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T. F. ELLISON

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COMBINED STOPPER AND BRUSH

Filed May 31, 1930

Fig. 1

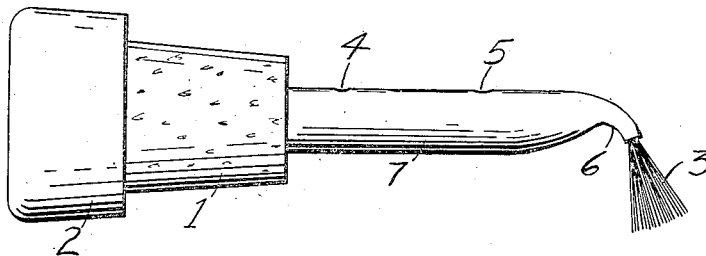


Fig. 2

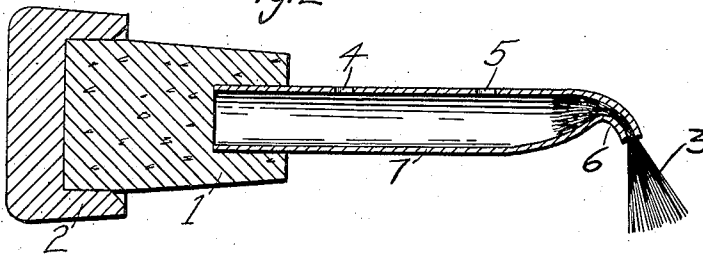
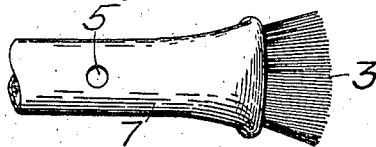


Fig. 3



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COMBINED STOPPER AND BRUSH

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My invention relates to combined brush and stopper structures wherein the brush is located in the bottle or container when the stopper is used to close the latter, and has reference more particularly to the arrangement of the brush so as to facilitate its use for type cleaning and similar purposes, and the provision of storage means in the stem of the brush to hold a charge of cleaning fluid which is supplied to the brush as the latter is used.

The principal objects of my invention are to provide a brush with a reservoir which upon insertion of said brush into a bottle of liquid will be automatically filled with the liquid; to provide an angular bristle arrangement in such a manner as to facilitate the use of the brush on surfaces substantially parallel to the axis of the brush; to provide a bristle arrangement in such a manner that the bristles are firmly attached to the brush.

On the drawing:—

Fig. 1 is a side view of the combined brush and stopper;

Fig. 2 is a vertical longitudinal sectional view thereof, and

Fig. 3 is a detail plan view of the bristle end of the brush.

Referring to the drawing, the reference numeral 1 indicates a bottle stopper such as a cork, which preferably has a cap or grip member 2 secured on the outer end, and is provided at the inner end with a tube 7 which is adapted to project into the bottle or container when the stopper or cork is used to close same. A set of bristles 3 is secured in the end of the tube 7, remote from the cork or stopper 1, said end of the tube being preferably flattened and having the bristles clamped therein, and having the end of the tube with the bristles therein bent laterally as shown in Figs. 1 and 2, so as to afford a brush arrangement that is particularly useful for cleaning the type in a typewriter. The bend 6 in the end of the tube 7, also serves to anchor the bristles 3 more securely in the end of the tube.

This brush is designed particularly for use with type cleaning liquid that is furnished in a bottle or container which is closed

by means of this combination stopper and brush, so that the latter is always available for use when desired, and to provide a supply of type cleaning liquid for the brush without the necessity of dipping the latter in the bottle or container from time to time, the tube 7 is arranged to fill automatically with the liquid and to supply same to the bristles. An opening 5 is provided in the tube adjacent to the bristle end and on the side of the tube 7 opposite that from which the bristles project, through which opening the liquid in the bottle or container enters the tube 7 when the bristle end of the brush is inserted into the bottle or container. A vent opening 4 may also be provided in tube 7, being located adjacent to the cork 1 and on the side of the tube 7 opposite that from which the bristles project, for the purpose of avoiding the trapping of air in the tube and to permit the liquid to rise freely therein.

When the combination brush and stopper is inserted into the bottle or container of type cleaning liquid, the latter enters the opening 5 and rises in the tube 7 to the level of the liquid in the bottle or container, and consequently when the combination brush and stopper is removed from the bottle and the tube 7 held in a position approximating the horizontal, with the bristles 3 projecting downwardly, the openings 4 and 5 are at the top, and a quantity of liquid will be retained in the tube 7. The bristles 3 are merely clamped in the end of the tube 7 sufficiently so that the clamping effect, together with the bent arrangement of the end of the tube, will hold the bristles securely in place without effecting a seal, and the liquid, which is usually of a highly penetrating character, will therefore readily feed from the inside of the tube 7 through the bristles 3 to the surface to be cleaned, by a combination of gravity and capillary action, said action being without restriction by air pressure, and being aided by the rubbing of the bristles against the type or other similar surface to be cleaned.

Thus I have provided a combination brush and stopper of simple design which is espe-

cially suitable for the cleaning of type in a typewriter or for other similar use, since it can be used without the constant dipping into the liquid in the bottle or container, and since
5 it is of a form which enables the brush to be conveniently used in a position that is substantially parallel to the surface to be cleaned.

10 While I have shown and described my invention in a preferred form, I am aware that various changes and modifications may be made therein without departing from the principles of my invention, the scope of

which is to be determined by the appended claim.

I claim as my invention:

In a combined brush and stopper, the combination of a tube, a bottle stopper axially
70 disposed at one end of the tube and bristles extending laterally at an abrupt angle from the other end of the tube and to which liquid is communicable from the interior of the
75 tube, said tube having one or more openings in its wall at the side opposite that from which the brush extends.

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