May 28, 1929. G. BENJAMIN 1,715,027

METALLIC FACE MASK AND PROCESS OF MAKING SAME

Filed Jan. 16, 1928 2 Sheets-Sheet 1

Fig. 1

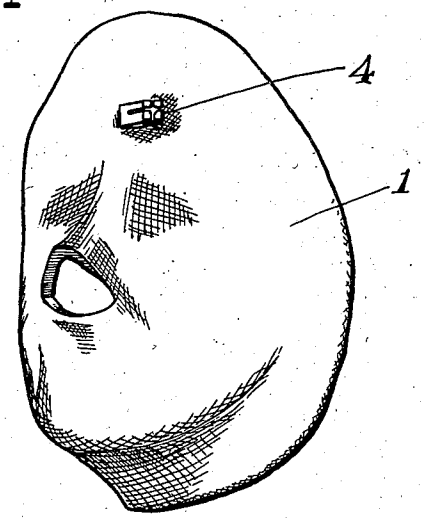


Fig. 2

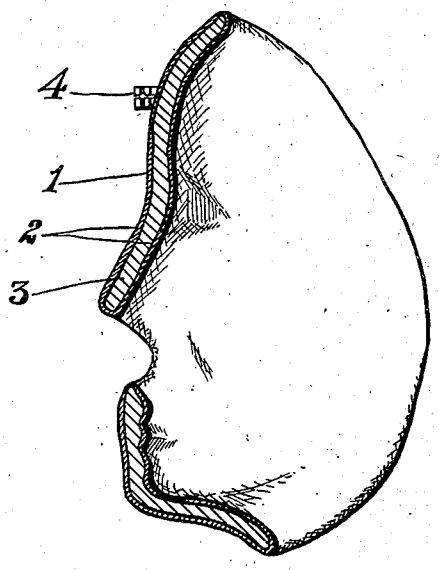
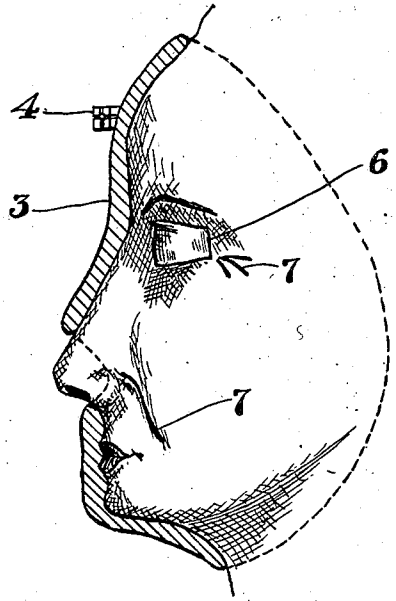


Fig. 3



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Filed Jan. 16, 1928 2 Sheets-Sheet 2

