(No Model.)

W. A. PRICE.

APPARATUS FOR ELECTRICALLY TREATING THE EYES.

No. 490,678. Patented Jan. 31, 1893.

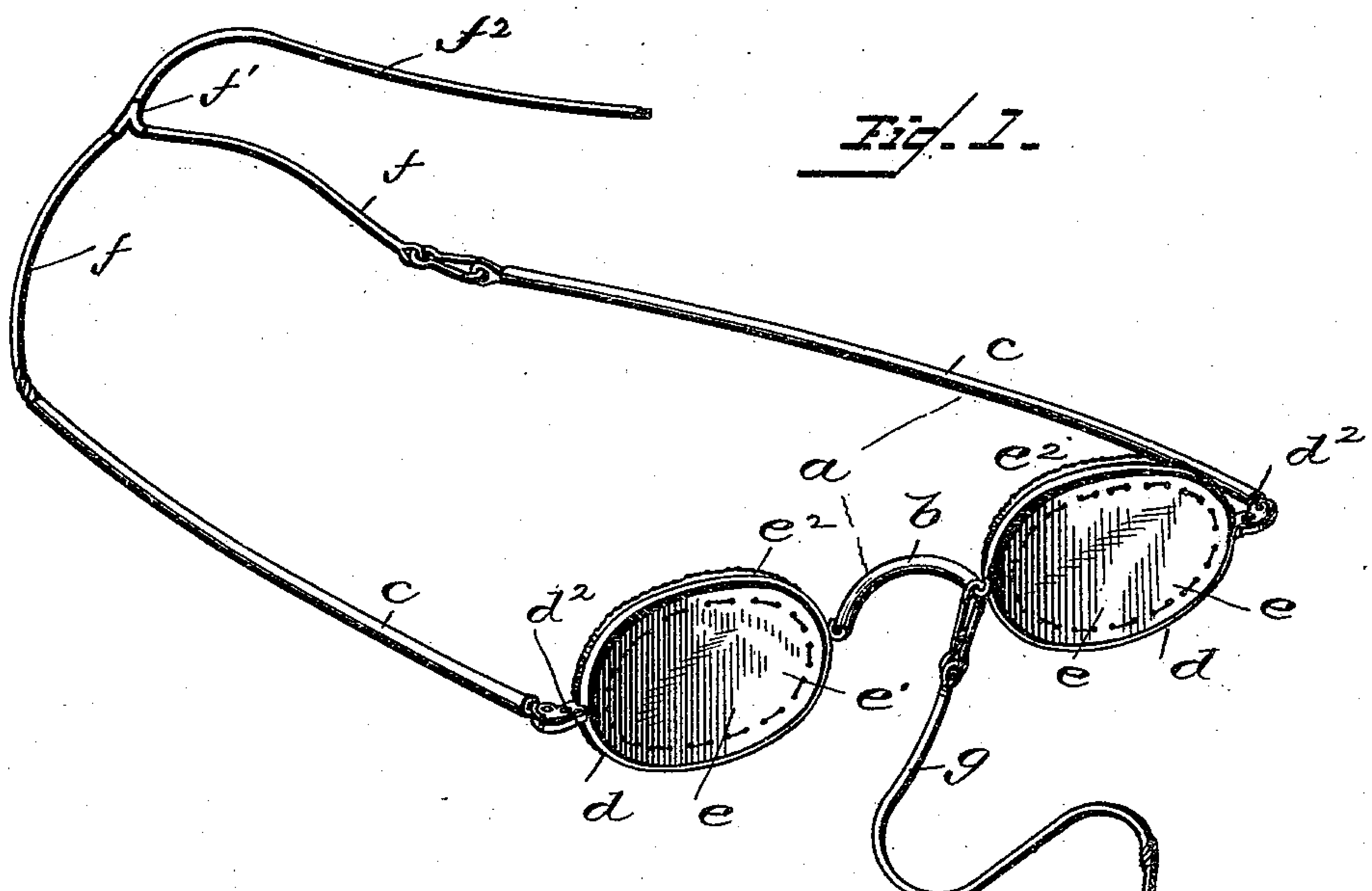

Fig. 1.

