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2,258,030

INK CONTAINER

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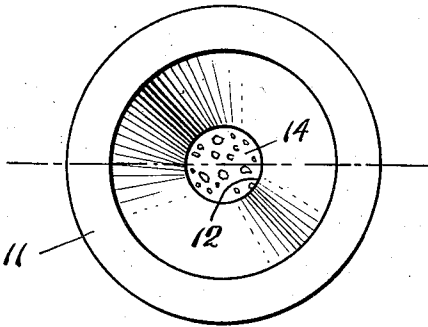


Fig. 1.

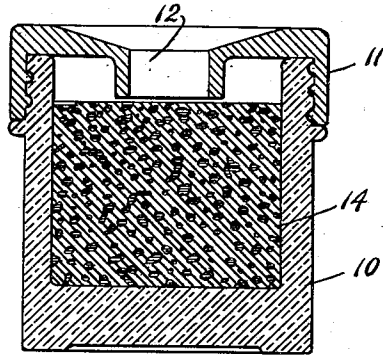


Fig. 2.

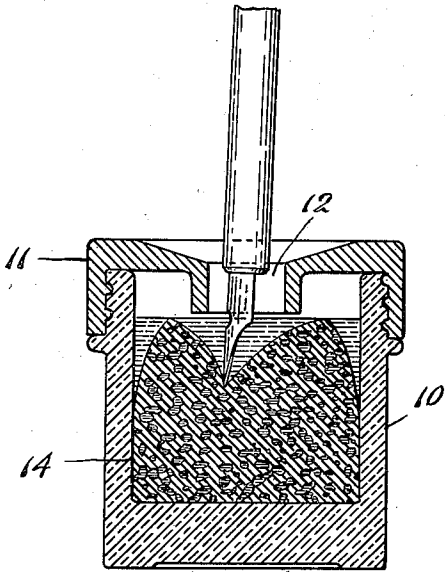


Fig. 3.

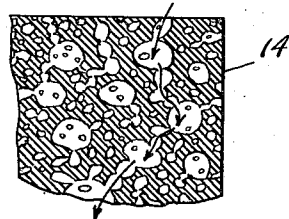


Fig. 4.

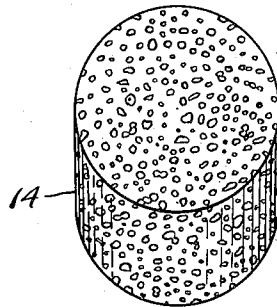


Fig. 5.

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UNITED STATES PATENT OFFICE

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INK CONTAINER

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8 Claims. (Cl. 120—57)

This invention relates to ink wells or receptacles containing ink which are primarily designed for use in schools and in public places where ink is provided.

The objects of my invention are to provide an ink containing means which will prevent evaporation of the ink if the receptacle containing it is uncovered, and which will hold the ink from spilling or leaking from the receptacle in case the receptacle is upset or inverted.

I accomplish these objects by providing a receptacle which may be normally open or uncovered to permit the insertion of a pen and which contains a packing of cellular latex which is perfectly resilient and completely porous, having a multitude of small interconnected air cells, so that when ink is discharged onto the packing it will immediately absorb the ink until all the cells are filled with it, and will retain it if the receptacle containing the packing is inverted, but when a pen is pressed against the packing, so as to form a cavity therein, the ink will immediately flow into the cavity and onto the pen, so that the result will be the same as when the pen is dipped into ink in the usual manner.

I have ascertained that this cellular latex material apparently completely resists attack by any of the acids of ordinary inks in general use and that when the material is completely saturated with ink and exposed to air for a long period there is practically no evaporation of the ink beyond a slight surface evaporation, and that this material retains its resilience indefinitely so that whenever any portion is depressed, so as to form a cavity, the ink will flow into the cavity and when the pressure is removed, the material will immediately resume its former shape and ink which has not been extracted will immediately be reabsorbed.

For a more complete disclosure of the invention reference is now made to the following specification, in connection with accompanying drawing in which:

Fig. 1 is a plan view of an ordinary ink receptacle, with my invention applied thereto.

Fig. 2 is a sectional view of Fig. 1 illustrating an embodiment of the invention.

