No. 679,925. Patented Aug. 6, 1901.

# L. H. VICKERS.

## ARTIFICIAL EAR DRUM.

(Application filed Dec. 15, 1900.)

(No Model.)

Fig. 1.

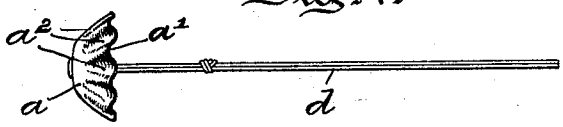



Fig. 2.

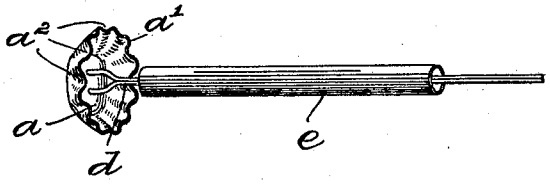
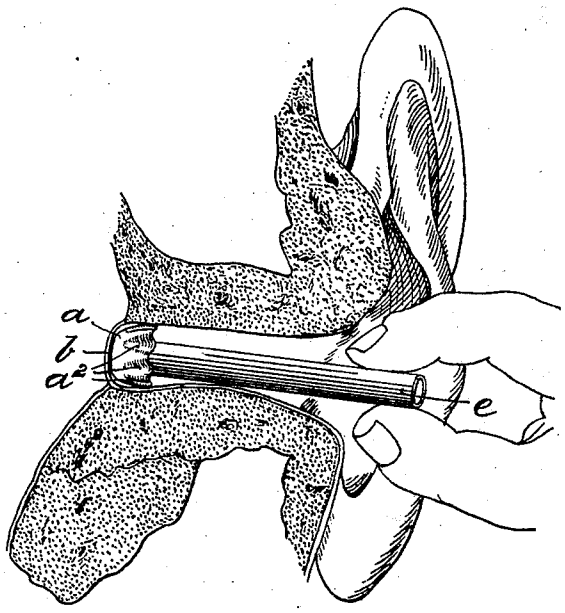



Fig. 3




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# UNITED STATES PATENT OFFICE.

LAURA H. VICKERS, OF WEST PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE MORLEY PHARMACEUTICAL COMPANY, OF WILMINGTON, DELAWARE, AND PHILADELPHIA, PENNSYLVANIA.

## ARTIFICIAL EAR-DRUM.

SPECIFICATION forming part of Letters Patent No. 679,925, dated August 6, 1901.

Application filed December 15, 1900. Serial No. 39,971. (No model.)

*To all whom it may concern:*

Be it known that I, LAURA H. VICKERS, a citizen of the United States, residing at West Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Artificial Ear-Drums, of which the following is a specification.

My invention relates to an artificial ear-drum, and in such connection it relates to the construction and arrangement of the drum.

According to my invention the membrane is made substantially cup-shaped, with the edges crimped to permit of an easy and flexible support for the membrane in the meatus externus and at the same time permit of the ventilation of the tympanum or ear-drum proper while the membrane is in position in the ear.

The nature and scope of my present invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1 is a side elevational view of an artificial ear-drum embodying main features of my invention. Fig. 2 is a perspective view of the same and of the inserting-tube, and Fig. 3 is a diagrammatic view illustrating the manner in which the ear-drum is inserted and held in the external channel of the ear.

Referring to the drawings, the membrane comprising the artificial ear-drum proper consists of a substantially cup-shaped body portion $a$, the convex surface of which is adapted to fit into or against the concave surface of the ear-drum $b$, as illustrated in Fig. 3. The rim or periphery $a'$ of the body portion $a$ is crimped at certain portions of the same, as at $a^2$, to form channels or openings extending through the peripheral portion of the membrane. To the body portion is connected a cord or thread $d$. When the membrane is inserted into the ear by means, preferably, of an inserting-tube $e$, as illustrated in Fig. 3, the convex body portion $a$ rests parallel to the concave ear-dum $d$ and the fluted or corrugated rim $a'$ rests lightly but firmly against the meatus externus, except at those portions $a^2$ where the channels or openings are formed. These channels or openings $a^2$ form a series of passage-ways to permit of the ventilation of the natural ear-drum.

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

1. An artificial ear-drum, consisting of a membrane formed substantially cup-shaped, the body portion of which is adapted to rest substantially parallel to the ear-drum proper, and the rim of the body portion fluted or corrugated to form in said rim a series of air passage-ways, substantially as and for the purposes described.

2. An artificial ear-drum, consisting of a membrane having a body portion adapted to occupy a position in the ear substantially parallel to the ear-drum proper thereof, and the rim of the body portion fluted or corrugated to form in said rim a series of air passage-ways, substantially as and for the purposes described.

3. An artificial ear-drum, consisting of a membrane formed substantially cup-shaped, the body portion of which is adapted to rest substantially parallel to the ear-drum, the rim of the body portion being fluted or corrugated to form a series of air passage-ways and a thread or cord connected with said membrane, substantially as and for the purposes described.

4. An artificial ear-drum, consisting of a membrane having a body portion with a fluted or corrugated rim to form a series of air passage-ways, a thread or cord connected with said membrane, and a tube adapted to surround said thread or cord and to engage said membrane during the inserting and locating of said membrane in the ear, substantially as and for the purposes described.

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

LAURA H. VICKERS.

Witnesses:
G. M. VICKERS, Jr.,
THOMAS M. SMITH.