

No. 704,017.

Patented July 8, 1902.

G. L. FOWLER.
RESPIRATOR.

(Application filed Dec. 13, 1901.)

(No Model.)

Fig. 1.

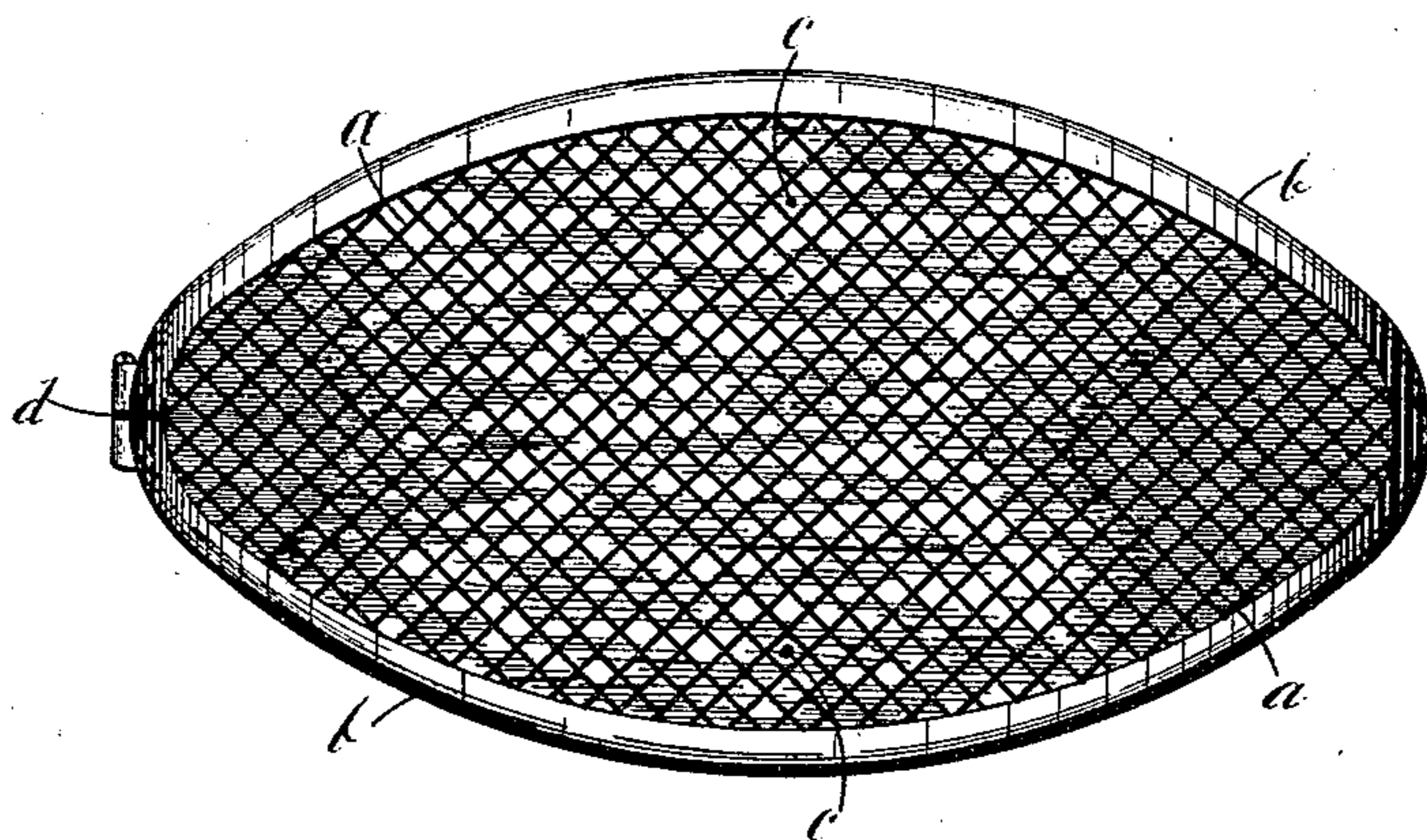
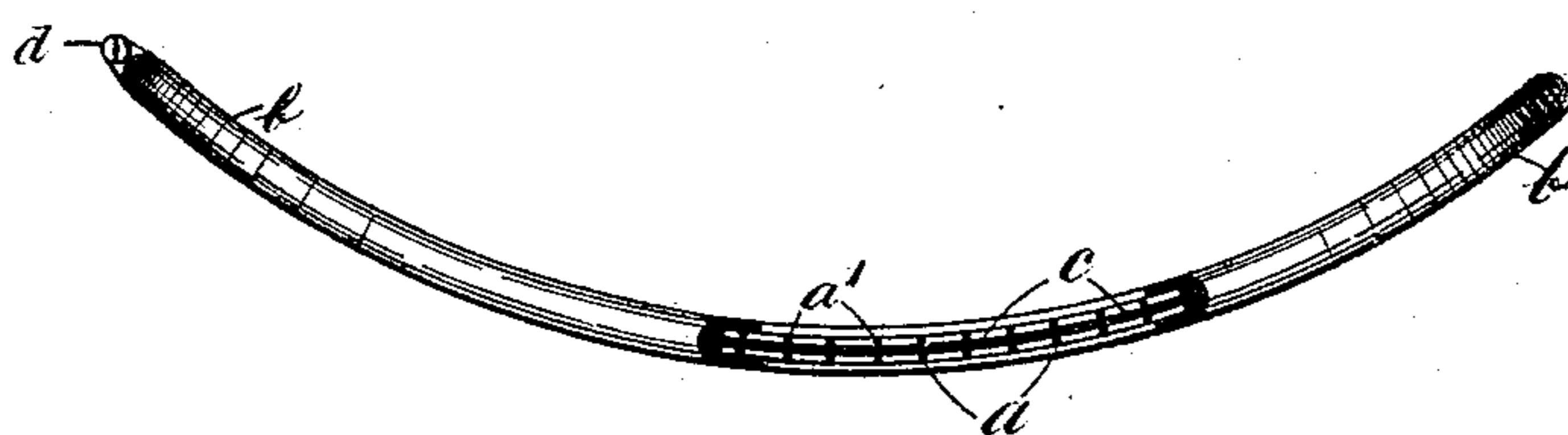