Fig. 3 is a similar view illustrating the action when a pen is pressed against the material which the receptacle contains.

Fig. 4 is a greatly enlarged sectional view of the material illustrating the interconnected cells and completely porous condition of the material.

Fig. 5 is a view on an enlarged scale illustrating

ing a block of the material before insertion in the receptacle.

In the drawing a common form of ink receptacle 10 is illustrated having a cover 11 in the middle of which a pen opening 12 is formed, the top side of said cover being preferably sloped down to the opening.

According to my invention the receptacle is filled with a packing 14 which consists of a block of cellular latex having interconnected air cells so that it is completely porous, said material being known on the market as "Airfoam" and no claim being made therefor per se.

The process of manufacture of this material may be briefly outlined as follows: Air is discharged into ordinary rubber latex, so that it is completely aerated and a gelling agent is added and then the mass is water cured and is usually produced in sheets.

The material is perfectly resilient and when compressed or deformed to any ordinary extent will immediately return to its former shape when the pressure is removed. When any liquid, as ink, is discharged on its surface, it will immediately become absorbed until all the cells are completely filled with the ink, the spaces provided for containing ink being from 50% to 75% of the total volume of the material. It is, of course, essential that the latex material be contained in a receptacle, but the particular shape of the block of the material, as compared with the interior of the receptacle, is not important, except that the material should not be under compression when in the receptacle, although the material will ordinarily approximately completely fill it. Several blocks or layers of the material may be employed instead of a single block.

When the latex material has been placed in the receptacle and its cells filled with ink, if a pen is pressed against its surface, so as to form a depression or cavity therein, the ink will immediately be discharged into the cavity, as indicated in Fig. 3, so that the effect will be the same as when the pen is dipped in ink in the ordinary way. When the pen is withdrawn the latex material will immediately expand and the ink which was left in the cavity will be immediately reabsorbed.

As the material is not of a fibrous nature the pen will not pick up threads or anything to clog the pen point and as it is very soft and yielding it will not injure the pen point even when pressed against it with considerable force.

If the receptacle is inverted, no ink will be discharged, so that all possibility of spilling or accidental leaking is avoided. If the receptacle is left open the extent of evaporation will be inappreciable, a thin surface coating being formed which seals the cells.

The material may be refilled with ink by merely pouring the ink on the material without removing the latter from the receptacle.

I claim:

1. In combination with a liquid ink container having a pen opening, an absorbent packing therein consisting of porous, resilient cellular latex material comprising cells of such size as to hold a complete filling of ink therein by capillary attraction.

2. In combination with a liquid ink container having a top opening, an absorbent packing therein consisting of completely porous and resilient latex material having interconnected air cells of such size as to hold a full load of ink by capillary attraction.

3. A receptacle for liquid ink comprising a body of latex foam rigidly supported at top and sides and having cells therein of such size that liquid ink therein will not flow out by gravity.

4. A method of storing liquid ink which comprises dispersing same in the pores of a body of latex foam, and of dispensing the stored liquid ink by compression of a portion only of said foam by an instrument which is to receive said liquid ink.

5. A method of storing and dispensing liquid

ink which comprises storing by filling the liquid ink into the cells of a body of latex foam, said cells being of such dimensions as to hold the liquid ink therein against gravity but to discharge it when such cells are compressed, and dispensing the liquid ink by localized compression of said body while holding said body against substantial spreading.

6. A method of storing and dispensing liquid ink which comprises storing by filling the liquid ink into the cells of a body of latex foam, said cells being of such dimensions as to hold the liquid ink therein against gravity but to discharge it when such cells are compressed, and dispensing the liquid ink by localized compression of said body while holding said body against substantial spreading, said compression causing the formation of a temporary pool of liquid ink in the space from which latex form has been removed by said compression.

7. As an article of manufacture, a block of latex foam having cells therein of size to hold such cells full of liquid ink by capillary attraction, said block being filled with liquid ink.

8. As an article of manufacture, a block of latex foam having cells therein of size to hold such cells full of liquid ink by capillary attraction, said block being filled with liquid ink, said foam having a surface skin penetrated by pores smaller than the interior cells, and a surface film of solidified ink formed across said pores by evaporation.

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