge rubber may be used, the peripheral wall 32 of exposed cellular sponge rubber forming a roughened highly compressible applicator wall part of the dauber. Attached on the outer end of said body 35 is a face 36 which may be made of thin flexible material preferably inelastic and substantially non-penetrable to a paste, wherefor I have found certain imitation leather fabrics such as may be found on note book covers to serve well and to present the desired slightly roughened surface. As illustrated in Figs. 1 and 4, the container projecting outlet tubes 13 and 33 respectively may form the non-penetrable protective tubular linings extending up through almost the height of the hole through the dauber, and irrespective of the type of dauber face construction, the flexible non-penetrable wall 23 may be optional as to its use.

The dauber 20 (Figs. 1, 2 and 3) may be formed using thin pliant rubber tubing for the perforation wall 23, the face 21 may be stamped out of thin pliant sheet, rubber or other material, preferably having a slightly roughened top surface, the body 22 may be formed from fine-celled sponge rubber, and the aforesaid parts cemented together with flexible rubber cement, having first inserted the fabric reenforcement 28 when making the modified form of Fig. 3.

Alternatively from the aforesaid and more economically, the daubers of Figs. 1, 2 and 3 may be formed in a mold having an area for a considerable number of daubers, and a depth for two daubers. Said mold would be provided with spaced cores registering with the perforations 19. The surface 21 would position against the top and the bottom of said mold, and the molded sheets would be sliced horizontally through the middle, and thereafter from each resultant sheet, the individual daubers would be cut or stamped out.

If said daubers are made entirely of rubber and in the form of Figs. 1 and 2, the mold may be charged with a rubber composition adapted when vulcanized, to form the thin solid surfaces 21 and 23 against said mold surfaces, and simultaneously to form the cellular sponge-like structure of the body 20 which does not contact against said mold surfaces.

If the face 21 is to be formed of thin pliant material other than rubber, a sheet thereof having the perforations 19 may be placed against the top and the bottom of the cored mold, and the intervening space filled with material adapted to form the resilient compressible body 24. The tubular walls 19 may be formed of short pieces of tubing placed on said mold cores, or said walls may be formed by a rubber composition as aforesaid in conjunction with said body 24.

The dauber of Fig. 3 may be formed in general by any of the preceding methods modified by inserting the mesh fabric 28 at a suitable step in the manufacturing process described. For instance, if the dauber is molded from aforesaid rubber composition, a very thin layer of suitable composition may first be spread over the bottom of the mold. The fabric 28 may then be put thereon, and the body material then placed of a thickness for two daubers. The upper fabric 28 may then be placed and finally the top face material spread in the mold, and the mold top be put on and secured, ready for the vulcanizing process.

In using a face 21 formed of a hardening plastic material such as used in imitation leathers, a suitable fabric 28 may be first molded therewith: The resultant combination sheet 21 and 28 with spaced perforations 19 therein may then be used in the top and the bottom of a mold for a two-dauber thickness, and the manufacturing process carried out otherwise similar to that already described.

Any of the aforesaid or other methods of manufacture may be used by those skilled in the art.

Figs. 5, 6, 7, and 8 illustrate on a greatly enlarged scale how paste may be entrained on one form 41 of the roughened face 21 and its detrainment therefrom as the dauber is manipulated. In Fig. 5 a dauber face 41 is shown with the roughened depressions 42 encased by the left walls 43, the right walls 44, generally bottomed at 45 and provided with a full load of entrained paste 48. In Fig. 6 is shown the encased paste 49 remaining in the depressions 42 after most of said paste 48 has been dispensed.

In Fig. 7, the face 41 is shown with the left walls 43 generally flattened and exposed so that paste may be wiped out of the left side of the depression 42 by a rubbing movement of the dauber 41 to the right. In like manner Fig. 8 shows the depression 42 flattened to expose the right wall 44 thereof to a flattening and wiping out as the dauber face is rubbed to the left.

The foregoing for purpose of explanation, relates to a back and forth rubbing motion on one directional line only, but it will be understood that such rubbing generally will take place in an irregular way in various directions.

It is intended to make obvious from the diagrams of Figs. 5, 6, 7, and 8 and the foregoing explanation thereof, how the appreciably-roughened dauber having a highly flexible surface material is enabled to entrain paste and thereafter by rubbing motions against a shoe, to dispense substantially all of its entrained paste free of appreciable waste by unavailable residual paste adhering to or being retained in the dauber. On the other hand, where the dauber is made with a face having a very low degree of roughness more closely resembling only the pore-like roughness of the finger skin, the paste penetrating into and encased by said pore-like spaces may be only a negligible amount. The before described flexing action of the walls of the depressions or pores then approaches a corresponding negligible degree.

