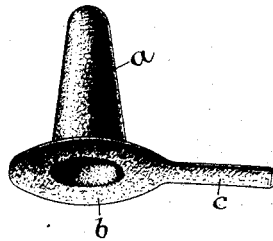


(No Model.)

J. W. COUSINS.
ARTIFICIAL EAR DRUM.

No. 419,420.

Patented Jan. 14, 1890.



Witnesses.

Walter P. Keene
J. L. Middleton

Inventor.

John Ward Cousins
by Ellis Spear
Atty.

UNITED STATES PATENT OFFICE.

JOHN WARD COUSINS, OF SOUTHSEA, COUNTY OF HANTS, ENGLAND.

ARTIFICIAL EAR-DRUM.

SPECIFICATION forming part of Letters Patent No. 419,420, dated January 14, 1890.

Application filed November 2, 1889. Serial No. 329,009. (No model.)

To all whom it may concern:

Be it known that I, JOHN WARD COUSINS, a subject of Her Majesty the Queen of Great Britain, residing at Southsea, in the county of Hants, England, have invented a new and useful Improved Antiseptic Artificial Ear-Drum, of which the following is a specification.

My invention consists of an improved antiseptic artificial ear-drum or ear-protector which is of service for improving the hearing power in cases of deafness caused by perforation of the drum of the ear or other aural diseases, or as a constant antiseptic in fetid suppuration, though they are well adapted for the use of other than deaf persons as a protection against cold and wind, where a plug of cotton-wool would be usually employed.

The ear-drums according to my invention are formed hollow or somewhat in the shape of a hat with a high crown and rim and with or without a projecting flexible strip or tab on one side, a drum such as described being shown in the drawing forming part of this specification, in which—

a is the crown, *b* the rim, and *c* the flexible strip or tab. The material of which they are composed may be cotton-wool or suitable fibrous substance. In manufacturing such drums I preferably proceed as follows: A mass of cotton-wool, after being first macerated in a hot boracic-acid solution and dried, is laid in a sheet of about one-sixteenth of an inch thick on a tray and then saturated with a mixture of collodion, (two parts,) alcohol, (one part,) and ether, (one part,) a little wax having been previously dissolved in the ether. The excess moisture is squeezed out, and the sheet is then compressed in some suitable machine, so that a firm (though absorbent) sheet is produced. On removal from the press the sheet

is allowed to dry, and the drums of the shape shown, with or without the strip or tab, are stamped therefrom by means of suitable punches and dies. The alcohol used is previously mixed with an antiseptic, such as a preparation of the *Pinus pumilio* or eucalyptus, or both, and, if desired, with a small quantity of a pink or scarlet dye, which will impart a flesh-colored tint to the finished article. If preferred, a solid powder dye may be suspended in the antiseptic substance, and this may be dropped onto the drum after the latter is made, though I do not consider this manner so desirable.

In place of immersing the cotton-wool in the solution of collodion, alcohol, and ether, a solution of alum may be employed; but the resulting article is fluffy and less compact.

To introduce the drum, it should be placed on the blunt point of a probe or small rod and gently pushed far into the ear. The strip or tab will be found a convenient means of removing the same; or it can be readily removed with a pair of tweezers.

I do not desire to confine myself to the particular shape or process of manufacture described; but

What I claim is—

As an article of manufacture, an artificial ear drum or protector of substantially the shape shown composed of cotton-wool or fiber saturated with suitable antiseptic substances and stamped or molded into shape, substantially as described.

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

JOHN WARD COUSINS.

Witnesses:

S. HUDSON,
J. MAIN.