May 7, 1963 M. RABINOFF 3,088,459

THERAPEUTIC COSMETIC MASK

Filed Sept. 11, 1961

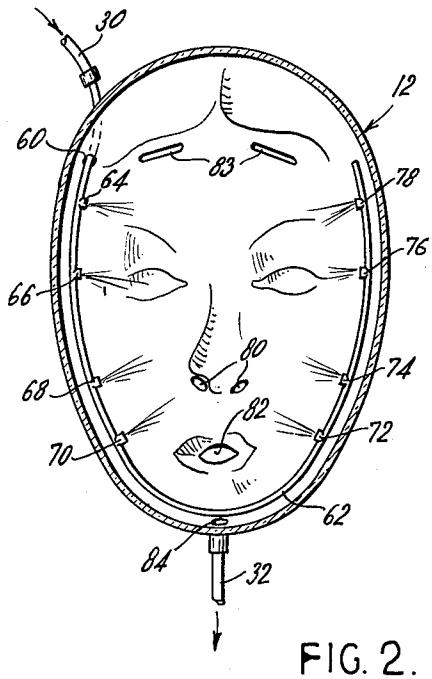


FIG. 2.

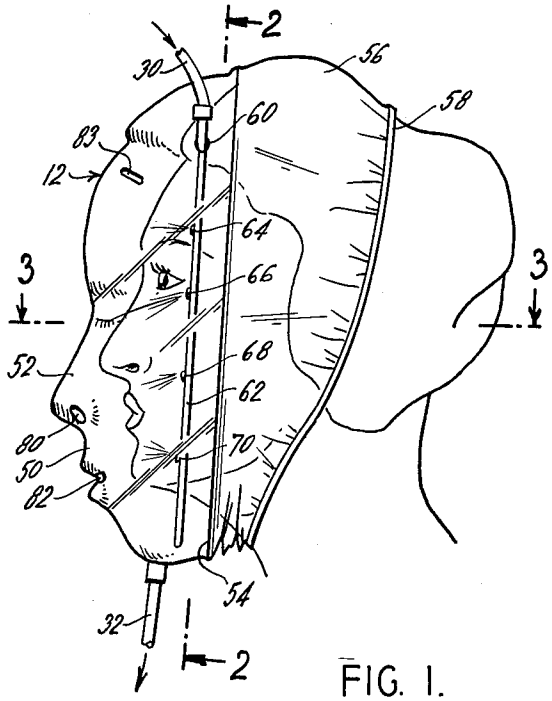


FIG. 1.

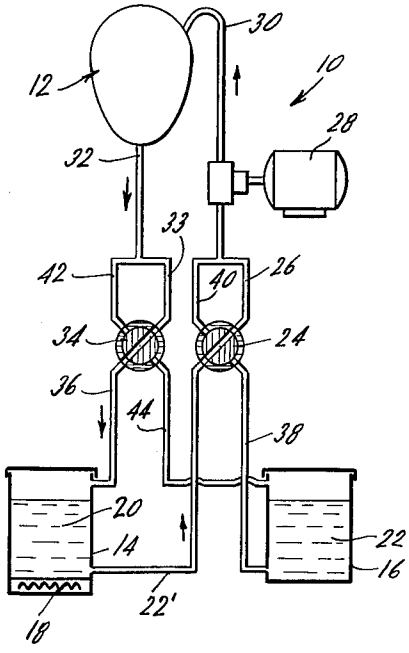


FIG. 4.

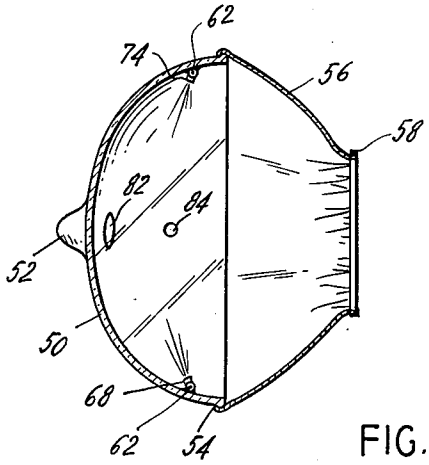


FIG. 3.

INVENTOR.
MAX RABINOFF
BY
Amster + Levy
ATTORNEYS

United States Patent Office

3,088,459
Patented May 7, 1963

3,088,459

THERAPEUTIC COSMETIC MASK

Max Rabinoff, 550 5th Ave., New York, N.Y.

Filed Sept. 11, 1961, Ser. No. 137,465
8 Claims. (Cl. 128—66)

This invention relates to a therapeutic cosmetic appliance and more particularly to a mask adapted to be secured in spaced relationship to the face of a person being treated with means being provided to spray fluid under pressure against the skin of the face.

