

[54] ELECTRICAL APPLIANCE

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[51] Int. Cl. **A61m 15/00**

[58] Field of Search.... 128/212, 192, 193, 195-197,
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 219/272-276; 261/99, 104, 107, 142, DIG. 65

[57] ABSTRACT

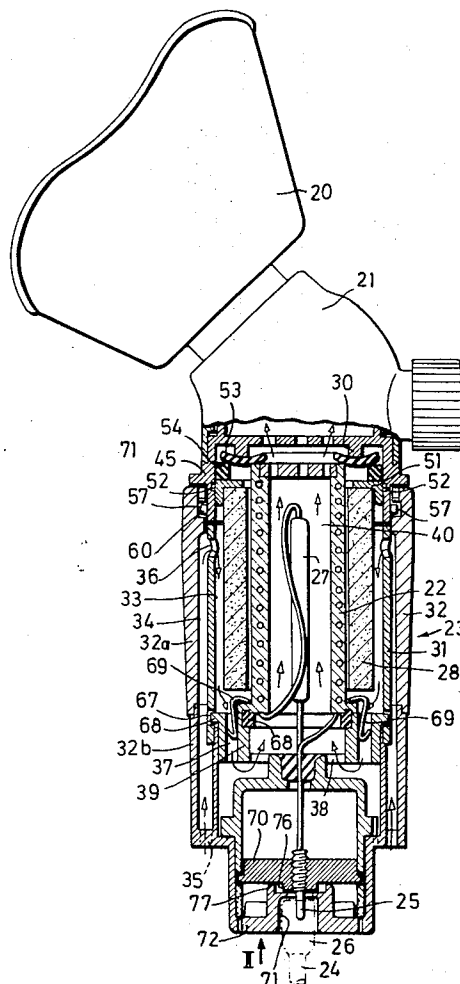
A first component of the appliance has a first section an annular wall of which surrounds a chamber within which a heating element is located. A second component includes a cupped face mask which is to be placed against the face of the user and a second section communicating with the interior of the mask via suitable passages, and having an annular fluid-storage absorbent element of porous material. The sections are telescoped together and can be axially separated, for facilitating access to the fluid-storage element and heating means.

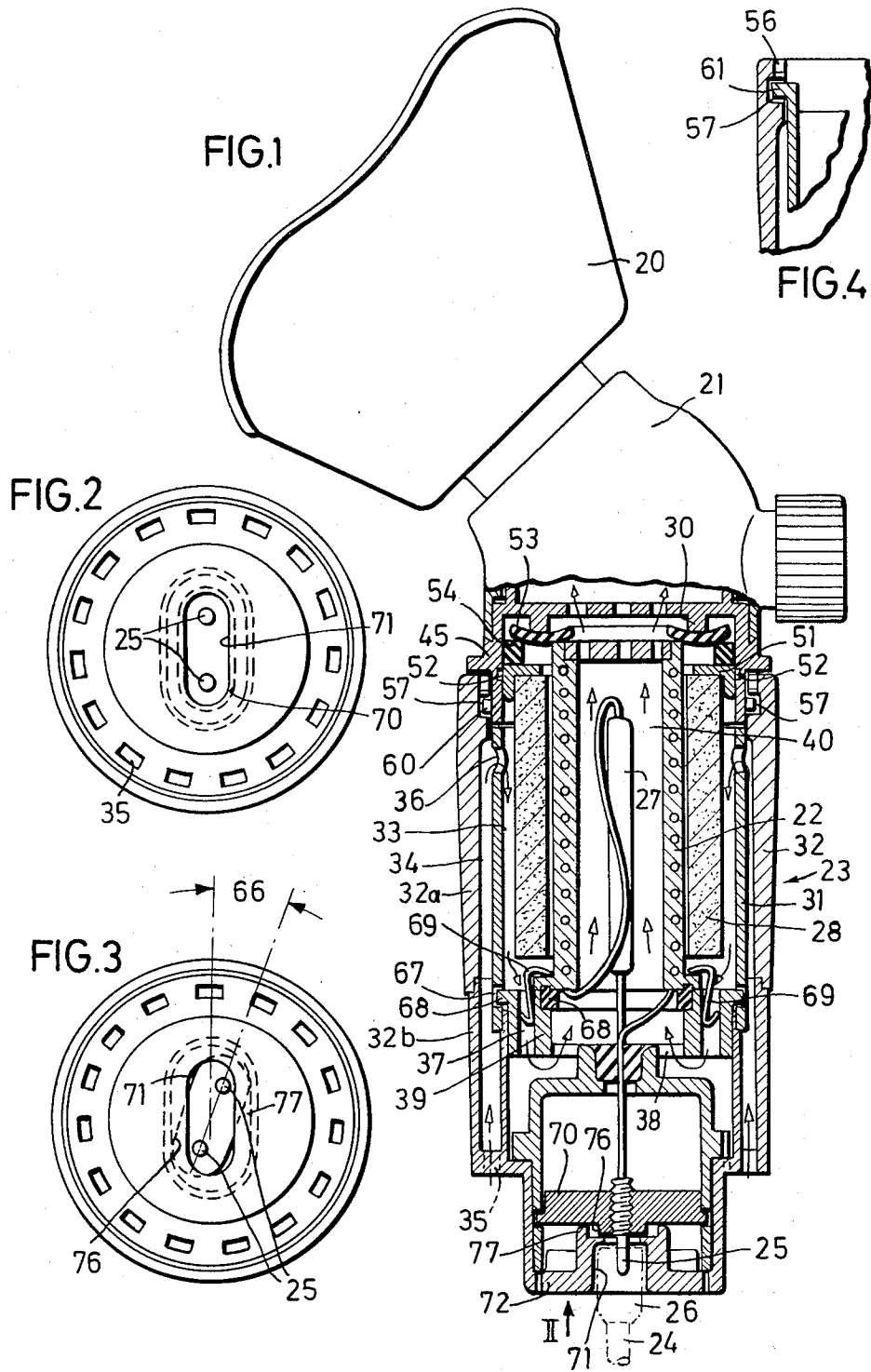
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25 Claims, 13 Drawing Figures





