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3,204,601

SUPPORT FOR AN ARTICLE

Filed Aug. 12, 1962

FIG. 1

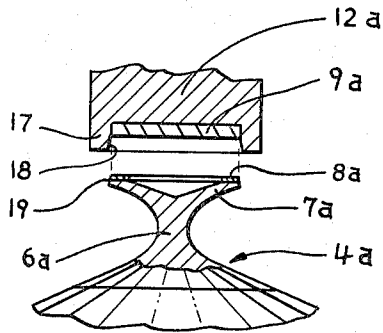
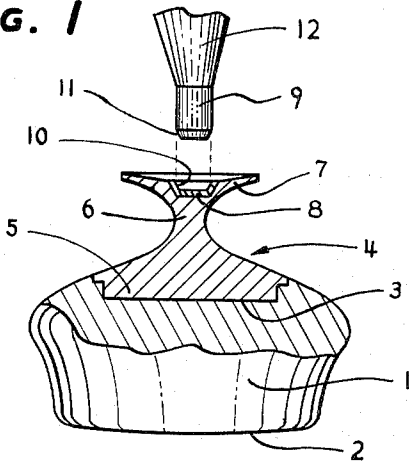


FIG. 2

FIG. 3

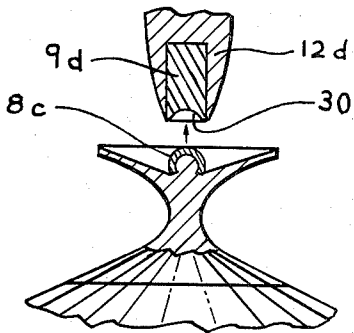
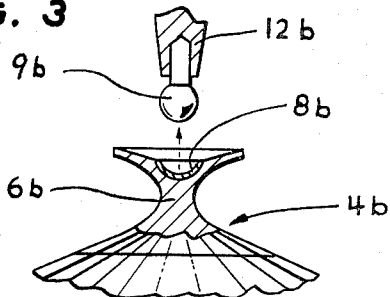


FIG. 5

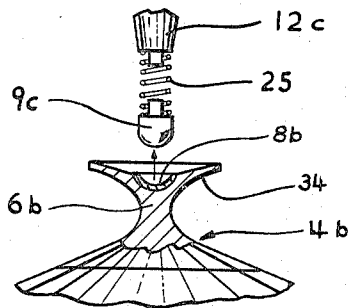


FIG. 4

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SUPPORT FOR AN ARTICLE

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7 Claims. (Cl. 118-76)

This invention relates generally to a magnetic support for an article that includes a material to be applied to an object being treated, and more particularly to a support for an article that includes a body of erodable material, such as soap.

This is a continuation in part of application Serial No. 47,766, filed August 5, 1960, now Patent No. 3,125,824, granted March 24, 1964, entitled Support for a Cake of Material. In my copending application Serial No. 804,283, filed April 6, 1959, now Patent No. 3,100,363, granted August 13, 1963, entitled Cake of Material and Handle, there is described a body of material, for example a cake of soap, which is adapted to operate on an object being treated. The body of material is attached to a holding means which extends upwardly from the side of the material opposite to the side which operates on an object being treated. This latter side is the principal surface of application of said body of material to said object. Said holding means includes a slender stem portion which is made so that it can be held comfortably in the crotch between two adjacent fingers of a hand and without spreading said fingers to an uncomfortable degree. One end of the holding means is adapted to hold the body of material, while the other end extends upwardly between said fingers. Usually the upper end of the holding means includes a head portion which facilitates holding by the hand and supporting of the article. In use, the body of material is generally held with the stem comfortably nested in the crotch between two adjacent fingers. The surface of the body of material adjacent to said holding means may rest against the under surface of the fingers and the palm of the hand. The ends of the fingers may fit over the outer edge of the article in a comfortable manner.

When such an article as described is suspended by simple magnetic means from a support, it sometimes happens that in the act of taking a hold of said article with the intent of disengaging it from the support, the hand may accidentally impart a sideward or lateral force to the article thereby causing sideward translation or other sideward movement of the article being supported. Since a magnetic support which holds such an article in a suspended position exerts its resultant force of attraction generally vertically, and normal to the face or faces of the magnet, it offers no appreciable magnetic attractive resistance to sideward sliding between the magnet and the metal portion of magnetic material cooperating therewith to support the article. The result is that the article may be easily dislodged from engagement with the support. This dislodgement may sometimes be caused by vibration or other movement of the support, for example in the case where such an article is supported in an automobile trailer or "camper," or in a boat.

