

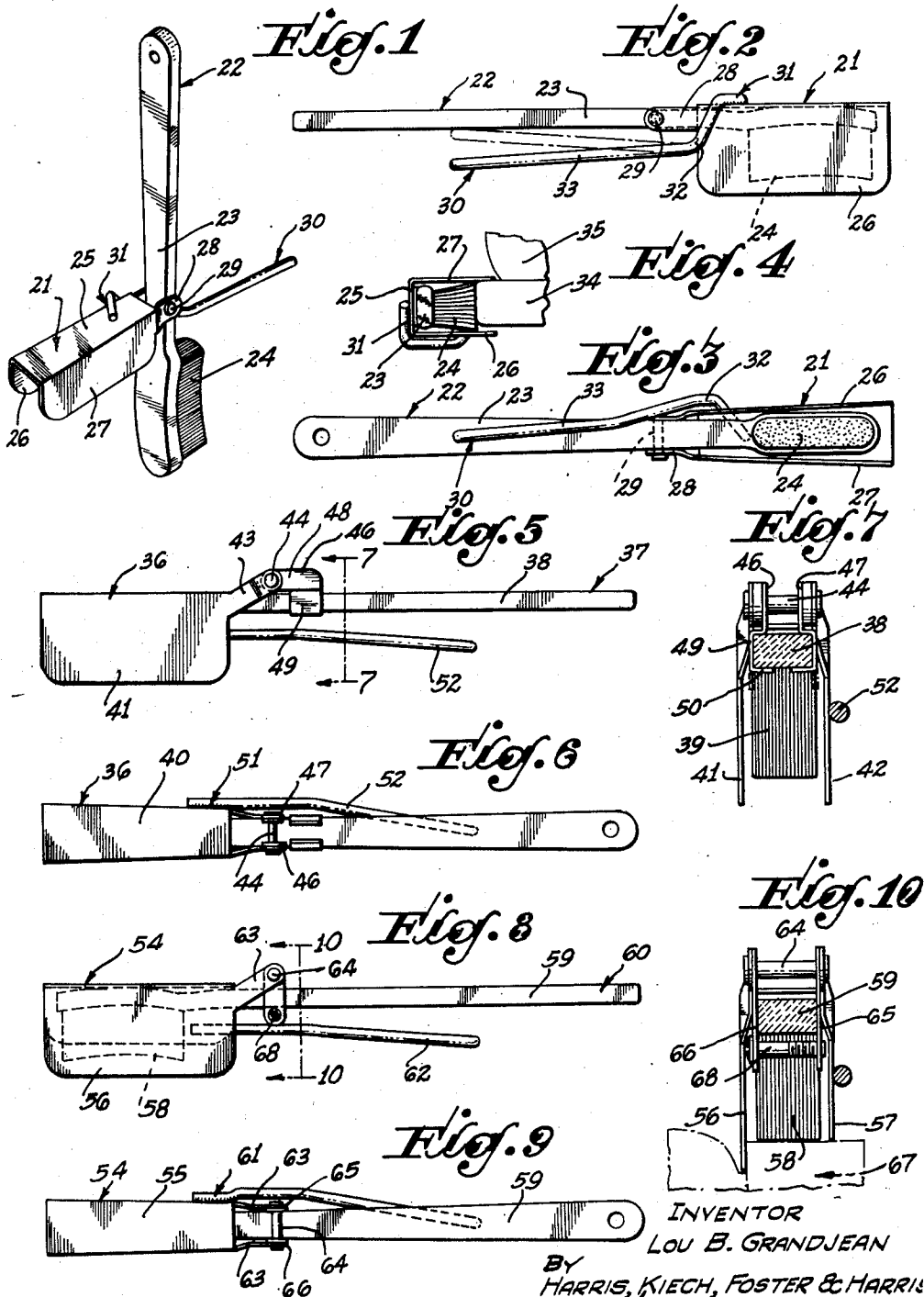
Dec. 19, 1950

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2,534,439

SHIELDED APPLICATOR

Filed Dec. 26, 1944



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2,534,439

SHIELDED APPLICATOR

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Application December 26, 1944, Serial No. 569,857

5 Claims. (Cl. 15—131.05)

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My invention relates to a shielding device for liquid applicators and is particularly concerned with applicators for applying liquid to a narrow strip or area.

