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STORAGE RECEPTACLE AND CONDITIONER FOR PAINT BRUSHES

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Fig. 1

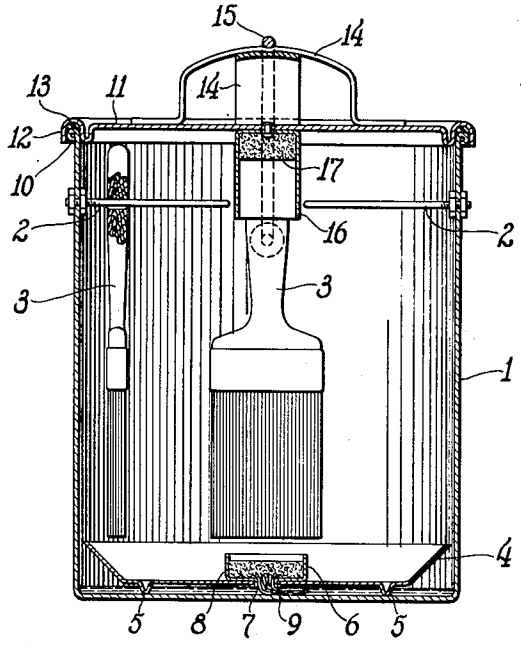
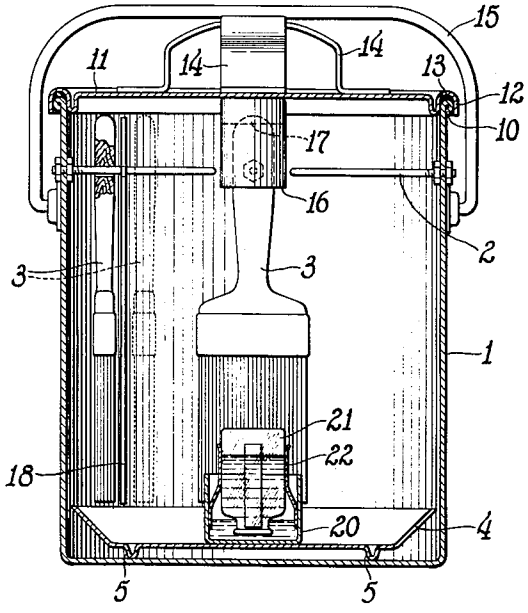


Fig. 2



Inventors.
Ernst Kurath.
James F. Campbell.
Joseph M. Hess.
By Arthur Simon
Attorney

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STORAGE RECEPTACLE AND CONDITIONER FOR PAINT BRUSHES

Ernst Kurath, James F. Campbell, and Joseph M. Ness, Milwaukee, Wis.

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1 Claim. (Cl. 206—15.1)

This invention relates to a storage receptacle and conditioner for paint brushes and the like and to means for maintaining the brushes in workable condition while stored in the container.

An object of the invention is to provide an improved air-tight container for paint brushes.

Another object is to prevent brushes saturated with paint or the like from hardening by contact with the air

Another object is to provide in a storage receptacle for brushes a vapor which keeps the paint in the brush soft.

Another object is to provide a storage receptacle for brushes wherein brushes which have been hardened by dried paint may be softened and reconditioned for further use.

Another object is to provide a receptacle for the storage of brushes, containing a vapor and so constructed that the vapor does not easily diffuse out of the container when it is temporarily opened to remove or insert brushes.

Another object is to provide a receptacle wherein the vapor absorbed by the brushes is kept at a minimum, but sufficient to keep the brushes pliable.

Another object is to provide a storage container for a multiplicity of brushes and storing same in such a manner that brushes saturated with different paints will not come in contact with each other.

Other objects and advantages will hereinafter appear.

The apparatus comprises a receptacle with a substantially flat cover which can be fitted air-tight to the top. Near the upper edge of the receptacle are fitted one or more rods on which the brushes may be hung. A liquid which vaporizes at normal temperature is introduced into the container, but so that the liquid does not come in contact with the brushes. As the liquid vaporizes it fills the vessel and this prevents entrance of air, thus preventing oxidation and hardening of the paint, while simultaneously the vapor forms with the paint a protective layer on the latter to further help to keep it from hardening. The vapor is of such nature that it does not attack the bristles and its specific weight is preferably greater than that of air.

In the accompanying drawing, Figure 1 illustrates one form of container embodying the invention, while

Fig. 2 is a modification of the container illustrated in Fig. 1.

Referring to Fig. 1, the conditioner comprises a cylindrical can 1, which is of sufficient depth so that the brushes can be freely suspended therein. A number of pins 2, are fastened near the upper edge of the can and extend radially towards the center thereof. The brushes 3 are provided with a hole through the upper end of their handle or with other means by which they may be suspended from the pins 2. Placed on the bottom of the can is a frusto-conical pan 4 whose outside diameter is slightly less than the inside diameter of the can. The pan is provided with a suitable number of bosses 5 by which it is raised some distance from the bottom of the can. A short cylinder 6, open at the top, is fastened to the inside bottom of the pan and a hole extends through the bottom of the pan, inside of the cylinder 6. The cylinder is partly filled with a wad 8 of absorbent material, and a wick 9 of absorbent material extends from the wad 9 through hole 7 to the bottom of the can 1.

The upper edge of the can is preferably provided with a bead 10. A cover 11 having a channeled rim 12 which interlocks with the bead 10 closes the can. Inside of the channel 12 is placed a resilient packing 13 to provide an air-tight seat between the can and the cover. The top of the cover is provided with two resilient inverted U-shaped straps 14 fastened to the cover and arranged at right angle to each other, while the can is equipped with an usual bale handle 15 which may be turned to a vertical position so as to abut the center of the straps 14 where it may be locked by an indentation in the straps and thereby exert a pressure thereon and thus on the packing 13 to compress the latter and tightly seal the can.

