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SOAP HOLDER

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Fig. 1

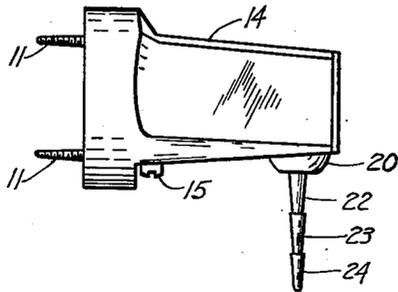


Fig. 2

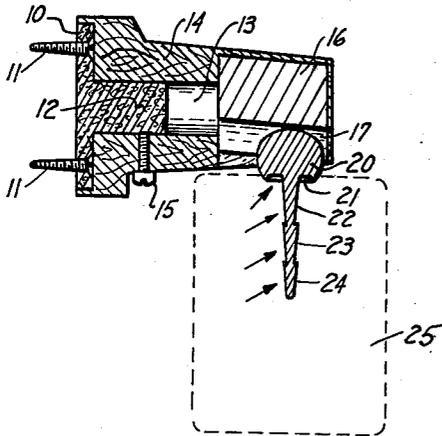


Fig. 3

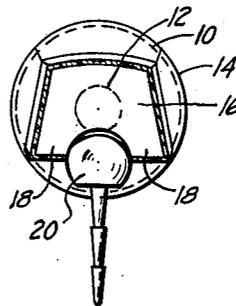
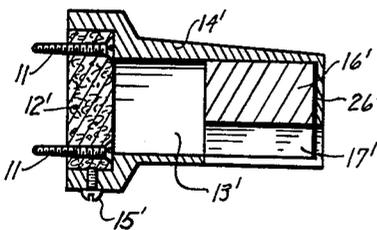


Fig. 4



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SOAP HOLDER

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7 Claims. (Cl. 45—28)

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This invention relates to soap holders and has for its general object, the provision of a new type of soap holder which will be sanitary in use and capable of eliminating the messy, wasteful conditions caused by the use of the usual soap dishes and containers.

A further object of the invention is to provide magnetic means for holding a cake of soap so that it will readily dry and will be conveniently held in position for ready use.

A further object of the invention is to provide an improved means which will securely hold the soap in a free depending position, and in such manner as to enable the soap to be readily removed from and attached to a support and to enable the soap to be used most economically.

Other objects of the invention as well as the novel details of construction thereof will be apparent from a perusal of the following specification when read in connection with the accompanying drawings, in which Fig. 1 is a side elevational view of a soap holder made in accordance with the invention; Fig. 2 is a central vertical longitudinal section of the holder shown in Fig. 1, and indicates the manner in which a cake of soap is supported thereby; Fig. 3 is a front elevational view of the holder, the front wall of the holder being eliminated to show the cross-sectional area of the magnet contained in such holder, and Fig. 4 is a view similar to Fig. 2 showing a modified form of the invention.

In the drawings, the reference character 10 indicates the disk-shaped base of a wall attachment or bracket, which may be secured to a wall, or other supporting surface in any suitable manner, as by cement or by the screws 11, 11 shown in Figs. 1 and 2 of the drawings. The attachment 10 has integrally formed therewith, a stem portion 12 adapted to be inserted into a central longitudinally extending passage or recess 13 formed in the body of the holder 14. The rear or outer end of the recess 13 is enlarged to receive the base 10, so that the holder 14 supported by the wall attachment may be placed flush against the supporting surface and entirely conceals such attachment. A set screw 15 may be provided to fixedly secure the holder 14 in position on the wall attachment.

The holder 14 may be made of any suitable non-magnetic material, such as wood or thermoplastic material and may be made as one integral part or in any other suitable manner. Embedded in the forward or projecting end of the holder 14 is a permanent magnet 16 which may be made of any suitable material, but which is preferably

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made of the magnet material known as "Alnico," as such material provides a magnet with a relatively large magnetic field and strong magnetic force in proportion to its size. The magnet 16 has a length slightly less than one-half the length of the holder 14 and a cross-sectional area which is shaped substantially in the form of a block A. The legs or poles 18, 18 of the magnet are separated by a longitudinally extending channel 17 whose wall in a transverse direction is in the form of an arc of a circle. The magnet is entirely covered or enclosed by the material of the holder 14, except the channel 17, which is left exposed so that it may receive the head 20 of a soap gripper member.