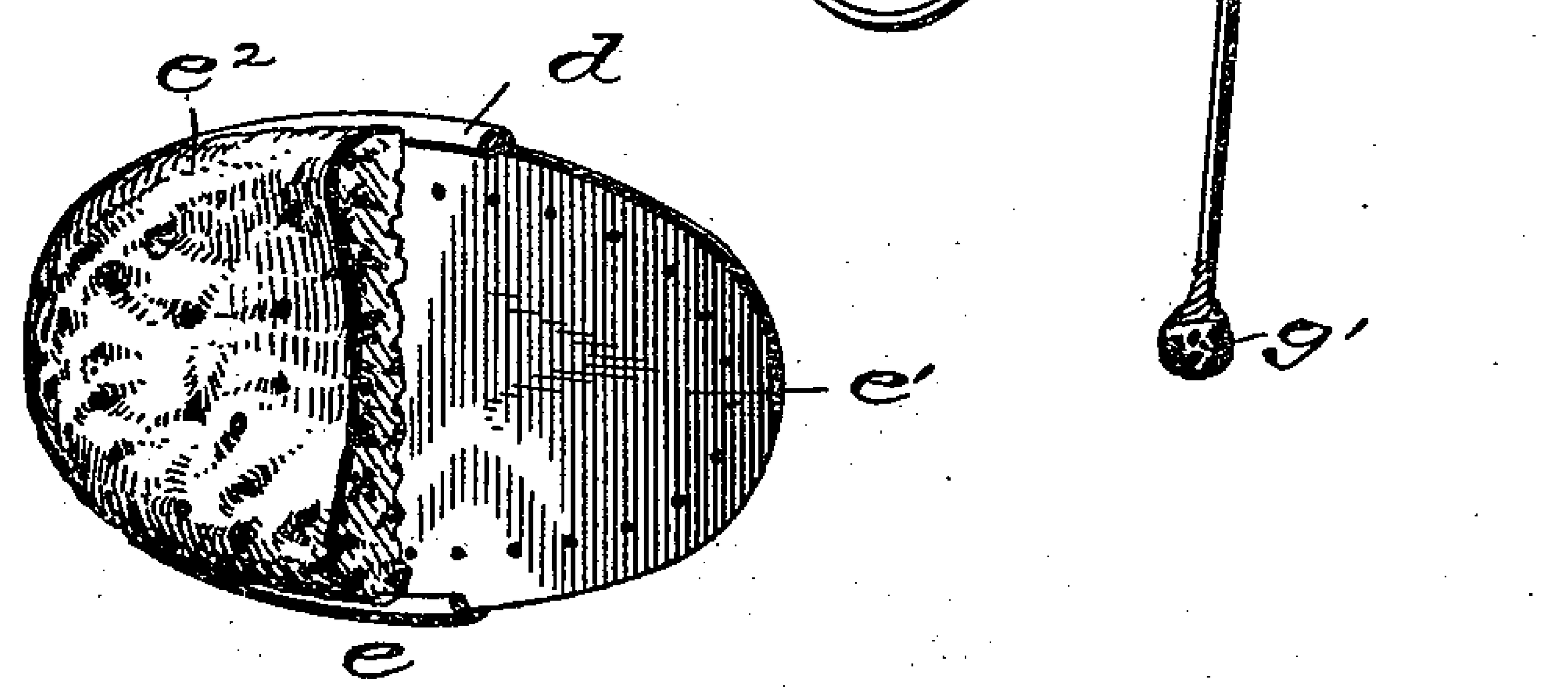

Fig. 2.

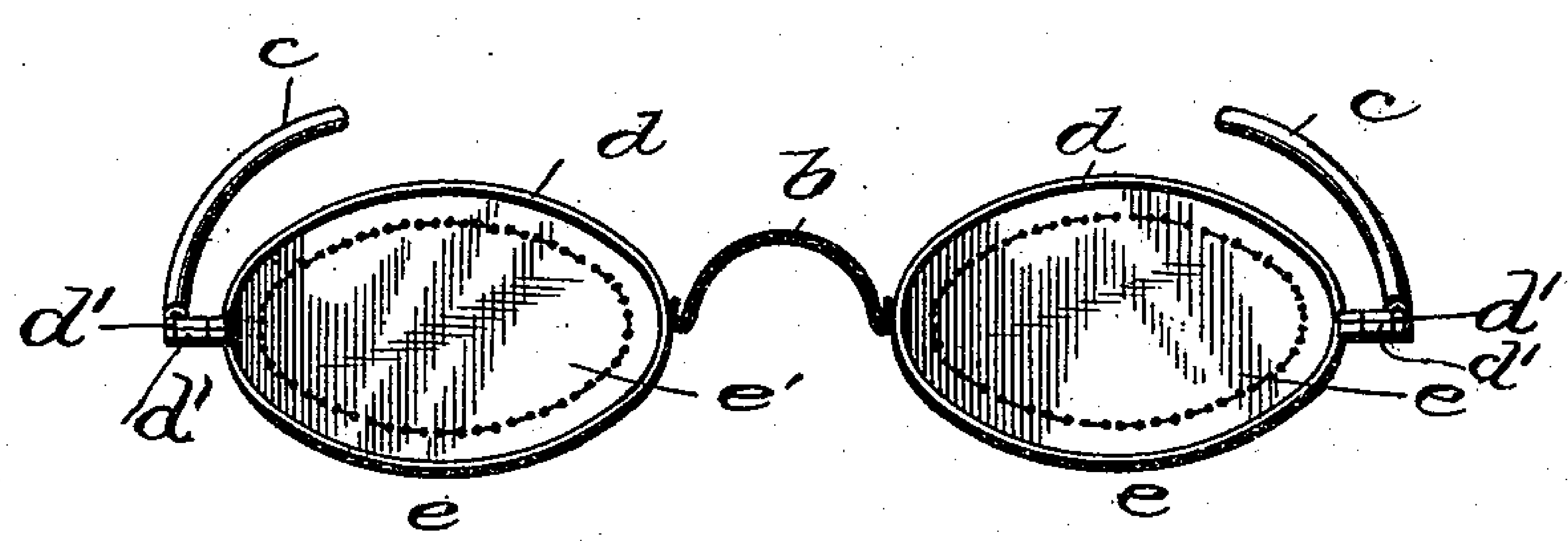

Fig. 3.