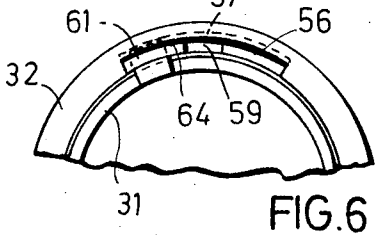
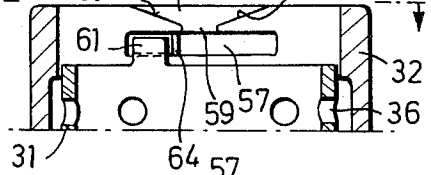
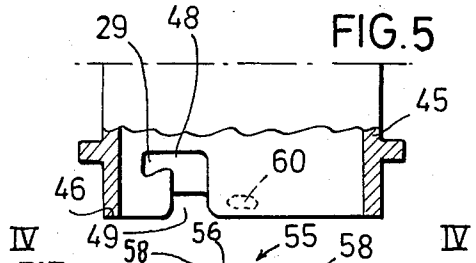
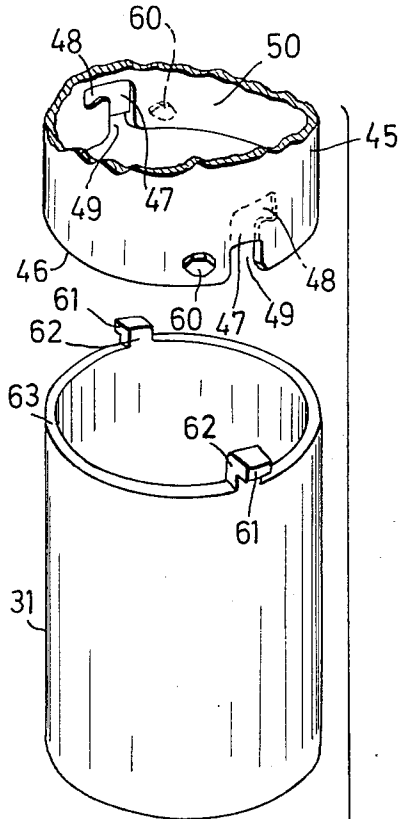


