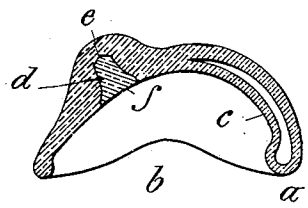
No. 826,047. PATENTED JULY 17, 1906.

E. MÜLLER.

ARTIFICIAL EYE.

APPLICATION FILED JULY 23, 1904. RENEWED JAN. 13, 1906.




Witnesses:
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Attorneys

THE NORRIS PETERS CO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

EMILIUS MÜLLER, OF LONDON, ENGLAND.

## ARTIFICIAL EYE.

No. 826,047. Specification of Letters Patent. Patented July 17, 1906.

Application filed July 23, 1904. Renewed January 13, 1906. Serial No. 295,903.

*To all whom it may concern:*

Be it known that I, EMILIUS MÜLLER, a subject of the German Emperor, and a resident of London, England, have invented new and useful Improvements in Artificial Eyes, of which the following is a specification.

This invention relates to artificial eyes, and has for its object to render the artificial eye more comfortable for the wearer, less liable to displacement, and, further, to make the pupil of the artificial eye appear larger when seen in the dusk or in artificial light, such as is the case with the pupil of the natural eye.

It has been proposed to construct artificial eyes with a thickened or broadened edge by making the same with a double shell. This construction has, however, the disadvantage that the eye becomes very heavy and much thicker than it ought to be, so that it easily falls out. Further, there is air inclosed between the double walls, which expands when the eye becomes hot, so that consequently it often happens that the eye bursts. These disadvantages have been partly overcome by constructing the artificial eye with a thickened edge formed by turning over a portion of the glass forming the main portion of the artificial eye, the turned-over portion being extended inwardly. This construction suffers from the inconvenience that the effluent matter from the orbit collects behind the turned-over portion of the artificial eyes.

Artificial eyes as constructed at present further have the disadvantage that the pupil has the shape of a sphere, although appearing to be of exactly the same size as the pupil of the natural eye if seen in daylight; but when the eyes are seen in artificial light or in the dusk there is a striking difference with the natural eye, because the pupil of the natural eye expands, while the pupil of the artificial eye remains constant.

The pupil of the natural eye changes with the distance from which one looks at it, which is of course not the case with the pupil of the artificial eyes of known construction.

Now the object of the present invention is to overcome the inconveniences hereinbefore mentioned with regard to the broadened edge, while preserving the advantages of the same, and, further, to construct the pupil so that its dimensions change in appearance in the same manner as is the case with the dimensions of the natural eyes.

In the accompanying drawing an artificial eye constructed according to the present invention is shown in a vertical section.

The thickened or broadened edge *a* of the artificial eye *b* is formed by turning over the glass forming the main portion of the eye and extending the turned-over portion *c* inwardly toward the center of the shell. The edge of the turned-over portion is melted to the inner surface of the main portion of the eye. The broadened edge is suitably made to decrease in thickness toward the edge of the artificial eye which is intended to lie nearest to the nose, so that the broadened edge has a crescent shape in ground plan. This broadened or thickened edge can be applied to artificial eyes of any shape.

The pupil *d* of this improved artificial eye is not spherical, but conical, with slightly concave outer surface. The front end *e* of the artificial pupil *d* is convex and corresponds in dimensions to the dimensions of the pupil of the natural eye seen in daylight. As the base of the artificial pupil *d* protrudes over the front end *e*, the pupil appears to be larger than usual when the eye is viewed from the front or at close range. The reason for this is that the base *f* is seen through the iris.

The improved pupil *d* for artificial eyes is in consequence of its peculiar shape brought much closer to the outer surface of the iris than is the case with the pupils of known construction.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an artificial eye, a pupil therein conically shaped and having an annular concaved surface between the base of the pupil and the point of said pupil, as set forth.

2. An artificial eye, comprising in combination a shell with a thickened edge of crescent shape in ground plan, a pupil therein conically shaped with an annular concave surface between its base and apex, said apex being convex, as set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EMILIUS MÜLLER

Witnesses:
HERBERT D. JAMESON,
F. L. RAND.