Fig. 5

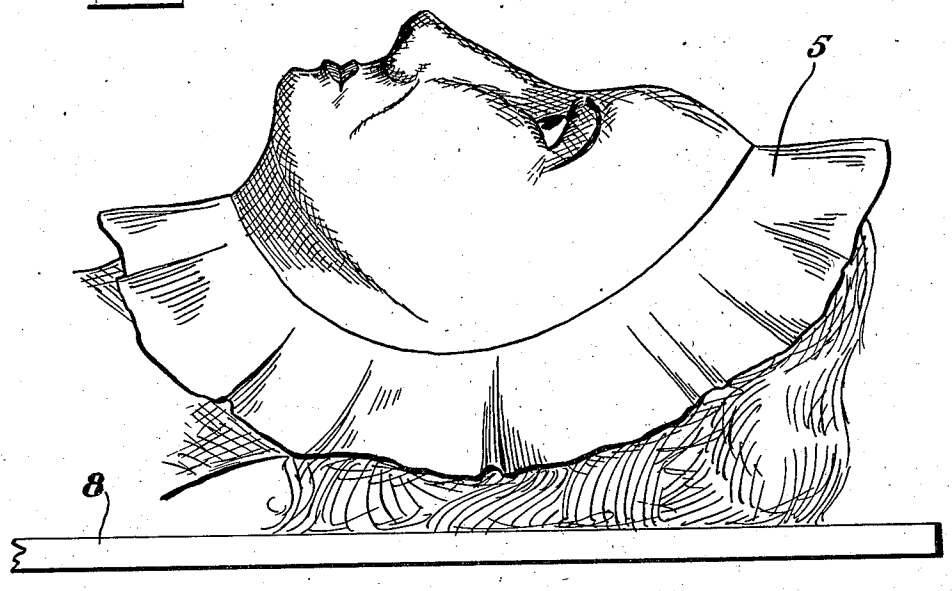


Fig. 6

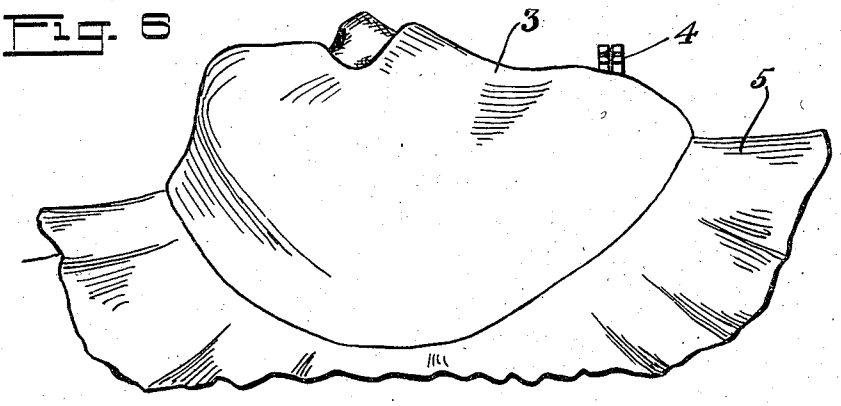
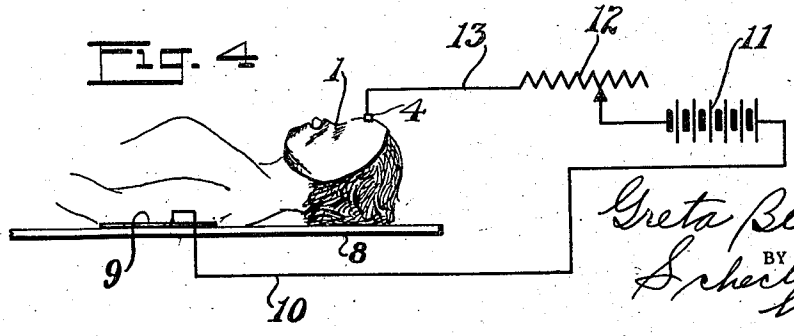


Fig. 4



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Patented May 28, 1929. 1,715,027

UNITED STATES PATENT OFFICE.

GRETA BENJAMIN, OF NEW YORK, N. Y.

METALLIC FACE MASK AND PROCESS OF MAKING SAME.

Application filed January 16, 1928. Serial No. 246,943.

This invention relates to that particular type of face mask used in the diathermic treatment of the face and illustrates a greatly improved and simplified method of making such a mask, which will be rigid and suitable for conducting electricity, but which will act not only as an electrotherapeutic device but also as a means for exercising a certain amount of pressure upon certain selected parts of the human face where such pressure is sought to smooth out wrinkles, sagging skin, etc.

One of the objects of this invention is to produce a face mask which can be used as an electrode for a diathermy current to produce heat and at the same time exercise a mild pressure on certain selected parts of the face wherever desired.

Another object of this invention is to produce a face mask which will be simple and cheap to manufacture, and which when completed will be rigid and suitable for conducting electricity and act as an electrotherapeutic device.

A further object of this invention is to produce a face mask which is primarily made by placing plaster of Paris upon the face of a patient and removing it when set and placing a contact in place to receive an electrical wire, after which the entire surface of the mask is electroplated with copper, silver, gold, brass or other metal to give it strength, conductivity and a surface which can be easily cleaned.

A further object of this invention is to produce a face mask for use in connection with diathermic treatments which will not shrink or stretch due to age or weather conditions.

With these and other objects in view, to be more fully set forth hereinafter, the invention consists in the novel construction, combination of elements and arrangement of parts which will be exemplified in the operation and construction herein described in the following specification and illustrated in the accompanying drawings.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

The invention will first be described in connection with the drawings, where similar reference characters are used to designate corresponding parts throughout the several views, and more specifically defined and indicated in the appended claims.

Attention is directed to the drawings in which:—

Fig. 1 is a perspective view of my improved face mask;

Fig. 2 is a central sectional view;

Fig. 3 is a central sectional view illustrating how the plaster of Paris takes the contour of the patient's face and how the eyes are protected by a covering of tissue paper;

Fig. 4 illustrates diagrammatically the electrical circuit with which my face mask is used;

Fig. 5 illustrates the first step necessary to produce one of my face masks which is the placing of a sheet of rubber over the patient's face; and

Fig. 6 illustrates the patient's face covered with plaster of Paris with the exception of the lower end of the nose through which the patient breathes.

Numeral 1 represents the mask in its completed form, 2, the electroplated metal surface, and 3, the plaster of Paris into which the contact 4 is inserted, the purpose of which is more fully described hereinafter.