FIG. 9

FIG. 7

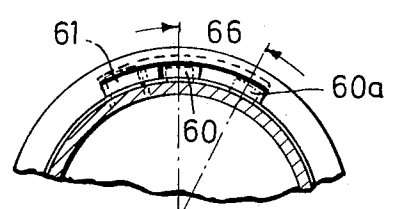
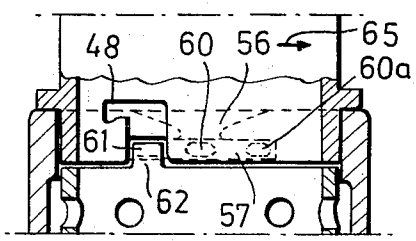
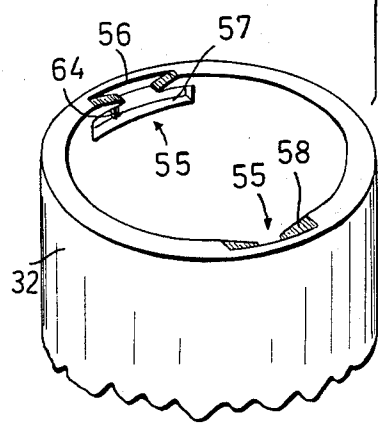
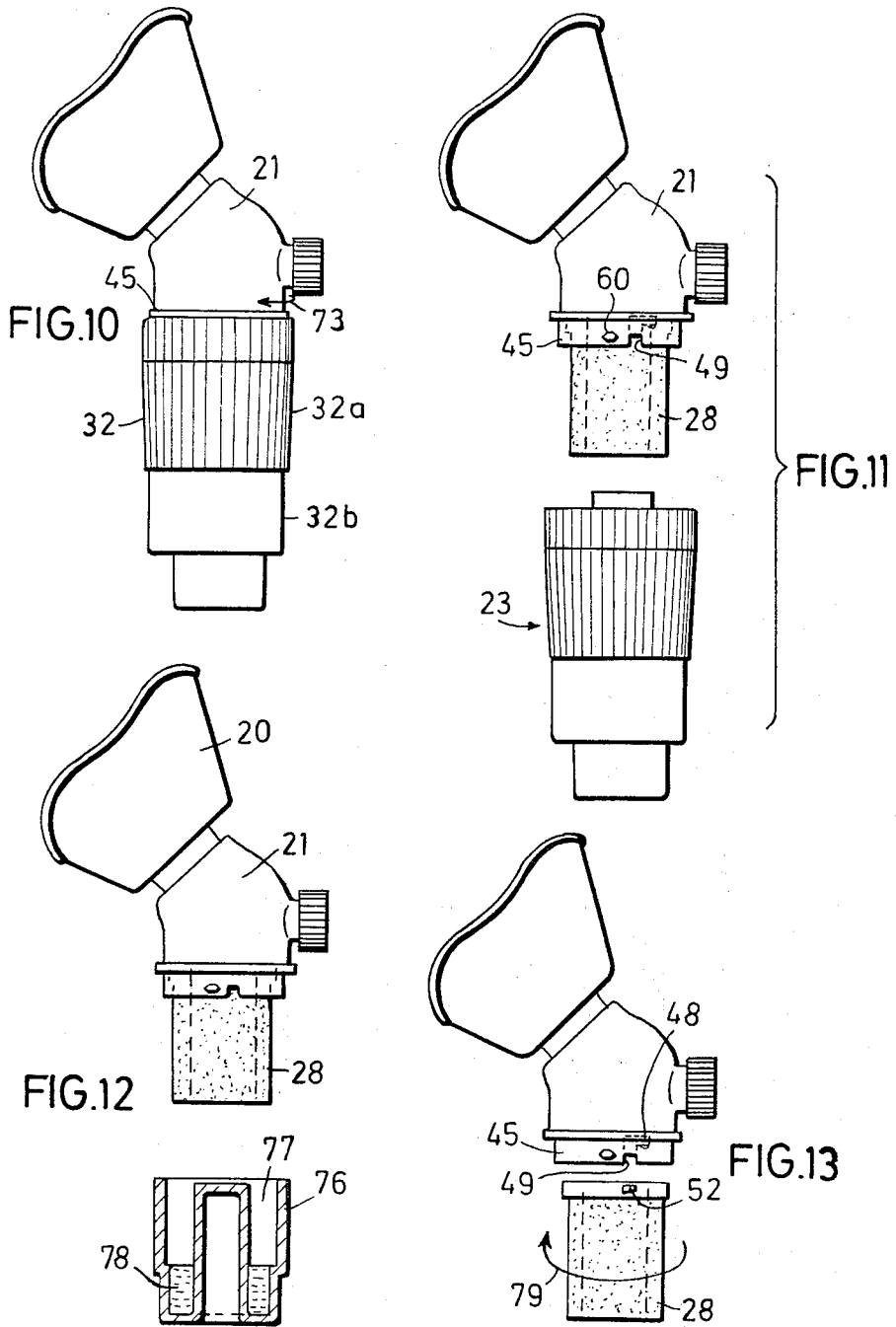


FIG. 8



ELECTRICAL APPLIANCE

BACKGROUND OF THE INVENTION

The present invention relates generally to an electrically operated appliance and more particularly to an appliance of the type having a facial mask which is to be placed against the face of a user and which produces vapors which are supplied to the interior of the mask.

Appliances of this type are already known. They are basically intended for two purposes, either as so called "facial-saunas" in which the intention is to supply vapors into contact with the facial skin of the user, or for treating the respiratory passages of the user with warm vapors, such as warm air. In either case, the appliances comprise a facial mask which is connected via suitable passage means with a component having a chamber in which there is located an annular storage element of porous material which is capable of absorbing water and/or fluids, for instance medication, although separate means for containing the medication (if any is to be provided) can be present. A heating arrangement is provided which provides heat and means is provided for circulating a stream of air over the heating arrangement to be heated thereby and in contact with the porous element to be enriched with water vapor and the like.

Particularly where the device is intended as a medical appliance, the purpose is, of course, to supply a stream of moist warm air to the respiratory passages of a user.

The problem with the prior art constructions is that is not readily possible to gain access to the porous storage element. The difficulty which arises from this fact is that after the device has been used, it is not readily possible to ascertain whether the storage element has become completely dry, that is whether or liquid which was stored in its pores has been fully used. If the device is repeatedly used and put away with the storage element still containing moisture, there exists the decided danger that undesired odors will develop due to the presence of such residual moisture, creating a musty smell which is unpleasant. Other undesirable consequences may also follow from this.

Moreover, the fact that it is not possible to readily gain access to the interior of these prior-art devices, where the storage element is located, makes it impossible to ascertain without difficulty just how much liquid has been absorbed by the storage device. This, in turn, can result in the storage device being incompletely filled, that is having absorbed an insufficient amount of liquid, so that the period of time for which moist air can be breathed or otherwise utilized is consequently shortened.

Moreover, it is conversely possible that too much moisture might be introduced into the device, that is more moisture than the storage element is capable of absorbing. In this case, liquid may be present in free (i.e., unabsorbed) state in the device, an undesirable circumstance, because of the fact that the device is electrically heated and the means for supplying the air stream is also electrically operated.

SUMMARY OF THE INVENTION

It is, accordingly a general object of the present invention to provide an improved apparatus of the type here under discussion.

More particularly, it is an object of the invention to provide such an improved apparatus in which the storage element employed is readily accessible.

Another object of the invention is to provide such an improved apparatus in which the storage element is not only readily accessible, but can readily be removed for repair, replacement or the like.