It has been found that application of moist heat to and about the sinus areas of a human being will cause a break-up of the congestion in the sinus cavities and passages, such that the facial muscles will gain better tone and the skin will be rejuvenated in appearance. Various means for localizing the application of heat to these areas have been devised. Sinus heating pads have been employed and these have been found to be somewhat unsatisfactory since these heating pads provide only dry heat and since it is very difficult to use the sinus heating pads after medication has been applied to the skin prior to application of the heat for effecting better penetration and treatment of the skin. In addition, if medication has been applied, there is a likelihood that the sinus pad will become soiled by the medication. Further, after use of a sinus pad it is still necessary to wash the medication off. If no medication is used, the pores of the skin will remain clogged. It is therefore an object of the present invention to provide a therapeutic cosmetic appliance which can be used to provide moist heat and pressure with medication already applied on the facial skin for treating the face especially about the sinus areas in a manner such that the medication applied on the face may be aided in penetrating the skin. After the pores have been opened by the hot moist treatment fluid, cool or cold treatment fluid can be applied to close the pores and complete the removal of the medication from the face of the individual thereby eliminating the necessity of separately washing the medication off of the face.

I have also found that the use of high pressure as well as heat on the sinus cavity regions of the face aids considerably in the elimination of congestion in the sinus pockets. It is another object of the invention, therefore, to provide a cosmetic appliance of the character described in which the treatment fluid is ejected in pin-point sprays under considerable pressure upon the sinus areas of the person being treated.

A further object of the invention is to provide a therapeutic cosmetic appliance including a mask having outer contours corresponding to the features of a human being such that when the mask is in use, a person viewing the apparatus is not repelled by a strange or alien looking device, but is actually pleased to look on the attractive features of the mask.

Another object of the invention resides in the provision of a therapeutic cosmetic appliance which employs a transparent elastic member fixed to the mask for holding the mask in proper spaced relationship to the features of the person wearing the appliance while forming a substantially watertight seal about the face of the person wearing the appliance. In this manner, the user's hair is protected against heat and moisture during the treatment.

In beauty parlors for women, various new appliances have been introduced and tested. It has been found that as a practical matter all new devices must have an esthetic appearance in order to be commercially successful. If a device has proved to be unappealing to the eyes of women, it is almost uniformly rejected and is not commercially successful even though it is effective in operation. Therefore, it is further an important object of the invention to

provide a therapeutic cosmetic appliance that is extremely attractive in appearance and comfortable to use to the individual wearing the appliance.

Still another object of the invention resides in the provision of a therapeutic cosmetic appliance that is adapted to supply hot liquid in the form of needle sprays under pressure onto the face of a person wearing the appliance and which is subsequently capable of applying cool or cold liquid onto the individual's face to close the pores of the skin and wash off the residue of any previously-applied medication or cosmetic preparation from the face of the user.

Still further objects and features of the invention reside in the provision of a therapeutic cosmetic appliance that is simple in construction, capable of being manufactured of readily available materials such as synthetic plastics including polystyrene, polyurethene, polyvinyl chloride, or polyethylene, which is durable as well as being heat and cold resistant, and which is simple to use.

These, together with the various ancillary objects and features of this invention which will become apparent as the following description proceeds, are attained by this therapeutic cosmetic appliance, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein:

FIG. 1 is a side elevational view illustrating the appliance in position about the head of a woman with the contours of the mask in spaced relation to the features of the woman;

FIG. 2 is a vertical sectional view taken along the plane of line 2—2 in FIG. 1 illustrating in particular the U-shaped tube used for spraying treatment fluid on the face of the user;

FIG. 3 is a horizontal sectional view taken along the plane of line 3—3 in FIG. 1 particularly illustrating the arrangement of the drain means and the breathing tube; and

FIG. 4 is a schematic diagram of the various components used in selectively spraying hot or cold treatment fluid.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the varous views, reference numeral **10** is used to generally indicate an illustrative embodiment of the therapeutic cosmetic appliance constructed in accordance with the present invention. This appliance includes a mask **12** which is designed to be secured on the head and about the face of the user. There is provided means for delivering both heated and cold treatment fluid to the mask **12**. One such arrangement may include a pair of tanks **14** and **16**. The tank **14** is provided with a heating coil **18** for heating the fluid such as water **20** in the tank **14**. The tank **16** has cold water **22** therein. Connected to the tank **14** is an outlet tube **22'** which delivers heated treatment fluid through a two-way valve **24** through a conduit **26**. The fluid thence is forced under pressure by a pump arrangement **28** through conduit **30** to the mask **12**. The fluid then passes through a drain pipe **32** and conduit branch **33** back to a two-way valve **34** and through return pipe **36** to the tank **14**.