The advantages and utility of my invention will be understood from a description of its application to a device for applying shoe polish, varnish, or the like to the edges of the soles of shoes; and therefore embodiments of my invention adapted for such use are herein illustrated and described; it being understood that my invention is not limited to such embodiments.

In applying liquid polish, varnish, and the like to the edge of a shoe sole, it is necessary to protect the upper of the shoe so that none of the polish or varnish is applied thereto.

It is an object of my invention to provide a device which insures that none of the liquid applied to the edges of the shoe sole shall contact the upper of the shoe.

It is also desirable in applying such a liquid to the edge of a shoe sole that none of the liquid be permitted to drop from the applicator. It is a corresponding object of my invention to provide a shielding device which effectively shields that side of the applicator beneath the sole and catches and retains any liquid dropping from the applicator.

It is another object of my invention to provide a device permitting the very rapid application of liquid to the edge of a shoe sole while preventing contact of the liquid with the upper of the shoe and dropping of the liquid from the applicator upon the floor or floor covering.

Still another object of my invention is to provide a device of the class described, readily movable relative to the applicator to permit the introduction of the applicator into a bottle or other receptacle containing the liquid to be applied.

Still another object of my invention is the provision of such a device adapted for use upon toothbrushes of conventional form.

Embodiments of my invention capable of performing the foregoing objects and providing the foregoing advantages and others made evident hereinafter are illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of one embodiment of my invention;

Fig. 2 is a side elevational view of the same embodiment;

Fig. 3 is a plan view of the open side of the shielding device as applied to an applicator;

Fig. 4 is a fragmentary end elevational view

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illustrating the use of my invention in applying a liquid to the edge of a shoe sole;

Fig. 5 is a side elevational view of an alternative embodiment of my invention;

Fig. 6 is a plan view of the embodiment illustrated in Fig. 5;

Fig. 7 is a sectional view taken as indicated by the line 7—7 of Fig. 5;

Fig. 8 is a side elevational view of another alternative embodiment of my invention;

Fig. 9 is a plan view of the embodiment illustrated in Fig. 8; and

Fig. 10 is a sectional view taken as indicated by the line 10—10 of Fig. 8.

Referring to the drawing, which is for illustrative purposes only, the numeral 21 indicates one form of the shielding device of my invention applied to a conventional toothbrush 22. The toothbrush 22 is provided with a handle 23 and a plurality of bristles forming a brush 24 on one end thereof. The shielding device 21 includes a back wall 25 and side walls 26 and 27 integral therewith and at right angles thereto. The side walls 26 and 27, which are congruent in outline, have rounded ends and a length substantially equal to that of the back wall 25 and a width slightly greater than the depth of the brush 24 and the thickness of the handle 23.

Projecting from the side walls 26 and 27 are ears 28 rotatably mounted upon a pin 29 which extends through the handle 23. A retaining member or lever 30 has an end portion 31 bent upon and secured by solder or the like to the back wall 25. The retaining lever 30 includes an angled portion 32, best shown in Fig. 2, substantially parallel to the side wall 27 and a rearwardly extending portion 33 having its axis diverging from the axis of the handle 23 when the shield member 21 is in the position illustrated in Fig. 2 with its back wall 25 contacting the handle 23 of the toothbrush 22. The retaining lever 30 is formed of resilient material, such as wire, so that it may be deformed from the position illustrated in the full lines of Fig. 2 with its axis diverging rearwardly from the axis of the handle 23 to the position illustrated in the dotted lines of the same figure in which its axis converges rearwardly with the axis of the handle 23 and the rearward end of the portion 33 contacts the handle 23.