Witnesses

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WILLIAM AMBROSE PRICE, OF IOWA FALLS, IOWA.

APPARATUS FOR ELECTRICALLY TREATING THE EYES.

SPECIFICATION forming part of Letters Patent No. 490,678, dated January 31, 1893.

Application filed September 24, 1892. Serial No. 446,755. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM AMBROSE PRICE, a citizen of the United States, residing at Iowa Falls, in the county of Hardin and State of Iowa, have invented certain new and useful Improvements in Apparatus for Electrically Treating the Eyes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has reference to an improved device for electrically treating the eyes and neighboring parts, and my object is to provide more effective means for preventing and treating the numerous diseases of the eye and nose.

To this end my invention consists of certain novel features of construction and arrangement of parts which will be more fully described hereinafter and pointed out in the claims.

Referring to the accompanying drawings which illustrate my invention: Figure 1 represents a perspective view of my improvements provided with the nose treating attachment. Fig. 2 a view of one of the eye electrodes. Fig. 3 a view showing a modified form of my invention.

The reference letter *a* indicates the frame portion of my device which is preferably constructed like an ordinary spectacle frame, and has the nose bridge *b* and arms *c* thoroughly covered with insulating material. Fixed in the lens rims or holders *d d* are the eye electrodes *e e*. These electrodes are formed of an oval-shaped metallic (preferably copper) base or body *e'*, to which is securely fastened a sponge e^2. The engaging surfaces of the sponges e^2 e^2 are formed slightly concaved, whereby a more effective electrical connection is established between the electrodes and the eye. These electrodes *e e* are fastened or secured within the rims or holders *d' d* by means similar to those used to hold the lens of a spectacle; that is, by means of the spring arms *d' d'* and the adjusting and securing screw d^2 d^2, said arms being adapted to embrace the copper body portion *e'* of the electrodes *e*. Attached to the ends of the arms *c* are the insulated electrical conductors at *f*, which come to a juncture at *f'* where the single conductor f^2 continues to any suitable or approved source of electricity. This will however be more fully described hereinafter.

Connected electrically to the nose bridge *b* is a second insulated conductor *g*, which terminates in a small sponge electrode *g'*. This electrode is adapted to enter one of the nostrils, whereby the nose may be treated simultaneously with the eyes. If it is not preferred or expedient to treat the nose in this way, the conductor *g* and electrode *g'* may be dispensed with, and the insulating material on the nose bridge may be removed, whereupon the electrical current will flow from the uninsulated nose bridge to and through the nose.

The arrangement shown by Fig. 3 illustrates a variation, or modified form of my invention. This consists in simply employing instead of the metallic nose bridge *b*, a bridge formed of some non-conductive or insulated material, such as wood or gutta-percha. By this arrangement it will be seen that there will be no electrical communication between the electrodes *e e* by way of the nose bridge as in the form shown by Fig. 1. The connections with the generator are, in this case, made by attaching to each of the arms *c c*, or to the electrodes *e e*, a separate conductor, and one that has no connections with the other except by way of the generator. Thus by this arrangement the current is compelled to travel through the eyes and from one to the other. This form also facilitates the application of electro-negative or positive currents to either eye at option.

In applying the device shown by Fig. 1, to a patient, one pole or terminal of the generator is electrically connected to the patient's body, and the other pole to the conductor f^2. By this means the current is made to travel continuously through the parts affected.

Any suitable or preferred form of electrical generator may be used, such as a small pocket battery, or an electric belt, the former however is probably the most efficient.

It is evident that my invention could be

changed in many slight ways which would suggest themselves to a skilled artisan, hence I do not propose to limit myself to the precise construction herein shown but shall consider myself entitled to all the arrangements that may come within the spirit and scope of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In an apparatus for electrically treating the eyes, the combination with a suitable source of electricity, of a conductor for conveying the current therefrom, eye electrodes connected to the end of said conductor and having a concaved or recessed engaging surface, whereby the electrical connection with the eyes is made more complete, and a second electrode or electrodes connected to the terminal of the first and adapted for use in connection with the nose, both of said electrodes being designed to deliver the current to the affected parts, which in turn serve as a conductor for conveying the current back to the generator, substantially as described.

2. An electrical device for treating the eyes which consists of a metallic frame provided with arms for holding it upon the head, in combination with electrodes formed of absorptive material secured to and in electrical contact with said frame and in such juxtaposition as to bear against the eyes of the patient, and insulated conductors leading to a generator, substantially as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM AMBROSE PRICE.

Witnesses:
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ETTA C. BUTTOLPH.