The gripper member is made of any suitable non-rusting metal material capable of being magnetically activated, such as, stainless steel. As will be noted from a comparison of Figs. 2 and 3 of the drawings, the gripper head 20 is substantially ball or spherically-shaped and has a transverse radius at its central body portion which is the same as the radius of the arc of curvature of the wall of the channel 17 so that the sides of such head at its outer central portion will engage with the wall of the channel 17. The upper or outer end surface of the head 20 has a flatter arc of curvature than the channel wall 17 so that it will be spaced therefrom. The purpose of this construction of the head 20 with relation to the channel 17 will hereinafter become more apparent. The lower end of the head 20 is provided with an annular recess 21 formed around the base of a cone-shaped section 22 of the stem that is integrally formed with such head. Integrally formed with the outer end of the cone-shaped section 22 is a second cone-shaped section 23, and integrally formed with the outer end of the latter section is a third cone-shaped section 24. It will be noted that while the tapers of the three cone-shaped sections, 22, 23 and 24 are similar, the bases of such sections and the lengths thereof are progressively smaller towards the outer end of the gripper stem formed by such sections. The overall length of the gripper member is approximately one and one-quarter inches, or substantially less than the length of the usual cake of soap. It will also be noted that the holders formed between sections 22 and 23, and sections 23 and 24 are not straight shoulders, but are slightly beveled inwardly and outwardly towards the longitudinal axis of such stem. As a result of this construction, when the stem of the gripper member is inserted into a cake of soap in the manner indicated in Fig. 2 of the drawings,

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the soap will be firmly attached thereto by the vacuum grip produced by the recess 21 and the longitudinal walls of the sections 22, 23, 24, such vacuum gripping portions of the gripper member being indicated by arrows in Fig. 2 of the drawings. The tapered shoulders formed between the sections 22 and 23, and the sections 23 and 24 will also coact to eliminate any possibility of the soap being separated from the gripper member even with the exercise of a relatively strong force tending to separate the same and substantially greater than the force to be overcome in separating the head 20 from the poles 18, 18 of the magnet 16.

It will be understood from the foregoing, that in the use of the device, the holder 14 is attached to a supporting surface by means of the attaching member, so that the exposed channel 17 of the magnet 16 is on the underside of the holder. The stem of the gripper member is then inserted in a cake of soap in the manner indicated in Fig. 2 of the drawings by simply pressing down on the head 20 thereof, the soap cake being indicated in dotted outline in such figures and designated 25. Due to the shape of the gripper stem, there is no danger of the soap being cracked or otherwise destroyed during such insertion. As a result of the firm anchorage of the stem of the gripper member in the soap for the reasons previously mentioned, there is no likelihood of a separation occurring throughout the life of the soap, even though the combined gripper member and soap may be dropped or subjected to severe shocks during usage. This secure anchorage of the gripper member in the soap also enables the soap to be used until practically all of it has dissolved. After the soap has been used, all that is necessary, is to simply lift the gripper head 20 toward the magnet channel 17 and when the head comes close to such channel, the gripper member together with the soap will be immediately attracted to the holder. Due to the shape of the gripper head 20 and the channel 17, the soap need not be held in any particular manner except to point the head 20 towards the channel, and the direction of approach of the head to the channel is quite immaterial. When the gripper head 20 engages with the channel 17, the soap can be safely released as the head firmly seats in such channel. Because the gripper head does not touch the top of the channel but is gripped by the sides of such channel, i. e., the portions of such channel which form the pole faces of the magnet, the soap when released, will swing easily to a vertical position, if it has been attached to the holder at an angle from the vertical, to position the soap so that it will drain readily and can be readily grasped for reuse. Due to the fact that the channel 17 is inverted and is only wide enough to receive the upper portion of the gripper head 20, the possibility of any soap or other matter accumulating in the channel to the extent that it would materially interfere with the positive action of the magnet on the gripper head, is eliminated. When the soap is to be used, all that is necessary is for the user to grasp the soap and by a downward pull separate the gripper head 20 from the channel magnet 17. Due to the secure anchorage of the gripper stem in the soap, there is no danger by such action of a separation thereof from the soap throughout the life of the soap. As only the smooth rounded surface of the head 20 of the gripper member projects from the soap, there is no danger of injury to the user by the gripper member while the soap is being used.

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It will be noted that in the above described embodiment of the invention, the magnet 16 is positioned within the holder 14 by inserting it through the forward end of the holder and then sealing it in position by means of the face plate of the holder. It is within the contemplation of the invention to construct the holder so that the magnet may be inserted therein through the back of the holder. This construction is shown in Fig. 4 of the drawings in which the numeral 14' indicates the modified form of holder and the numeral 16', the magnet. The holder 14' is provided with an integral front wall and a recess 13' which opens at the back of the holder and which throughout its length has a cross-sectional area such as will permit the magnet 16' to be inserted into the holder through its rear. The inserted magnet 16' may be retained in position in the holder in any suitable manner, as by providing a layer of adhesive 26 to adhere the front wall of the magnet to the front wall of the holder. The front and bottom walls of the holder 14' are opened to expose the channel 17' of the magnet and to permit the head 20 of the gripper member to be inserted therein. The bottom wall of the holder is also constructed so that it lies in a horizontal plane when the holder is mounted on a support, thus providing more clearance for the cake of soap secured to the gripper member, and enabling the supported soap to swing to some extent without coming into contact with the holder. This feature of course, may also be embodied in the construction shown in Figs. 1 to 3, inclusive. This modified form of holder may be supported by a bracket such as the bracket 12' shown, in which case, the set-screw 15' is positioned so that it secures the holder 14' to such bracket, in the manner shown.