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE LILLEYMAN FOWLER, OF LONDON, ENGLAND.

RESPIRATOR.

SPECIFICATION forming part of Letters Patent No. 704,017, dated July 8, 1902.

Application filed December 13, 1901. Serial No. 85,796. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LILLEYMAN FOWLER, a subject of the King of Great Britain, residing at London, in the county of Middlesex, England, have invented new and useful Improvements in Respirators, of which the following is a specification.

My invention relates to respirators in which the air breathed is first filtered and purified before entering the mouth and lungs. Such respirator ordinarily consists of a chamber adjusted and fastened outside the mouth of the person using it, its outer surface being formed of perforated metal, while it contains wool, medicated or otherwise, or other porous material, through which the air breathed has to pass before entering the mouth and lungs.

My present invention has for its object a novel method of forming and using the respirator, by which, while retaining its full efficacy, it is made simple, light, inexpensive, and free from the clumsiness and extreme unsightliness of the ordinary respirator.

In the accompanying drawings, which are illustrations upon an enlarged scale of the invention, Figure 1 is a front view, and Fig. 2 an edge view, partly in section, of the improved respirator.

Similar letters refer to similar parts in the different figures.

$a a'$ are two pieces of thin material, perforated or woven, and attached or held together at their edges by a smooth hollow rim b , a thickness of fine asbestos fiber or other suitable fibrous or other material c being placed between the two perforated pieces.

The shape of the completed device is such that it can perfectly, easily, and quickly and without discomfort be placed in the mouth of the wearer in front of the teeth and inside the lips, for which purpose its shape in front view, as shown in Fig. 1, is such that it fits neatly and comfortably between the gums and the inside of the lips, while it is curved in top view, as shown in Fig. 2, to fit snugly in its place.

The perforated or woven pieces $a a'$ may be made of gold or silver, thin perforated plates or gauze, or of a suitable metal electroplated or coated with gold or silver, or they may be made of ebonite, vulcanite, or other like material of sufficient strength and durability and not liable to be affected by acid or other

secretions present in the mouth or breath. The rim b may be separated at one or more points, as at d , for the purpose of easily introducing and removing the two perforated plates and the asbestos fiber between them, and they are held together at the junction by a fine screw, as shown in the drawings, or by other equivalent means, care being taken that no rough projecting parts are left which might cause discomfort or injury to the mouth. The rim is made of thin metal or material similar to that of which the perforated plates $a a'$ are made of U-shaped section, as small and light as is consistent with strength, having a rounded outer surface.

The improved respirator is very durable, easily introduced into and removed from the mouth, and is practically invisible when worn. It can be easily and thoroughly cleaned, for which purpose it may, if desired, be boiled in water with or without the addition of other purifying ingredients. The asbestos fiber or other material may be treated in the same way and before use may be impregnated or treated or medicated with antiseptic or disinfecting or other substance of any desired kind.

The respirator may be used in almost all circumstances and is particularly valuable for singers and public speakers and any persons who may have to go from hot rooms into the open air.

What I claim, and desire to secure by Letters Patent of the United States, is—

The respirator described composed of foraminous plates of a material not affected by the acids of the mouth, an asbestos layer interposed between said plates, a smooth hollow rounded rim embracing the edges of said plates and asbestos layer, the said rim being divided, means for uniting the ends of said rim at the division, the said device being curved and shaped to fit the mouth of the wearer between the inside of the lips and the gums, all substantially as shown and described.

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

GEORGE LILLEYMAN FOWLER.

Witnesses:

ALFRED T. BRATTON,
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