In pursuance of these objects and of others which will become apparent hereafter, one feature of the invention resides in an apparatus of the character outlined herein, which, briefly stated, comprises a first component including a first section provided with wall means surrounding the chamber and heating means located in the chamber. A second component is also provided including a cupped face mask adapted to be placed against the face of a user, and a second section communicating via passage means with the interior of the mask and having an annular fluid-storing element of porous material. The sections are telescoped together so that the fluid-storage element is concentric with the heating means but the sections are nevertheless separable so as to expose the fluid-storage element and the heating means when so separated.

It is particularly advantageous if the sections are separable from one another in axial direction, and the apparatus according to the present invention has the advantage that the fluid-storage element of porous material can readily be not only inspected but also removed for repair or replacement. In fact, it can be readily removed for the purpose of "filling" it, that is to placed it into a body of liquid which it is to absorb rather than having to place the liquid into the device itself.

We have found it to be particularly advantageous to construct the apparatus in such a manner that a separate intermediate member is provided which connects the mask and the wall means and is provided on its side facing the wall means with the advantageously hollow-cylindrically configured storage element. This means that when the sections are separated, the storage element projects beyond the intermediate member and is thus accessible almost over its entire axial length. The storage element may be connected with the intermediate member in releasable manner, for instance via a bayonet coupling so that it can be readily separated and reconnected, or a new storage element can be connected with the intermediate member when desired. The intermediate member or a projecting portion thereof can be provided with one or more recesses which cooperate with corresponding projections on the storage element which advantageously is of lime sandstone. The storage element may be provided with a ring, advantageously composed of synthetic plastic material, which carries the projections cooperating with the recesses of the intermediate member. Of course, it is not necessary that the storage element consist of lime sandstone, but it should consist of a suitably porous material, that is of a material which has the same porosity and absorption characteristics as lime sandstone. This includes ceramic material, suitable filter material or the like, and in such instances it may not always be possible to provide the projections on the storage element itself,

for which reason the aforementioned ring may be provided.

The intermediate member can be releasably connected with the wall means, again via a suitable bayonet coupling. The wall means advantageously is provided in the region of that end which faces the intermediate member when the sections are connected, with at least one recess which is preferably located at its inwardly directed side, and which is associated with one or more noses provided on the intermediate member. This means that when a relative rotary displacement between the intermediate member and wall means takes place, the two may be separated or, again be reconnected. The recess or recesses may be provided as circumferentially extending recesses or grooves and to permit entry of the noses into them they may communicate with additional recesses or grooves which extend to the adjacent axial end of the wall means. The circumferentially extending grooves may have a greater depth in radial direction of the wall means than the additional recesses which latter are advantageously of approximately triangular configuration with one corner of the triangle merging with the respectively associated groove and having a dimension permitting one of the noses to pass through it into the groove.

It is also advantageous, in accordance with a further concept of the invention, if the section provided with the wall means and the heating means is further provided with an inner wall which is arranged with inwardly with spacing of the outer wall means and is of tubular configuration, being turnable relative to the outer wall means about its longitudinal axis. The tubular inner wall may be provided on its side facing the intermediate member with outwardly projecting projections which may be carried on suitable webs which extend into the grooves, so that the extent to which the inner wall means can turn with reference to the outer wall means is limited by the length of the grooves. The radial projection of the projections is advantageously greater than the depth of the additional grooves which connect the circumferentially extending grooves at the axial end of the outer wall means, so that it is not readily possible to withdraw these projections from the respectively associated grooves. It will be appreciated that if the various components are made of synthetic plastic material, particularly of thermoplastic material, there is as a rule, a certain resilient deformability characteristic inherent in the material which, makes it possible to assemble and disassemble these components with one another even if in undeformed condition they are so interengaged that they cannot be readily separated.

The intermediate member is advantageously provided with edge recesses or cutouts into which the aforementioned projections or webs extend, that is which straddle the projections or webs. These cutouts may merge with or be part of those recesses which cooperate with the projections of the storage element.

The circumferentially extending groove sections may be provided with a nose or the like which is elastically deformable and under the influence of a force acting in the circumferential direction of the wall means. The purpose of this is to assure that when the device is disassembled, that is separated and the inner wall means is accessible, the latter cannot be turned out of its position in which it is when the storage element is removed. On the other hand, the nose, which acts as a blocking

element is not so strong that it would be capable of preventing a turning of the inner wall means when a sufficient torque is exerted. Here again, it should be taken into consideration that appropriate material, for instance, a suitable thermoplastic material, permits the elastic or resilient deformability in the manner outlined earlier.

The tubular inner wall means may be provided with an insert carrying the heating means, and the latter may be associated at its region adjacent the intermediate member with annular sealing element of elastomeric material, advantageously silicon rubber. Such a sealing element would be in sealing relationship with the heating element and the intermediate member and the latter is advantageously provided with an annular step which engages the sealing element. It has also been found advantageous to provide the construction according to the present invention in such a manner that the sealing element, if necessary with the interposition of a spacing ring, is also in engagement with the storage element. When the sealing element is thus under pretension, it acts not only to provide a sealing effect but also to maintain the components which it contacts under a certain amount of stress. This factor can be utilized for instance to maintain the bayonet closures under some pretension to prevent undesired opening of these closures. Also, the sealing element is thus capable of providing a certain compensation for tolerance variations between the various components so that the latter cannot in normal use move from their respective positions.