In principle, for the larger dauber-face depressions surrounded by the more protruding walls (or the like), a great degree of flexibility is essential in said walls in order that they may adequately flex over and provide for the non-wasteful dispensing of the paste entrained thereby. As the size of the roughening depressions approaches the previously described minimum, the necessity for flexing of said walls thereof approaches the vanishing point, but the requirement remains of a pliant face adapted in general

to conform to the irregular surface of the shoe in contact with the dauber. Therefore the pliancy and flexibility of the dauber face is to be correlated (*a*) with the form of the roughening depressions therein adapting it to non-wasteful dispensing of paste, and (*b*) with the forms of the curved surfaces of a shoe adapting it to spread paste easily and effectively thereon.

Avoiding on the one hand a smooth rubber-like surface such as that of the squilgee adapted mainly to wipe another surface clean of fluid or paste, and on the other hand, avoiding a deeply-depressed comparatively inflexible surface which would wastefully retain paste, a considerable degree of variation may be made in said correlated roughened and pliant characteristics of the face of my dauber and still fall within the scope of my specification and claims.

The operation of my dauber appears to be somewhat as follows: From the container on which it is mounted, paste may be extruded through the perforation **19** in the dauber. By pressing and rubbing the dauber against the shoe, the cylindrically extruded paste is flattened and entrained by the roughened dauber face **21** mainly as an adherent layer thereon, (see Fig. 5). In a minor degree, the paste is also encased in the roughening outwardly-open indentations or depressions **42** of said face (see Fig. 6). By manipulation of the dauber, said entrained paste is gradually spread upon the shoe, the adherent main portion of paste **48** being first dispensed. Finally the relatively small portion of paste **42** encased in the depressions **42** is nearly all worked out. Then there ensues a noticeable increase in the frictional drag as the substantially unloaded dauber face, generally free of residual paste, is rubbed on the shoe, thereby indicating the necessity of extruding more paste for daubing an unfinished shoe.

Obvious to the user is the advantage of the roughened pliant compressible side wall cooperating with the face in forcing paste into the crevice between the sole and the upper of a shoe.

I have found that my dauber is very economical in its consumption of paste which appears accounted for by its ability to apply substantially all of said paste extruded effectively to the shoe. Only a negligible percentage of the extruded paste need generally remain adherent or encased in the shallow depressions of the dauber which in use is also generally non-penetrable.

The foregoing economical results are in contrast with the results produced by other daubers generally absorbent to, or penetrable by, the entrained paste, thereby, after each use leaving therewith a residuum of unavailable wasted paste.

Varying degrees of resilient pliancy and compressibility may be used in the dauber body. I have found that a sponge rubber, easily compressible between my thumb and forefinger to one-half of its free height (three-eighths inch thick sample) gives good results. I prefer that the dauber body in normal use be generally resistant to penetration by a paste, for which purpose I prefer that aforesaid sponge-rubber be provided with a fine, small-celled characteristic. I do not want it to act as a sponge in the ordinary sense of having ability to draw in fluids. I do want a high degree of resilient compressibility, flexibility, and pliancy, adequate in relation to the aforesaid characteristics of the dauber face, and also in its adaptability in use to conform roughly to the irregular curved surfaces and crevices to be daubed thereby.

Other materials than rubber may be used in the flexible pliant dauber face. For instance, imitation rubber, skins, leathers and a compound used for making imitation leather fabric have given good results. Some of these I have found satisfactory, also substantially unaffected by the solvent turpentine (much used in shoe pastes), and in some cases generally impervious thereto. Also, I have found serviceable in the dauber face, a very thin membraneous material, similar to that used in sausage casing, smooth in texture and extremely pliant, and adapted to spreading paste when backed up very pliantly as by the fingers or by some sponge rubbers. Using rubber in the dauber face, I have sometimes found it advantageous to use cotton thread netting reenforcement underlying the face to guard against lateral expansion due to the action of turpentine on a rubber face. This mesh is useful also to prevent expansion in the cell-size of the dauber body adjacent, and thereby preventing it from becoming more penetrable to any paste which may get through any openings or ruptures in the face surface.

Sponge rubber generally serves well and cheaply for material in the resilient pliant flexible body **24**, preferably generally resistant to penetration by a paste in normal use. Another rubber-like material, duprene, is more resistant to the action of some solvents used in shoe pastes, and with some pastes may be preferable (although more expensive).

In the drawing herewith, it is to be understood that the thickness and detail of the face and walls of the dauber are not necessarily proportioned to the dimensions of the dauber body, but are so drawn as to illustrate the positioning of said parts. In said drawing I have used cross-sectioning which is conventional for my preferred rubber and sponge rubber in certain parts, but it is to be understood that other material may be used alternatively.