The following is a description of the process of making the mask and the method of using it:

As illustrated in Fig. 5 a sheet of very thin rubber 5 is slit and stretched over the patient's face to prevent the plaster of Paris from lodging in the hair or ears and to expose only those parts which are to receive diathermic treatment when the mask is completed. A thin coating of vaseline or any other suitable fatty substance is then applied to the parts exposed; a generous amount of which is applied to the eyebrows. A piece of tissue paper 6 is placed over each eye as illustrated in Fig. 3; the eyes being in the

closed position. Should there be any particular places on the patient's face which will require more pressure than the rest of the face during a diathermic treatment, they are marked as at 7 in Fig. 3 by means of a greasy coloring matter such as a lip stick. After the face has been thus prepared a quantity of plaster of Paris 3 is mixed with water; a small amount of salt being added to it to quicken the process of setting the plaster. As soon as the mixture has become semi-liquid, it is applied to the exposed portion of the patient's face, keeping it about one-half inch thick and as even as possible; leaving the lower end of the nose exposed through which the patient must breathe. The contact or terminal 4 is pushed into the plaster of Paris, the setting of which firmly holds it in position. When the plaster of Paris becomes hard, which requires but two or three minutes' time, the mask is easily removed from the patient's face due to the coating of vaseline. Having removed the mask, the inner surface is then prepared according to the individual needs which were marked with lip stick. The plaster of Paris absorbs a small amount of the lip stick which indicates the portions of the inner surface which are to be built up in order that more pressure may be given those parts when the mask is completed and again applied to the face for a treatment. To these marked portions of the inner surface a small amount of plaster of Paris, clay or other suitable material is added. This added layer is about one-half to one mm. in thickness. Any small holes that may be present in this surface are also filled in and then the entire surface is smoothed down by means of sandpaper. When the plaster of Paris mask is entirely dried out it is entirely covered with graphite and then electroplated with copper, silver, gold, brass or other metal. This metal plating gives the mask additional rigidity and makes it a suitable electrode for therapeutic purposes.

The plated mask will perfectly fit the patient's face and will exercise a mild pressure only on those parts where it was predetermined in its making. If it is so desired a light pressure can be applied to the entire face by fastening the mask in position by means of an elastic bandage.

The process of giving a patient a diathermic treatment as illustrated in Fig. 4 is as follows:

The patient lies upon a couch 8 with a lead electrode 9 pressing against his or her back. A wire 10 connects this electrode 9 to a source of current 11 which in turn is connected to the variable resistance 12 having the wire 13 connected thereto. The completed mask is then placed upon the face of the patient and adjusted and the end of the wire 13 is connected to the contact 4. The current is then allowed to pass through the resistance 12 which is varied in accordance with the amount necessary for that particular patient receiving the treatment. The electric current passes from the entire inner surface of the mask, through the body to the lead electrode 9 which completes the circuit. The body acts as a resistance and heat is created especially at the mask, because this is the smaller one of the two electrodes. The penetrating current heats and stimulates the deep facial structures (connective tissues, elastic fibres, muscles) producing better circulation and better tension. The treatment results in the improvement of the complexion and in restoring elasticity, this causing wrinkles and sagging to decrease.

This invention may be applied in the making of casts of any part of the human body where a diathermy current can be applied for a treatment.

In accordance with the provisions of the patent statute, I have described my invention but I desire it understood that it is not confined to the particular form shown and described, the same being merely illustrative, and that the invention can be carried out in other ways without departing from the spirit of my invention, and therefore, I claim broadly the right to employ all equivalent instrumentalities coming within the scope of the appended claims, and by means of which, objects of my invention are attained and new results accomplished; as it is obvious that the particular embodiments herein shown and described are only some of many that can be employed to attain these objects and accomplish these results.

What I claim and desire to obtain by Letters Patent is:—

1. An electrode for application to a portion of the body, comprising a core of hardened plastic material with a coating of metal completely enclosing the same.

2. An electrode for application to a portion of the body, comprising a core of hardened plastic material bearing upon one face an exact reproduction in intaglio of said portion of the body and a coating of metal completely enclosing said core.

3. An electrode for application to a portion of the body comprising a core of hardened plastic material with an electrodeposition of metal completely covering the exterior surface of the same.

4. An electrode for application to a portion of the body comprising a core of hardened plastic material bearing upon one face an exact reproduction in intaglio of said portion of the body and an electrodeposition of metal forming a shell completely enclosing said core.

5. The process of making an electrode for application to a portion of the human body which comprises the steps of making a cast-

ing of pulverulent plastic material and then covering the entire surface of the same with a metallic shell.

6. The process of making electrodes for application to portions of the body which comprises casting a core of plastic material upon said portion of the body, removing the same, coating said core over its whole surface with a conducting, unctuous material and then depositing by electrolysis a metallic shell entirely covering and enclosing said core.

This specification signed this 4th day of January, 1928.

GRETA BENJAMIN.