It should be noted that it requires greater coordination of the hand and arm to grasp an article such as described, while suspended from a magnetic support, in substantially the using position with the slender stem clasped within the crotch of two adjacent fingers of the hand than it does to grasp any article suspended from a magnet with the entire hand. Therefore, one is more apt to dislodge the article described from a magnetic support, this increasing the need for some means to prevent or otherwise to reduce the possibility of accidental dislodgement of the described article from the magnetic support when re-

trieving it from or placing it in cooperation with said support. This need is further accentuated by two facts: (a) a body, if of soap, becomes slippery in use and therefore is more difficult to hold than one that does not become slippery in use, which may also make it more difficult to place such an article in proper cooperation with a magnet support and which at least at times may make it more difficult to grasp same when suspended from such a magnetic support without increasing the possibility of causing accidental dislodgement, and (b) a body of erodable material grows continually smaller in use so that the body can be relied on less and less to offer auxiliary means for holding the article, which places continually increasing reliance on this particular holding means for holding the article in the preferred way when retrieving it from or placing it in cooperation with the support.

It is desirable to be able to support or hang the article described when not in use, from or otherwise in cooperation with a magnetic support of such character that not only can the article be easily engaged and disengaged from said support, but also that said support prevents the article supported from substantial sideward sliding or displacement which may cause the undesired disengagement between the support and the article supported. It is at the same time desirable that the article be supported in such a manner that the hand can be extended toward the same with the adjacent fingers slightly spread for nesting the slender stem in the crotch between them with a minimum of interference from the means of support and without the unintentional dislodgement of the article supported from the support.

It is an object of the present invention to provide a magnetic support for a body of material together with the type of holding means described in which interference with the hand is minimized during removal of the article from and placement in cooperation with the support, and in which sideward movement of the article supported, with respect to the support, is restricted.

It is another object of the present invention to provide a magnetic support as described above in which the article supported may be free to rotate under the effect of gravity and inertial forces through a substantial arc about the support, which arc lies in a plane that is not ordinarily normal to the axis of the holding means, while remaining supported by the support.

It is still another object of the present invention to provide a magnetic support, such as described above, with the cooperating magnetic portions of the support and the article supported being restricted in lateral movement, and in which said support is flexible.

These and other objects of the invention will become more clearly apparent from the following description taken in conjunction with the attached drawings.

Referring to the drawing:

FIGURE 1 is a front elevation view in partial section showing a body of material with holding means including intermediate support means at the upper end of the holding means for supporting the article in cooperation with a magnetic support which restricts the lateral translation of the intermediate support means with respect to the support.

FIGURE 2 shows another magnetic support means which restricts the lateral translation of the intermediate support means and the article supported with respect to the support.

FIGURE 3 shows still another magnetic support means which restricts the lateral translation of the intermediate support means but which allows the article supported to rotate about the cooperating portion of the support means while remaining suspended therefrom.

FIGURE 4 shows another magnetic support similar to the preceding, with the support being flexible.

FIGURE 5 shows still another magnetic support.

Referring to FIGURE 1, the body of material 1 which may, for example, be soap, includes a surface 2 adapted to cooperate with an object to be treated and an opposed surface 3 adapted to cooperate with a holding means. The holding means is designated generally by the reference numeral 4. It includes a lower portion 5, at least part of which is adapted to form intimate contact with the adjacent surface 3 of the material 1. The central portion of the holding means 4 includes a slender stem portion 6 which is adapted to be grasped comfortably in the crotch between two adjacent fingers of a hand and without spreading said fingers to an uncomfortable degree. The upper end of the holding means includes a laterally extending head portion 7. Recessed within the upper surface of said head is an intermediate support means portion 8 that includes magnetic material, for cooperation with a magnetic support means portion 9 of the support means 12. The intermediate support means 8 has an upwardly extending side surface portion 10 that cooperates with the downwardly extending side surface 11 of the magnetic support means portion 9 to prevent substantial lateral translation of the intermediate support means 8 and of the article of which it is a part with respect to the magnetic support means portion 9. This provides a more secure attachment of the intermediate support means to the magnetic support means with less chance of the article supported becoming unintentionally detached because of generally lateral translation of the intermediate support means relative to the magnetic support means, due to vibration or other movement or a slight misdirected sideward movement of the hand. Needless to say, the force of attraction should not be so great that the person using the article would in any way find it difficult to detach the article supported from the magnetic support.