The center of the cover 11 is provided with a cylindrical tube 16 open at the bottom and which depends from the cover into the can. The tube is of such length and diameter that with the cover in place it prevents any brushes suspended from the rods 2 from sliding off the rods. The cylinder 16 may be partly filled with an absorbent wad 17, which is held in place by friction or other means. Cardboard or other suitable separators 18 (shown in Fig. 2) may be suspended from the rods 2 alternately with brushes so as to prevent adjacent brushes from touching each other.

When the can is to be used for the storage of brushes a quantity of a vaporizable liquid is placed in the bottom of the can so as to approximately fill the space under the pan 4. Part of the liquid is drawn up by the wick 9 into the wad 8 from the surface of which it evaporates to fill the can and thus prevent infiltration of

air and access of oxygen which would dry and harden the paint. The vapor producing liquid is preferably a solvent of paint and the like, whereby it is slightly absorbed by the brushes to keep the paint soft. As there is equilibrium of vapor pressure in the closed can, the brushes cannot become supersaturated with excess liquid and when they are exposed to the air, upon removal from the can, the vapor quickly evaporates and leaves only the paint in its original soft condition in the brush which is thus immediately ready for use. This is especially valuable, for instance with brushes used for flat paint. When such brushes are stored in oil in the usual way, all the oil must be removed prior to use, otherwise the paint which is applied with the brush will not be flat, as it contains excess oil.

If brushes which are used with various paints which require different solvents to prevent their hardening are to be stored in a common container, the liquid is preferably compounded as a mixture the different constituents of which selectively react with the brushes to keep them soft. Any excess of dissolved paint on the brushes may drip off into the pan where the solvent is again vaporized.

When using the container for the first time or after it has been open for some time, it may take a long period for the vapor to completely permeate it. To provide for a more rapid diffusion of vapor throughout the container, the wad **17** is saturated with the vaporizable liquid prior to the closure of the container. The liquid in the porous wad vaporizes and completely fills the can rapidly.

It is desirable that the specific gravity of the liquid vapor be higher than that of air so that the vapor does not rapidly flow out of the can to be replaced by air when the can is opened. Thus the can may be left open in still air for several minutes and the lower part thereof remains filled with vapor which prevents access of air to the paint saturated bristles of the brushes.

The modification illustrated in Fig. 2 differs from the construction just described in the manner of storage of the vaporizable liquid. In this case the bottom of the pan **4** is not perforated. To the upper side of the pan is fastened an open cylinder **20** of suitable diameter which with the pan forms a cup adapted to receive an inverted bottle **21**, the latter being held in place through frictional engagement with springs **22** which are fastened to the side of the cylinder **20**. In service the bottle is filled with vaporizable liquid and placed as shown into the can **20**, the end of the bottle being spaced a small distance from the bottom of the cylinder **20**, whereupon part of the liquid flows into the can until the vapor pressure upon the liquid inside and outside of the bottle is equalized. As the liquid vaporizes from the circular space between the can and the bottle, additional liquid is forced by the vapor pressure out of the bottle.

It is obvious that other means for suspending the brushes in the container than those shown may be employed.

The pan **4** serves the further purpose of catching any paint which may drip off the stored brushes and thus prevent such paint from becoming mixed with the vaporizable liquid at the bottom of the container. Hence the pan may be cleaned of paint without necessitating the wasting of any of the liquid at the bottom of the container. The arrangement aforediscussed also prevents dripping paint from mixing with and absorbing the liquid, thereby reducing its ability to vaporize and filling the container with protective vapor enveloping the brushes.

The inherent resiliency of the bale handle **15** and of the engaging straps **14** together with the cover act as a safety valve which permits escape of vapor from the can if the pressure therein should exceed a safe value, for instance, if the can should be exposed to a high temperature in the sun or the like.

If brushes which have been hardened by the hardening of the paint therein are stored in the container, the vapor acts thereon and after a short time, the paint becomes soft and the brush is thereby restored to usefulness by simply brushing out the softened paint and perhaps washing it in a suitable solvent without the necessity of using strong alkaline substances which attack the bristles and the setting of the brush. The softening vapor penetrates through the paint to the center of the brush, so that the latter may be cleaned throughout, while with the usual methods used heretofore it is almost impossible to remove hardened paint from the center of the brush.

What we claim as new and desire to secure by Letters Patent is:

In a receptacle and conditioner for paint brushes and the like, the combination of a container, adapted to receive a vaporizable liquid, whose vapor has a higher specific weight than air, said container being of a height greater than the length of the brushes which are to be stored to permit the latter to be freely suspended therein, brush supports arranged adjacent to the inside of the side wall of said receptacle and adapted to freely support the brushes, a shallow dish substantially covering the bottom of said receptacle and supported in spaced relation therefrom and forming with the latter a space for receiving a liquid, said dish being provided with a cup, a porous wad in said cup, a hole in the bottom of said cup and passing through said dish and a wick extending from said wad through said hole to the bottom of said container, said wad being adapted to cause evaporation of the liquid, and to cause the thus formed vapor to permeate said receptacle and to prevent paint adhering to the brushes from hardening, and a cover adapted to form a tight seal with said receptacle so as to prevent escape of the vapor therefrom.

ERNST KURATH.
JAMES F. CAMPBELL.
JOSEPH M. NESS.