Describing the face of the dauber, I have referred to roughening indentations or depressions therein adapted to the spreading of a paste. Conversely, the face might be described as being roughened by closely spaced minute protrusions, in the spaces between which paste would tend to lodge. By either mode of description the effect described would be that of a generally roughened surface adapted to the purpose herein set forth.

In the specification and in the claims appended thereto, I generally refer to my device as a dauber, and to a shoe as representing the surface on which the paste is to be applied thereby. It is obvious that the device may be used for applying other than shoe polishing paste, and for applying said other paste on surfaces other than those of shoes. I wish it understood therefore that the term "dauber" applies to the device of the character set forth irrespective of where it may be suitably used, and that reference to application with a shoe is also to be considered as referring to any surface on which paste may be suitably spread by my device.

Any of the aforesaid substitutions or modifications, or others, which may provide for the characteristics specified, may be made in the article or device of my invention while still falling under the scope of my claims herewith appended.

What I claim is:

1. In combination with a paste-dispensing container having an outlet passage; a pliant project-

ing dauber body attached at its base end to said container, having a longitudinal tubular perforation therethrough connecting with said outlet passage, said dauber body projecting unconfinedly substantially above said base end to provide a compressible pliant roughened exposed peripheral applicator wall part; said dauber body being provided with substantially the resilient pliant compressible characteristics of live sponge rubber, having on its outer end a roughened applicator face made generally non-penetrable to said paste as dispensed; and a generally non-penetrable lining generally forming a wall for said tubular perforation and thereby substantially preventing access of said paste into said body.

2. In combination with a paste-dispensing container having an outlet passage; a pliant dauber body attached at its base end to said container, having a longitudinal tubular passage therethrough connecting with said outlet passage; said dauber body projecting above said base end to provide a pliant compressible exposed peripheral applicator wall part; said dauber body being provided with substantially the resilient pliant compressible characteristics of live sponge rubber, and having on the entire surface of its outer end an applicator face made generally non-penetrable to said paste.

3. In combination with a paste dispensing container having an outlet passage; a flexible dauber body attached at its base end to said container, having a dispensing perforation therethrough connecting with said outlet passage; said body projecting substantially above said base end to provide a flexible exposed peripheral wall part; said dauber body having generally the resilient pliant characteristics of live sponge rubber, and having on its outer end an applicator face; and flexible generally inelastic, transversely disposed reinforcing means embedded beneath and in proximity to said dauber face.

4. In combination with a paste-dispensing container having an outlet passage; a pliant dauber body attached at its base end to said container, having a longitudinal perforation therethrough connecting with said outlet passage; said body projecting substantially above said base end to provide a pliant peripheral applicator wall part; said dauber body having generally the resilient flexible characteristics of live sponge rubber and having attached on its outer end an applicator face made of flexible generally inelastic fabric.

5. In combination with a paste dispensing container having an outlet passage; a flexible dauber body attached at its base end to said container, having a longitudinal perforation therethrough connecting with said outlet passage; said body projecting substantially above said base end to provide a flexible peripheral applicator wall part; said dauber body having generally the resilient flexible characteristics of live sponge rubber and having attached on its outer end an applicator face generally non-penetrable to said paste, said face being made of flexible generally inelastic fabric.

6. In a paste dispensing and spreading device combined with a container, a dauber attached to said container, said dauber being characterized by having soft pliant roughened exposed top and side surfaces; the body of said dauber backing said surfaces having cellular resilient compressible characteristics generally similar to said characteristics in live sponge rubber; and a tubular hole in said body through which hole said paste may be dispensed; a lining for said hole; said top surface generally and said lining for said hole generally being made substantially non-penetrable to said paste.

7. In a paste dispensing and spreading device combined with a container, a dauber attached to said container, said dauber being characterized by having soft pliant exposed top and side surfaces; the body of said dauber backing said surfaces having resilient compressible characteristics generally similar to said characteristics in live sponge rubber; and a tubular hole in said body wherethrough said paste may be dispensed; said top surface generally and the wall around said hole generally being made substantially non-penetrable to said paste.

8. In a paste dispensing and spreading device, in combination with a container having a projecting outlet tube; a projecting dauber attached to said container, said dauber having a tubular hole therethrough generally lined by said projecting tube; said dauber having soft pliant exposed top and side surfaces; the dauber body backing said surfaces having resilient compressible characteristics generally similar to said characteristics in live spong rubber; said top surface generally being made substantially non-penetrable to said paste.

9. In a paste dispensing and spreading device, in combination with a container having a projecting outlet tube; a dauber attached to said container and projecting higher than said tube, said dauber having a tubular hole therethrough lined throughout part of its height by said outlet tube; said dauber being characterized by having soft flexible exposed top and side surfaces; the dauber body backing said surfaces having resilient compressible characteristics generally similar to said characteristics in live sponge rubber; said top surface generally being made substantially non-penetrable to said paste.

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