Referring to FIGURE 2, the holding means 4a includes a slender stem portion 6a and a laterally extending head portion 7a which contains an intermediate support means portion 8a of magnetic material which cooperates with a magnetic support means portion 9a recessed within support means 12a. The outer downwardly extending portion 17 of the support means 12a contains an inner surface 18 that may operate in opposition to the facing edge-surface 19 of the head portion 7a so as to prevent any substantial lateral translation of the intermediate support means 8a with respect to the support means 12a. This provides another improved type of magnetic support.

Referring to FIGURE 3, the holding means 4b includes a slender stem portion 6b at the upper end of which is located a concave intermediate support means portion 8b of magnetic material which may cooperate with a partially spherical magnetic support means portion 9b of the support means 12b in such a way that horizontal translation of the article supported relative to the support is prevented. However, it should be noted that while the intermediate support means portion 8b cooperates with the support means portion 9b to support the article therefrom, said article may be rotated through a substantial arc without disengagement from the support means. This provides a worthwhile improvement as it helps to prevent dislodgement as a result of vibration of the support, as when mounted in a boat or trailer, or from an accidental sideward push by the hand. Also, in being free to rotate, the article will tend to accommodate itself by yielding to an accidental sideward force without disengagement from the support. Further, this increases the ease with which the article may be brought into engagement with the support since the article need not be oriented in a vertical position. For an article to be able to rotate about its support with some freedom, as here described, the force of magnetic attraction should not be so great as to prevent any substantial rotation under

the force of gravity of the article supported when it is at its normal full weight, before possible diminution through use.

Referring to FIGURE 4, the holding means 4b includes a slender stem portion 6b at the upper end of which is located a concave intermediate support means 8b of magnetic material, as previously, which may cooperate with a partially spherical magnetic support means portion 9c of the support means 12c. The support means portion 9c is attached to the upper fixed portion of the support means 12c by means of a flexible connecting means portion 25. The flexible connecting means portion provides even greater flexibility in the supporting of the article than previously, and thus further helps to prevent the accidental or otherwise unwanted disengagement of the article from the support. The flexible connecting means may be a spring or any flexible material such as rubber and various synthetics. Also, the entire support and sometimes even the holding means may be of such material and may be so designed as to provide the desired flexibility. For example, either or both of the cooperating means for support of the article may be fastened to the holding means and/or support means in such a flexible way that they may rotate or otherwise adjust their position with respect to the holding means and/or support means so that said means of support may more readily accommodate themselves in a position of cooperation. A flexible support may be especially desirable when the support is affixed to a vibrating surface, for example, on a plane or ship.

Referring to FIGURE 5, a holding means and cooperating support means are shown similar to those in FIGURE 3 except that the cooperating surface 30 of the magnetic support means portion 9d of the support means 12d is concave and of a configuration to cooperate with the partially spherical intermediate support means 8c, which is convex and made of magnetic material.

It may be noted that all five drawings depict other intermediate non-magnetic support means in combination on the same holding means such that each of the articles shown may be supported in at least two other ways according to the disclosures of the application of which this is a division, although the magnetic means of support described are not dependent on them. For example, each of the five articles described that are to be supported may be rested in an inverted position with what would ordinarily be the uppermost surface of the holding means cooperating with a substantially flat surface to support the article thereon. Also, the laterally extending head portion of the holding means may be positioned so that its outer and under surface, e.g., FIGURE 4, reference numeral 34, rests upon a pronged support which includes a crotch to receive the stem portion 6b of the holding means 4b, such as disclosed in the application of which this is a continuation-in-part.

It should be noted that the positions of the magnet and the magnetic material with which it cooperates in the support of the article, and even the positions of their cooperating configurations, may be reversed without changing the intention of the invention. The disadvantages in using the magnet as the intermediate support means is that it usually adds to the weight of the article and also would ordinarily add to the cost of the holding means. If the magnet and magnetic material utilized are made of such material that either or both would tend to corrode on exposure to water or other substances with which they might come into contact, then the exposed surfaces may be covered with a thin protective coating. Such coating should tend to resist physical abrasion that might be expected in prolonged use. For example, a very thin coating of Teflon or polyethylene might be satisfactory.