While I have hereinabove described and illustrated preferred embodiments of my invention, it will be understood by those skilled in the art that various changes may be made therein without departing from the spirit of the invention or the scope of the appended claims.

I claim:

1. A soap holder comprising a soap gripper member having a metal head of rounded form and capable of being magnetically attracted, and a stem formed to be securely anchored in a cake of soap, a support adapted to be mounted on a supporting surface with one end projecting outwardly therefrom, a magnet adapted to attract and support the metal head of said gripper member and a cake of soap attached thereto, said magnet being carried by the projecting end of said support and having a pair of spaced depending poles and an exposed channel-shaped seat formed between the opposed outer ends of such poles and adapted to receive the head of said gripper member to enable the poles of said magnet to hold such member and the attached cake of soap in a depending position, said rounded gripper member head being dimensioned to engage both poles of said magnet when positioned in said magnet seat.

2. A soap holder such as defined in claim 1, in which said support is made of non-magnetic material and in which said magnet is completely enclosed by the material of said support except for the exposed walls of said channel.

3. A soap holder such as defined in claim 1, in which said magnet channel-shaped seat is arc-shaped in a transverse direction, and in which the head of said gripper member is substantially spherically-shaped, the inner longitudinal central

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portion of such channel and the outer end of such head being so constructed relative to each other that the outer end of said head is spaced from the longitudinal central portion of such channel wall when the head is seated in such channel.

4. A soap holder such as defined in claim 1, in which said magnet channel-shaped seat is arc-shaped in a transverse direction, and in which the head of said gripper member is substantially spherically-shaped and of such dimensions that the outer end of such head can be readily seated in such channel, and an annular recess provided on the inner end of such head around the attached base of the stem of said gripper member.

5. A soap holder comprising a soap gripper device having a metal attachment member in the form of a rounded head and a stem formed to be readily inserted into a cake of soap, and when so inserted to securely anchor said gripper device to the cake of soap, said attachment member having a recessed undersurface providing a rim encircling said stem and adapted to be embedded in the cake of soap when said device is secured thereto, and said attachment member being of greater cross-sectional dimensions than the largest transverse dimension of said stem and being of substantial thickness so that such member substantially projects from the surface of the soap in which such rim is embedded, a support including an attachment portion adapted to be fixedly secured to a supporting surface and an elongated portion connected to and supported at one end by said attachment portion so as to project outwardly from such supporting surface, and a metal attachment member carried by the outer end of said elongated portion and having a channel-shaped recessed seat arranged thereon to be engageable by the attachment member of said soap gripper device with the soap held in depending position relative to said elongated portion, the metallic material of one of said attachment members being unmagnetized but capable of being magnetically attracted, and the metallic material of the other of said attachment members being magnetized, whereby the attachment member of said soap gripper device may be detachably connected to the channel-shaped seat of the attachment member carried by said elongated portion to secure a cake of soap in depending relation on the projecting end of said support in spaced relation to the supporting surface to which said support is connected.

6. A soap holder comprising a soap gripper device having a metal attachment member in the form of a rounded head and a stem formed to be readily inserted into a cake of soap, and when so inserted to securely anchor said gripper device to the cake of soap, said attachment member being of greater cross-sectional dimensions than the largest transverse dimension of said stem and being of substantial thickness so that such member substantially projects from the surface of the soap into which the stem has been inserted, a support including an attachment portion adapted to be fixedly secured to a supporting surface and

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an elongated portion connected to and supported at one end by said attachment portion so as to project outwardly from such supporting surface, and a metal attachment member carried by the outer end of said elongated portion and arranged thereon to be engageable by the attachment member of said soap gripper device with the soap in depending position relative to said elongated portion, the attachment member carried by said elongated portion having a concave seat of less depth than the head-like attachment member of said soap gripper device and adapted to readily receive the attachment member of said soap gripper device, and the metallic material of one of said attachment members being unmagnetized, but capable of being magnetically attracted, and the metallic material of the other of said attachment members being magnetized, whereby the attachment member of said soap gripper device may be detachably connected to the seat of the attachment member carried by said elongated portion to secure a cake of soap in depending relation on the projecting end of said support in spaced relation to the supporting surface to which said support is connected.

7. A soap holder comprising a soap gripper device having a metal attachment member in the form of a rounded head and having means for securely anchoring said gripper device to a cake of soap, a support adapted to be mounted on a supporting surface, and a metal attachment member carried by said support and having a concave seat of less depth than the rounded head-like attachment member of said soap gripper device and adapted to readily receive such attachment member of said soap gripper device with the soap held in depending position relative to said support and in spaced relation to the supporting surface, the metallic material of one of said attachment members being unmagnetized, but capable of being magnetically attracted, and the metallic material of the other of said attachment members being magnetized, whereby the attachment member of said soap gripper device may be detachably connected to the seat of the attachment member carried by said support to secure a cake of soap in depending position on said support.

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