When it is desired to insert the brush 24 into a bottle or other receptacle of liquid to be applied to the edge of a shoe sole, for example, the retaining lever 30 is swung away from the handle 23 of the toothbrush 22 to the position illustrated

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ed in Fig. 1 so that the axis of the retaining lever 30 and the planes of the back wall 25 and side walls 26 and 27 of the shielding device 21 are substantially at right angles to the plane of the handle 23. With the shielding device in such position, the brush 24 may be readily wetted with the liquid to be applied contained in such a receptacle. When the brush 24 is withdrawn from the receptacle, the retaining lever 30 is swung about the pin 29 to the position illustrated in the full lines of Fig. 2. Pressure by the thumb of the hand gripping 23 deforms the resilient retaining lever 30 into contact with the handle 23, as illustrated by the dotted lines of Fig. 2, insuring that the shielding device 21 is in shielding position relative to the brush 24. The brush 24 may now be applied to the edge of a shoe sole 34, as illustrated in Fig. 4, with the side wall 27 engaging the upper surface of the shoe sole 34 and the other side wall 26 projecting beneath the lower surface of the shoe sole 34. It will be apparent that the contact of the side wall 27 with the upper surface of the shoe sole 34 prevents the application of any liquid by the brush to the shoe upper 35 and serves as a guide for the movement of the brush 24, permitting the liquid on the brush to be rapidly applied to the edge of the shoe sole 34. It will be seen also that the projection of the side wall 26 beyond the brush 24 throughout its length causes the side wall 26 to catch any liquid dropped from the brush 24 and prevent the falling of such liquid upon the floor or floor covering.

In Figs. 5 to 7, inclusive, is illustrated an embodiment of the shielding device of my invention capable of being readily applied to a toothbrush of conventional form without the passage of a pin, such as the pin 29 previously described, through the handle thereof. The shielding device of this embodiment of my invention is indicated by the numeral 36 and is applied to a toothbrush 37 having a handle 38 and a plurality of bristles forming a brush 39. The shielding device includes a back wall 40 and side walls 41 and 42 of shape and dimensions like the walls 25, 26, and 27 previously described. In this embodiment of my invention, however, ears 43 are inclined beyond the back wall 40 and connected by a pin 44 upon which arms 46 and 47 are mounted. Each of the arms 46 and 47 is provided with a rearwardly extending portion 48, an outwardly flared portion 49, and an inwardly directed portion 50. The arms 46 and 47 are constructed of deformable material, such as light sheet metal, so that the user may readily deform the outwardly flared portion 49 to form the inwardly directed portions 50 around the handle 38 of the toothbrush 37, thus securing the shielding device 36 to the toothbrush.

Secured to the side wall 42 is a retaining lever 51 having a grip portion 52. The retaining member 51, like the retaining member 33, is preferably made of resilient material, such as wire, so that the grip portion may be readily pressed by the user into contact with the handle 38, insuring the retention of the shielding device 36 in position shielding the brush 39 and with its back wall 40 in contact with the handle 38.

By forming the arms 46 and 47 of a deformable material, such as thin sheet metal, this embodiment of the shielding device of my invention may be quickly and easily applied to an old toothbrush after utility for brushing the teeth has been exhausted.

In Figs. 8 to 10, inclusive, I have illustrated

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another embodiment of the shielding device of my invention which is also adapted for being secured to a toothbrush by the user. In these figures the shielding device is indicated by the numeral 54 and includes a back plate 55 and side walls 56 and 57. The side wall 56 is of substantially the form and dimensions of the side walls 26 and 27 and the side walls 41 and 42 previously described. However, the side wall 57 in this embodiment of my invention is of a length substantially equal to the length of the side wall 56 but of a width less than the width of the side wall 56 and less than the length of the bristles forming the brush 58 secured to one end of a handle 59 of a toothbrush 60.

A retaining lever 61 is secured to the side wall 57 and includes a gripping portion 62. The retaining member 61 is preferably formed of resilient material, so that it may be deformed by the user until its rearward end contacts the handle 59 to insure the retention of the shielding device 54 in shielding position.