Of course, a suitable connector is provided for connecting the device with a source of electrical energy. This is advantageously in form of a female connector recessed in the outer side of the outer wall means and accommodating the connector pins, so that a male connector can be inserted into it. It is possible to provide an arrangement in which an electrical connection cannot be carried out or maintained when the device is opened, that is when the sections thereof are separated. This will be discussed in more detail later.

Another concept of the invention provides for a receptacle to be associated with the apparatus according to the invention and having an annular inner space which is accommodated in configuration to the shape of the storage element. The annular inner space may have in its lower portion a less radial dimension than in its upper portion, and the space may be filled with a liquid to be absorbed by the annular storage element which is thereupon inserted into the space. The lower narrower portion of the annular space is made to conform relatively closely to the exterior dimension of the storage element and serves to displace the liquid into the interior of the storage element when the latter is inserted into the space. This is particularly advantageous if the liquid is a mixture of water and medication because the forcible displacement into the interior of the storage element upon insertion of the latter into the annular space, also provides for an enforced admixing of the water and medication.

The novel features which are considered as characteristic for the invention are set forth in particular in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following de-

scription of specific embodiments when read in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a side view of an apparatus according to the present invention, partially sectioned;

FIG. 2 is a view as seen in the direction of the arrow II in FIG. 1;

FIG. 3 is a view similar to FIG. 2 but with the various components in different relative positions;

FIG. 4 is a fragmentary view in longitudinal section of the apparatus of FIG. 1, but taken in a plane other than that of FIG. 1;

FIG. 5 is a longitudinal fragmentary section taken in an other axial plane of FIG. 1;

FIG. 6 is a view seen in the direction of the arrows VI—VI of FIG. 5;

FIG. 7 is a view similar to FIG. 5, with the components being in different relative positions;

FIG. 8 is a top-plan view of FIG. 7;

FIG. 9 is a perspective view of several components of the apparatus in separated condition;

FIG. 10 is a side view of the apparatus;

FIG. 11 is a side view of the apparatus with the components separated;

FIG. 12 is a side view of the upper portion of the apparatus with an associated receptacle for charging of the storage element with liquid; and

FIG. 13 is a side view of the upper portion of the apparatus with the storage element removed.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Discussing the drawing now in detail, it will be seen that the embodiment illustrated in FIGS. 1—13 is composed, insofar as the major elements are concerned, of a mask 20 which is to be placed against the face of a user, an intermediate member 21 which surrounds a chamber, and a section 23 provided with a heating element 22, with the section 23 also serving as a handle. The heating element 22 is connectable with a source of electrical energy (not shown) via a cable or wire 24. The connection between the cable 24 and the heating element 22 is effected as a releasable connection by means of the contacts 25 and the plug 26.

Heating element 22 is of tubular configuration and accommodates in its interior a thermostat 27 which is of any type well known to those skilled in the art. The element 22 is surrounded exteriorly by a porous storage element, for instance of lime sandstone or the like, which is identified with reference numeral 28, and is also of tubular configuration. The storage element 28 absorbs liquid. It is in turn surrounded by an inner tubular wall 31 which defines with an outer wall 32 and the storage element 28 respective annular chambers 33 and 34.

Apertures 35 are provided in the lower region of the section 23 to permit entry of air first into the chamber 34 and from there through apertures 36 provided in the wall 31 and into the annular chamber 33. The air then flows downwardly in the latter and passes the openings 37 and 38, provided in an insert 39 into the interior space 40 surrounded by heating element 22. From there the air passes — having been heated by contact with the heating element 22 — via the intermediate member 21 into the mask 20 and into engagement with the facial skin of the user, or if it is being breathed into

the respiratory passages of the person whose face is placed against the mask 20.

It will be understood that the air is heated to a temperature as desired and which can be selected via the thermostat 27, during its passage through the chambers 33, 34 and the space 40. It also serves to insulate the outer wall 32 and thus to prevent undesired or excessive heating of the same. Furthermore, as the air passes in the aforementioned path, it absorbs moisture from the moisture laden storage element 28.

As previously indicated the storage element 28 should be readily releasable. It is therefore releasably connected with the portion 45 of the intermediate member 21, and the intermediate member 21 and the portion 45 may either be of one-piece with one another or may be separate elements. From the point of view of ease of manufacture, it is preferable that the portion 45 be a separate element and then be later connected with the intermediate member 21, for instance by being adhesively or otherwise bounded thereto.

In any case, the portion 45 is provided at its free end with recesses 47 which extend from its edge 46 and initially extend in direction parallel with the longitudinal axis of the section 23, whereupon they have a portion 48 which extends approximately in circumferential direction. The arrangement is such that the section 49 of each recess 47 which faces the edge 46, constitutes a complete hole through the wall of the portion 45, whereas the remainder of each recess 47, including the portion 48, is only a groove in the inner wall surface 60.