The tank **16** feeds cold water **22** through the feed pipe **38** and the two-way valve **24**, thence through conduit **40** to the pump **28**. The pump **28** supplies the fluid under pressure through the conduit **30** into the mask **12**. The fluid is then sprayed on the face of the user and collects and drains through the drain pipe **32** and the conduit **42** through the two-way valve **34** and through the return pipe **44** to the tank **16**. The pump **28** is designed to raise the pressure of the fluid being sprayed to approximately 150 p.s.i. The mask **12** includes a face piece **50** which is molded with contours **52** simulating the features of a human being. The face piece **50** is somewhat larger

than the size of an average woman's head and terminates in an oval shaped open end portion 54 to which there is secured or bonded an elastic cap portion 56 provided with a reinforced resilient edged member or band 58. The cap portion is preferably formed out of any suitable resilient and elastic transparent material and like the face piece 52 may be selected from such substances as polyurethene, polyethylene, polyvinyl chloride, polystyrene or the like.

As can be readily understood, the features 52 forming the contours of the mask face piece 50 are quite attractive and do not offend the esthetic sensibilities of a person viewing the therapeutic cosmetic appliance in use. Both the face piece 52 and the cap portion 56 are transparent or translucent, thereby allowing the color of the person using the therapeutic cosmetic appliance to be seen. Thus, the appliance will not appear distasteful or frightening to even the most sensitive women who use or view the apparatus in use in a beauty parlor or other establishments.

The face piece 50 has an opening 60 therein through which one end of a U-shaped tube 62 extends, the conduit 30 being connected to the tube 62. The opposite end of the tube 62 is closed. This U-shaped tube 62 is sized and shaped to extend about the interior side surface of the face piece 50, and has a lower portion which is adapted to extend under the chin of a person wearing the mask 12. A plurality of spaced nozzles 64, 66, 68, 70, 72, 74, 76 and 78 are disposed about the U-shaped tube 62. Each of these nozzles has a cluster of tiny apertures for producing a needle spray from each nozzle. As can be readily seen, the nozzles 64 and 78 are adapted to spray liquid onto the sinus cavities above the eyes while the nozzles 66 and 76 spray liquid on the sinus cavities on either side of the nose bridge. The nozzles 68 and 74 are provided for applying liquid under pressure to the cheek sinus cavities on either side of the nose while the nozzles 70 and 72 take care of the lower sinus cavities. In this manner, heat and pressure are applied just where it is necessary for therapeutic and cosmetic action.

To permit the person to breathe within the mask during the spray treatment, suitable apertures 80, 82 and 83 may be provided in the face piece 50 in the vicinity of the nostrils, mouth and forehead, respectively. These apertures may be bordered on the inner surface of the mask by molded ledges (not shown) which divert the liquid therefrom and prevent it from leaking from the mask. A drain aperture 84, to which the conduit 32 is attached, is provided at the base of the mask 12 at the simulated chin portion thereof for collecting fluid which has already been sprayed on the face.

In use, the apparatus is carefully adjusted on the head of the person being treated, after a suitable medication or cosmetic as desired has been applied on the face and skin of the person. The elastic cap portion 56 is secured in such a manner as to insure that the spray nozzles are directed toward the proper sinus pockets, that a watertight seal is provided around the edges of the mask, and that the other portions of the person's head, such as the hair and ears, are properly protected. Then, with distilled and purified cold rain water 22 in the tank 16 and the hot rain water 20 heated by the coil 18 in the tank 14, the valve mechanism is switched so that the hot water 20 is drawn by the pump 28 through the valve 24 and into the U-shaped tube 62 at which time it is sprayed under optimum pressure on the face of the patient. The high pressure sprays of heated water applied over a considerable period of time will normally remove some or all of the excess medication cosmetic or preparation, while aiding the preparation in bringing about its therapeutic or cosmetic action. The heat and pressure of the sprays will aid the medication in penetrating the pores of the skin of the person undergoing treatment.

In addition, the pressure produced by the sprays against the sinus cavities increases blood circulation in these areas and initiates the breaking up of the pus deposits in the sinus cavities.

In order to close the pores which are opened by the moist heat, the valve mechanism is turned so that the cold water 22 of container 16 passes through the conduit 38 and then through the valve 24 to the tube 62 wherein the cold water is sprayed from the nozzles on the face. It is noted that the valves 24 and 34 may be coupled together for simultaneous operation by a single knob so that alternately the hot water 20 or the cold water 22 may be applied on the face of the patient being treated in a selective and convenient manner.