It should be noted that the support and the article supported need not either one or both be vertical. For example, supports of the type shown in FIGURES 1 and

2 may be oriented to hold the article outward from the vertical. The support may be rotated so as to hold the article upwardly from the support or outwardly from the support. It is only where the cooperating surfaces of the support means and the intermediate support means permit rotation of the article in a plane other than that normal to the axis of the holding means that the article normally tends to assume a vertical position unless its movement is restricted. Therefore, sideward or lateral movement of the article supported with respect to the support means may normally be defined to include a direction generally normal to the axis of the holding means. A support such as that shown in FIGURE 2 might be highly practical where the article to be supported contains a body of soap, with the support oriented at the washbasin to a position similar to the orientation of the support shown in FIGURE 5 of the application of which this is a continuation-in-part (i.e., diagonally upwardly). It should be clear that for any support which is to hold the article in other than a suspended position, the positive orientation of the article need not be determined alone by the cooperating magnetic means of support between the support means and the cooperating intermediate support means. Non-magnetic portions of the two cooperating means for support of the article may cooperate to help maintain the desired relative orientation. For such a non-vertical orientation, a spherical cooperating interface between the magnetic support means and the intermediate support means facilitates proper engagement and may be desirable for such use.

The inclusion of soap-like material in the body of the article to be supported makes such cooperating magnetic means for supporting said article of increased importance to the consumer. Soap in use becomes a highly effective lubricant and makes any article containing such material more difficult to hold and to manipulate. Further, the standard type of bar soap when used in the shower is often stowed in a receptacle which is not only inconveniently placed but which is also placed in such a location as to increase the possibility of slipping and an ensuing accident. The bathing area is known to be one with a high frequency of accident occurrence. In contrast, the magnetic type support may be placed in any location judged convenient and safe to the user. Further, it tends to minimize the possibility of interference between the fingers holding the article and the support, thus making engagement with and removal from the support more easily accomplished, which further increases the convenience and safety of this type support. In addition, the magnetic type support with its small requirement for the areas of the cooperating magnetic surfaces offers aesthetic advantages of design for the combination of the support and the article to be supported either not possible nor so easily achieved with most other types of supporting means. Such an advantage may be important under highly competitive market conditions. Soap is defined broadly to include any erodable material of soap-like character regardless of what other substances it may contain such as skin creams, skin moisturizers, medication, etc.

Thus, there are shown improved magnetic means for support of an article as described, which markedly reduce the possibility of dislodgement from the support as a result of vibration, oscillation and irregular movement of the support and also as a result of the hand unintentionally knocking the article from the support for any reason such as through poor coordination. A further advantage is that such a support tends to reduce to a minimum any possible interference between the fingers claspingsaid

stem of the holding means and the support. Further, it is believed that the high convenience of a magnetic means of support, when coupled to the special advantages given by this invention, which tends to minimize accidental dislodgement of the article supported, will make a support of this design of increased desirability by the consumer.

I claim:

1. A combination of the character described for supporting a body of material of the type which includes a surface adapted to operate on an object and a holding means having a lower portion secured to the opposite surface of said body, said holding means having a slender stem portion extending upwardly from said lower portion enabling said stem to be held comfortably in the crotch of two adjacent fingers of a hand without spreading said fingers to an uncomfortable degree, when the article is in use, said combination comprising said body of material; said holding means, a magnetic support means; and intermediate support means disposed generally upwardly from said stem portion to cooperate with the support means to support the article therefrom, while leaving said stem portion, and the space lying generally outwardly from said stem, unobstructed whereby said intermediate support means may be engaged with or removed from said support means conveniently while said holding means is engaged in the crotch between said fingers, the support means and the intermediate support means being comprised one of a magnet and the other of magnetic material attractable to said magnet, the magnet being of sufficient strength to securely support the article therefrom in the way intended but without being so strong as to prevent reasonably easy detachment of the article from the support means, the cooperating surface of the support means with the intermediate support means, together with surfaces adjacent thereto, being of such configuration as to prevent substantial lateral translation of the intermediate support means with respect to the cooperating portion of the support means.

2. The combination as in claim 1 wherein the body of material contains soap.

3. The combination as in claim 2 wherein the configuration of the cooperating surfaces of the support means with the intermediate support means are such that they may rotate to a substantial degree, one about the other, while remaining in magnetic cooperation, with the strength of the magnet not being so great as to prevent this limited rotation under the force of gravity, when the weight of the article to be supported has not been reduced by use.

4. The combination as in claim 2 wherein at least part of the support means is flexible.

5. The combination as in claim 3 wherein at least part of the support means is flexible.

6. The combination as in claim 2 wherein the upper end of the holding means contains a laterally extending head located generally upwardly from said stem.

7. The combination as in claim 3 wherein the upper end of the holding means contains a laterally extending head located generally upwardly from said stem.

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FRANK B. SHERRY, *Primary Examiner.*