Extending upwardly and rearwardly from the side walls 56 and 57 are ears 63 in which a pin 64 is mounted above the handle 59 of the toothbrush 60. Also mounted upon the pin 64 are parallel arms 65 and 66 which extend on either side of the handle 59. The arm 66 is provided with an opening for the reception of a screw 68, and the arm 65 is provided with a threaded opening into which the screw 68 may be threaded to compress the handle 59 between the arms 65 and 66 and thus secure the shielding device 54 in place upon the handle.

In the use of this embodiment of the invention, the side wall 56 is in engagement with the upper surface of the shoe sole indicated by the numeral 67 during the application of liquid by the brush 68 to the edge thereof, and the side wall 57 of lesser width engages the edge of the shoe sole 67 during such application. This embodiment of my invention permits the application of liquid by the brush 58 to a shoe sole 67 of greater thickness than the distance between the side walls 56 and 57 with the same rapidity and insurance against dropping of the liquid upon the floor or floor covering and the application of the liquid to the shoe upper as those embodiments of my invention previously described.

In the embodiment of my invention illustrated in Figs. 5 to 7 and the embodiment illustrated in Figs. 8 to 10, the shielding device may be very readily moved about the pins 44 and 64, respectively, into position with the walls of the shielding device at substantially right angles to the axis of the toothbrush handle, so that the brush may be readily inserted in a bottle or other receptacle containing the liquid to be applied. In both such embodiments also the portions 52 and 62, respectively, of the retaining levers are in position to be readily grasped by the thumb of the hand holding the toothbrush handle during the use of the toothbrush.

The shielding device in all of its embodiments may be formed of thin metal, a plastic, or other suitable material. It will be evident that either of the side walls of any of the embodiments of the shielding device of my invention may be so formed as to engage an edge, projection, or groove in the wall to which liquid is to be applied by the brush to serve as a guide for the travel of the brush. While the embodiments of my invention herein specifically illustrated and described are fully capable of performing the

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objects and providing the advantages primarily stated, and while the utility of the shielding device of my invention has been illustrated herein by its application to a toothbrush of conventional form, it is to be understood that my invention is not restricted to such embodiments or application.

I claim as my invention:

1. An applicator, including: a handle; means having an applying surface on said handle; a shield member including a back wall and a side wall, said member being mounted on said handle and swingable relative thereto from shielding position adjacent said means with said side wall projecting beyond said applying surface and said back wall engaging one side of said handle to position separated from said means, whereby said surface may be coated with the material to be applied; and a member connected to said shield member and adapted to be deformed into engagement with the other side of said handle when said shield member is in shielding position.

2. An applicator, including: a handle having an applying means on one side thereof; a shield member adapted for engaging the other side of said handle and projecting beyond said means; connecting means secured to said shield member and adapted for deformation around said handle for securing said shield member to said handle; and hinge means associated with said connecting means, whereby said shield member may be swung from shielding position engaging said other side of said handle to a position separated from said applying means.

3. An applicator, including: a handle having an applying means at one side thereof; a shield member adapted for engaging the other side of said handle and projecting beyond said means; connecting means secured to said shield member and adapted for clamping around said handle for securing said shield member to said handle; and hinge means associated with said connecting means and disposed at said other side of said handle, whereby said shield member may be

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swung from shielding position engaging said other side of said handle to a position separated from said applying means.

4. An applicator, including: a handle having an applying means at one side thereof; a shield member adapted for engaging the other side of said handle and projecting beyond said means; connecting means secured to said shield member and adapted to be deformed around said handle for releasably securing said shield member to said handle; and hinge means associated with said connecting means and disposed at said other side of said handle, whereby said shield member may be swung from shielding position engaging said other side of said handle to a position separated from said applying means.

5. An applicator, including: a handle having an applying means at one side thereof; a U-shaped shield member having a back wall adapted for engaging the other side of said handle and side walls projecting beyond said means, said side walls having inclined ears projecting therefrom and terminating at said other side of said handle; connecting means secured to said handle and provided with projecting arms disposed at said other side of said handle; and hinge means between said arms and said ears adapting said shield member to be swung from shielding position engaging said other side of said handle to a position separated from said applying means.

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