An annular member 51, for instance of synthetic plastic material or the like, is provided at that end of the storage element 28 which is closer to the mask 20. The member 51 is connected with the storage element 28 in suitable manner, for instance by being bounded thereto. The outer periphery of the member 51 is provided with radial projections 52, in the illustrated embodiment two of them which cooperate in the manner of a bayonet coupling with the recesses 47, 48. Thus, when the element 28 is to be connected with the projection 45, it is first moved towards the latter in axial direction so that the projections 52 enter into the recesses 47 until, when they have reached the level of the portions 48, relative rotary displacement of the members 28 and 45 causes the projections 52 to become lodged in the portions 48. The portions 48 may be axially inclined of the portion 45, or at least one of their boundary surfaces 27 may be so inclined, to provide for a certain amount of force acting upon the projections 52 and fixing them against undesired displacement.

The position of a sealing ring of elastomeric material, advantageously of silicon rubber, further facilitates such fixing. The sealing ring 53 presses via an intermediate ring 54 against the ring 51 and the heating element 22, subjecting it to a certain amount of pretension aside from serving as its desired sealing function. The portion 45 is provided with an annular projection 30 which contacts the median region of the ring 53.

Recesses 55 are provided on the inner side of the outer wall 32 in the upper end region (as seen in FIG. 1) thereof, being located opposite one another and each being composed of two portions 56 and 57. The portion 56 is the upper portion and delimited at one side by two inclined surfaces 58 in such a manner that it is of approximately triangular configuration with one corner of the triangle communicating via a cutout 59

with the portion 57. The portion 57 which is the lower portion, is configured as a circumferentially extending groove and has a greater radial depth than the respectively upper portion 56, as indicated in FIGS. 6 and 8. The portion 45 of the intermediate member 21 is provided with two radial noses 60 as well as with two outer projections 61 provided at the upper end of the inner wall 31. These components cooperate with the recesses 55 and the drawing shows that the projections 61 are each carried by a web 62 which extends upwardly beyond the upper end 23 of the inner wall 21. It will be appreciated that the upper portion 56 of the respective recesses 55 serves primarily for insertion of the respectively associated nose 60 or projection 61 into the respective lower portion 57. When this is to be effected, the inner wall 31 is initially inserted into the space surrounded by the outer wall 32, causing the projections 61 first to enter into the respective portions 56 and from there via the cutout 59 into the portion 57. The inclined surfaces 58 guide the projections 51 necessarily in the direction toward the cutout 59.

Once this is accomplished, the inner wall 31 is then turned to a position in which the projections 61 assume the location illustrated in FIG. 5, and in which the projections 61 and thus the inner wall 31 are retained by a small stud or projection 64 provided in the region of the portions 57. This stud is advantageously of synthetic plastic material, such as a thermoplastic, and has a certain ability to elastically yield. On the one hand it serves to prevent undesired turning of the inner wall 31 from its position, and on the other hand it is sufficiently yieldable to become elastically deformable — under the influence of a torque exerted in circumferential direction — to permit the turning of the inner wall 31 if and when this is specifically desired.

When the components have the position illustrated in FIGS. 5 and 6, the portion 45 of the intermediate member 21 can be inserted from above into the upper part of the space surrounded by the outer wall 32. The arrangement of recesses 49 and the portions 47 on the one hand and of the noses 60 on the other hand, with reference to one another is such, as shown in FIG. 5, that when the noses 60 are inserted through the respective cutout 59 into the lower portion 57 of the recess 55, the recess 49 straddles from above at the lower free end of the portion 45 the respectively associated web 62 of the inner wall 31. This means that in circumferential direction there exists a mechanical connection between the webs 62 on the one hand and the recesses 49 on the other hand.

In FIG. 7 the components have been illustrated in their connected condition, and here, as in FIGS. 5, 6 and 8, the storage element 28 has been omitted for the sake of clarity of illustration.

The arrow 65 in FIG. 7 indicates relative rotational movement of the portion 45 about the longitudinal axis of the section 23, which is to be imparted in order to retain the portion 45 and thereby the intermediate member 21 and the components associated therewith, in the position in which the portion 45 is located within the upper part of the space surrounded by the outer wall 32. In FIG. 8 the extent to which such rotational movement is to be effected is designated with reference numeral 36 and it will be appreciated that when the end of the rotational movement indicated by the arrow 65 has been reached, the noses 60 assume the position 60a which is illustrated in broken lines in FIGS. 7 and 8. At

the same time, the inner wall 31 has been turned through a corresponding extent, because it is connected with the portion 45 via the webs 62 and the recesses 49, respectively. During such movement the projection 64 is elastically deformed in the manner already discussed, to such an extent that it does not permit the rotational movement of the associated web 62. The second position of the projection 61 is not illustrated in FIG. 8 because it was thought advisable to omit this for the sake of clarity of illustration.

It is advantageous that the inner wall 31 as well as the insert 39, which was mentioned above, be of a resiliently yieldable synthetic plastic material, advantageously a thermoplastic material. This makes it possible to insert the lower end of the inner wall 31 over the insert 39 when the components are assembled, until projections 68 on the outer periphery of the insert 39 engage in cutouts 67 provided on the inner wall 31. The components have sufficient ability to resiliently yield due to the use of a thermoplastic material. The heating element 22 is carried by the insert 39, with a sealing ring 68 being interposed and with the heating element 22 being retained by clamping members 69 which engage with one end in the openings 37.