During the heat treatment with the heated water and then the cold water, there is a considerable rejuvenating effect on the skin of the person undergoing treatment. Further, a considerable amount of cleansing action will be achieved and congestion in any of the sinus cavities will be broken up and diminished. The cap portion 56 and sealing band 58 will prevent any of the moisture from soiling the garments of the person undergoing treatment and it will serve to hold the mask in place in a comfortable manner.

A latitude of modifiaction, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What I claim is:

1. A therapeutic cosmetic appliance comprising a mask having contours simulating the features of a human being, means for securing said mask on a head of a person with said contours being in spaced relationship to the features of the person, and a tube extending into said mask, means for connecting said tube to a source of fluid under pressure, said tube having a plurality of openings directed toward the sinus areas of the face for spraying treatment fluid on the face and around the sinus areas of the head of a person wearing said mask.

2. A therapeutic cosmetic appliance comprising a mask arranged to fit over the face of a person in spaced relation thereto, said mask being provided with contours simulating the features of a human being, an elastic cap portion secured to said mask for holding said mask on the head of a person while forming a substantially fluid tight seal with said head of a person, a tube extending into said mask, said tube having a plurality of apertures therein through which treatment fluid can be sprayed on the face of a person wearing the appliance, and means connected to said tube for feeding fluid under pressure to said tube.

3. A therapeutic cosmetic appliance comprising a mask arranged to fit over the face of a person in spaced relation thereto, said mask being provided with contours simulating the features of a human being, an elastic cap portion secured to said mask for holding said mask on the head of a person while forming a seal with said head of a person, a tube extending into said mask, said tube having a plurality of apertures therein through which treatment fluid can be sprayed on the face of a person wearing the appliance, means connected to said tube for feeding fluid under pressure to said tube, and collecting means at the bottom of said mask for collecting treatment fluid after it has been sprayed on the face of a person.

4. A therapeutic cosmetic appliance comprising a mask arranged to fit over the face of a person in spaced relation thereto, said mask being provided with contours simulating the features of a human being, an elastic cap portion secured to said mask for holding said mask on the head of a person while forming a substantially fluid tight seal with said head of a person, a U-shaped tube ex-

tending into said mask and adapted to surround the head of a person, said tube having a plurality of apertures therein through which treatment fluid can be sprayed on the face and about the sinus areas of a person wearing the appliance, and means connected to said tube for feeding fluid under pressure to said tube.

5. A therapeutic cosmetic appliance comprising a transparent mask arranged to fit over the face of a person, said mask being provided with contours simulating the features of a human being, an elastic transparent cap portion secured to said mask for holding said mask on the head of a person while forming a substantially fluid tight seal with said head of a person with said contours in spaced relationship to the features of a person, a tube extending into said mask, said tube having a plurality of apertures therein through which treatment fluid can be sprayed on the face of a person wearing the appliance, and means connected to said tube for feeding fluid under pressure to said tube.

6. A therapeutic cosmetic appliance comprising a mask arranged to fit over the face of a person in spaced relation thereto, said mask being provided with contours simulating the features of a human being, an elastic cap portion secured to said mask for holding said mask on the head of a person while forming a seal with said head of a person, a conduit extending into said mask, said conduit having a plurality of nozzles attached thereto through which treatment fluid can be sprayed on the face of a person wearing the appliance, and means connected to said tube for selectively feeding hot and cold fluid under pressure to said tube.

7. A therapeutic cosmetic appliance including a mask comprising a single walled member having contours simulating the features of a human being, means for securing said mask on a head of a person with said contours being in spaced relationship to the features of the person, spray means in said mask for spraying treatment fluid on the face and around the sinus areas of the head of a person wearing said mask, and means connected to said spray means for selectively feeding hot and cold fluid under pressure to said spray means, said spray means comprising a tubular conduit located within the mask and extending around the interior side surface thereof, and a plurality of spaced nozzles in said tube having apertures sufficiently small to produce a fine needle spray, said nozzles being directed only to the sinus areas of the face.

8. A therapeutic cosmetic appliance comprising a transparent mask having contours simulating the features of a human being, transparent means flexible for overlying the hair of a person and for securing said mask on a head of a person with said contours being in spaced relationship to the features of the person, spray means in said mask for spraying treatment fluid on the face and around the sinus areas of the head of a person wearing said mask, and means connected to said spray means for feeding fluid under pressure to said spray means.

References Cited in the file of this patent

FOREIGN PATENTS

168,278 Switzerland ---------- June 16, 1934