A mounting member or unit 70 is provided for the electrical contacts 25, portions of which which are to be inserted into the plug extend into a cutout 71 in the bottom wall 72 which is connected with the outer wall 32. Because of the previously described connection between the inner wall 31 and the insert 39, the latter has the mounting member 70 participate in the earlier-described turning movement. The cutout 71 is so configured in its outline that its cross section is substantially completely filled when the plug 26 is inserted into it and mates with the contacts 25.

It should be understood that the various components, in particular the inner wall 31 and the outer wall 32 will in normal use assume the relative position illustrated in FIGS. 1, 2, 4 and 10. When the storage element 28 is to be charged with liquid, the element 28 is to be removed from the section 23 for which purpose the intermediate member 21 with its portion 45 is turned by the distance 66 (see FIGS. 1 and 3) in the direction of the arrow 73 with the reference to the outer wall 32. For manufacturing reasons, or to obtain a particular appearance the outer wall 32 may be composed of two parts 32a and 32b, but this is not necessary. When the turning movement is completed, the components have the position illustrated in FIGS. 5 - 8, and the inner wall 31 has participated in the turning movement due to the connection via the webs 62 and the recesses 49. Similarly, the contacts 25 have also participated in this movement because the mounting member 70 for them turns with the insert 49.

When the just mentioned turning movement is completed the various components assume the relative positions illustrated in FIGS. 5 - 8, permitting the intermediate member 21 with its portion 45 to be withdrawn upwardly (as seen in the drawing) from the section 23, that is from the confines of its outer wall 32. In so doing, the noses 60 pass through the respective cutout 59 and the portion 45 is lifted off the webs 62 of the inner wall 31 which latter remains in the end position shown in FIGS. 5 - 8, which, incidentally, corresponds also to the displaced position of the two electrical contacts 25 as shown in FIG. 3.

With reference to the cutout 71 into which the male plug 26 is inserted, the contacts 25 assume at this time an inclined position so that it is impossible to insert the connector 26 and establish a connection with a source of electrical energy, when the device is opened, or when the storage element has been removed. Conversely, it is, of course, impossible to effect relative turning movement of the sections 31 and 32 in a sense opening the apparatus, while the male connector 26 is still located in the cutout 71 and in electrically conductive connection with the contacts 25. Thus, there is provided an interlocking arrangement which prevents the danger of electrical shock.

Appropriate abutment may be provided for limiting the relative rotational movement of the components for instance in the region 57 of the recess 55. Projection 76 of the mounting element 70 may also be provided and located so as to contact an associated abutment 77, or the electrical contacts may be so positioned that they abut a sidewall of the cutout 71 and thus limit the relative rotational displacement.

FIG. 11 illustrates the storage element 28 which is connected with the portion 45 of the intermediate member 21, showing the storage element 28 as it appears after it has been upwardly withdrawn out of the section 23, or conversely after the section 23 has been downwardly withdrawn. The storage element 28, which may still be connected with the member 21 and possible also with the mask 20, is now sufficiently exposed so that it can be inserted into a separate receptacle 76 having an annular space 77 whose dimensions are accommodated to those of the storage element 28. The lower region of the annular space 77 is designated with reference numeral 78 and advantageously so narrowed that its radial dimension corresponds approximately to the wall thickness of the storage element 28. When the space 77, 78 is filled with liquid, insertion of the storage element 78 into the space 77 and entry into the portion 78 thereof, causes liquid contained in this portion 78 to be upwardly displaced and in effect to be "squeezed" into the pores of the storage element 28. In addition, this construction assures good admixing of two or more liquids, if for instance, water and medication are inserted together into the space 77, 78.

The storage element 28 can be removed from the portion 45 as shown in FIG. 13 by effecting a relative turning movement of the storage element 28 and the portion 45 in the direction of the arrow 79, thereby separating the storage element 28 with its associated annular member 51. This makes it possible to very simply and readily remove one storage element 28 and replace it with another.

When the storage element 28 has absorbed the desired amount of liquid, the apparatus is reassembled in the manner discussed with reference to FIGS. 5 - 8 whereupon the relative rotational displacement in the direction of the arrow 65 (see FIG. 7) is carried out in order to re-connect the elements 21 and 25 on the one hand, and 23 and 32 on the other hand, via the bayonet coupling described earlier.

The present invention thus achieves the objects which have been set forth above, and avoids the disadvantages of the prior art.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of constructions differing from the types described above.

While the invention has been illustrated and described as embodied in an electrical appliance, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention, that others can, by applying current knowledge readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention and, therefore, such adaptations should and are intended to be comprehended within the meaning and range of equivalence of the following claims.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims.

We claim:

1. An apparatus of the character described, comprising a first component including a first section provided with a chamber and with wall means surrounding said chamber, and heating means located in said chamber; a second component including a cupped face mask adapted to be placed against the face of a user, and a second section and having an intermediate member releasably connecting said mask with said wall means and an annular fluid-storage element of porous material mounted on an inner side of said intermediate member, said sections being telescoped together so that said fluid-storage element is concentric with said heating means, but being separable so as to expose said fluid-storage element and heating means when separated; bayonet-coupling means removably connecting said fluid-storage element with said intermediate member; and means for admission of air to, and passage thereof through said porous element and heating means prior to exiting from said mask.

2. An apparatus as defined in claim 1, wherein said fluid-storage element is of hollow cylindrical configuration.

3. An apparatus as defined in claim 1; further comprising bayonet-coupling means for releasably coupling said sections with one another.

4. An apparatus as defined in claim 1, said wall means being provided with at least one recess, and said second section having at least one projection removably received in said recess.

5. An apparatus as defined in claim 4, said wall means having an inwardly directed side, and said recess being provided at said inwardly directed side.

6. An apparatus as defined in claim 5, said wall means having an axial end, and said recess being a circumferentially extending groove provided in the region of said axial end; and further comprising at least one additional recess in said wall means and extending from said end to said recess.

7. An apparatus as defined in claim 1, said heating means including a hollow cylindrical heating element; and further comprising an annular sealing member of elastomeric material interposed and, when said sections are telescoped together, compressed between said heating element and said second section.

8. An apparatus as defined in claim 7, said elastomeric material being silicon rubber.

9. An apparatus as defined in claim 7, said second section having an annular bead in abutment with said sealing member.

10. An apparatus as defined in claim 7, wherein said sealing member also abuts said storage element.

11. An apparatus as defined in claim 1, said wall means being annular and having a cut-out; and further comprising electrical terminal means mounted within the confines of said annular wall means, one of said wall and terminal means being circumferentially displaceable with reference to the other from and to a position in which said electrical terminal means register with said cut-out, and in which position a cooperating electrical connector is insertable into said cut-out and into electrical engagement with said electrical terminal means.

12. An apparatus of the character described, comprising a first component including a first section provided with a chamber and with wall means surrounding said chamber, and heating means located in said chamber; a second component including a cupped face mask adapted to be placed against the face of a user, and a second section comprised of an intermediate member releasably connecting said mask with said wall means and an annular fluid-storage element of porous material mounted on an inner side of said intermediate member, said sections being telescoped together so that said fluid-storage element is concentric with said heating means, but being separable so as to expose said fluid-storage element and heating means when separated, one of said intermediate member and fluid-storage element having a plurality of projections, and the other having a plurality of recesses removably accommodating said projections; and means for admission of air to, and passage thereof through said porous element and heating means prior to exiting from said mask.

13. An apparatus as defined in claim 12, said storage element being provided with a ring portion, and said projections being provided on said ring portion.

14. An apparatus as defined in claim 13, wherein said ring portion is of synthetic plastic material.

15. An apparatus as defined in claim 13, wherein said storage element is of lime sandstone.

16. An apparatus of the character described, comprising a first component including a first section provided with a chamber and with wall means surrounding said chamber and having an axial end and an inwardly directed side which is provided in the region of said axial end of said wall means with a circumferential groove and with a recess whose depth is less than that of said groove and which extends from said axial end to said groove, said recess having substantially the shape of a triangle one corner of which has a portion which communicates with said groove; heating means located in said chamber; a second component including a cupped face mask adapted to be placed against the face of a user, and a second section connected to said mask and having an annular fluid-storage element of porous material and at least one projection removably received in said groove, said sections being telescoped together so that said fluid-storage element is concentric with said heating means, but being separable so as to expose said fluid-storage element and heating means when separated; and means for admission of air to, and passage thereof through said porous element and heating means prior to exiting from said mask.

17. An apparatus as defined in claim 16, said portion having in circumferential direction a dimension which

is slightly greater than the corresponding dimension of said projection.

18. An apparatus of the character described, comprising a first component including a first section provided with a chamber and with wall means surrounding said chamber and having an inwardly directed side provided in the region of one axial end of said wall means with a circumferential groove, and with a recess extending from said axial end to said groove, said first section further including an inner tubular wall which defines with said wall means an annular clearance and is turnable relative to said wall means about its own longitudinal axis, and heating means located in said chamber; a second component including a cupped face mask adapted to be placed against the face of a user, and a second section connected to said mask and having an annular fluid-storage element of porous material and at least one projection removably received in said groove, said sections being telescoped together so that said fluid-storage element is concentric with said heating means, but being separable so as to expose said fluid-storage element and heating means when separated; and means for admission of air to, and passage thereof through said porous element and heating means prior to exiting from said mask.

19. An apparatus as defined in claim 18, said tubular wall having at least one outwardly extending nose which projects into said recess.

20. An apparatus as defined in claim 19, said nose having a length which is greater than said depth of said recess.

21. An apparatus as defined in claim 19, said second section including at least one cut-out which straddles said nose.

22. An apparatus as defined in claim 21, said cut-out merging with said recess.

23. An apparatus as defined in claim 19; further comprising at least one stud portion in the region of said recess, and said stud portion being resiliently deformable under the influence of a force acting upon it.

24. An apparatus as defined in claim 18, said inner tubular wall including an insert portion; and wherein said heating means is provided on said insert portion.

25. An apparatus of the character described, comprising a first component including a first section provided with a chamber and with wall means surrounding said chamber and having an axial end and an inwardly directed side which is provided in the region of said axial end with a circumferential groove and with a recess whose depth is less than that of said groove and which extends from said axial end to said groove; a second component including a cupped face mask adapted to be placed against the face of a user, and a second section connected to said mask and having an annular fluid-storage element of porous material and at least one projection which is removably received in said groove, said sections being telescoped together so that said fluid-storage element is concentric with said heating means, but being separable so as to expose said fluid-storage element and heating means when separated; and means for admission of air to, and passage thereof through said porous element and heating means prior to exiting from said mask.