

No. 705,218.

Patented July 22, 1902.

E. DE MEULEMEESTER.

EAR TRUMPET.

(Application filed Jan. 18, 1902.)

(No Model.)

2 Sheets—Sheet 1.

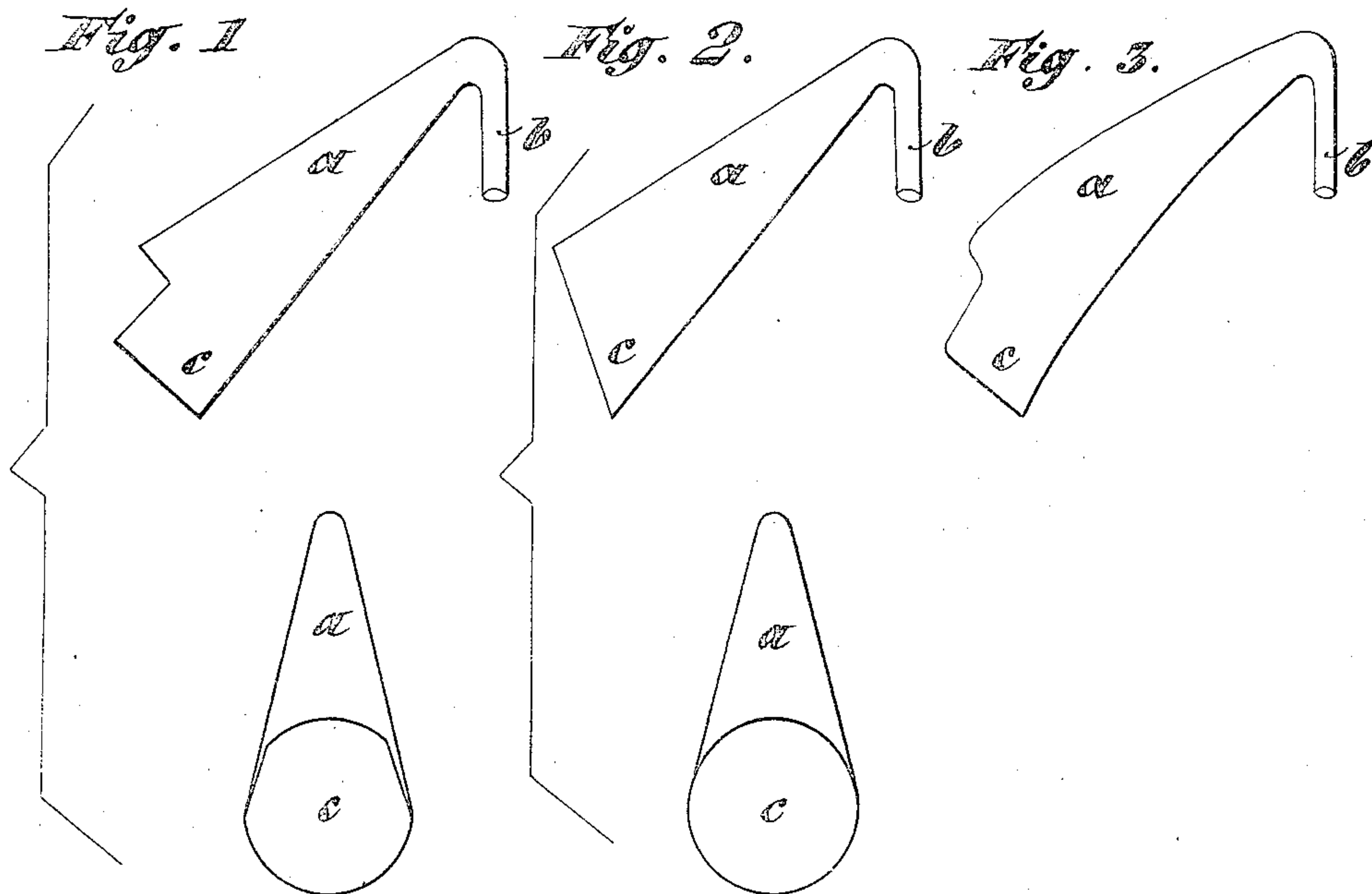
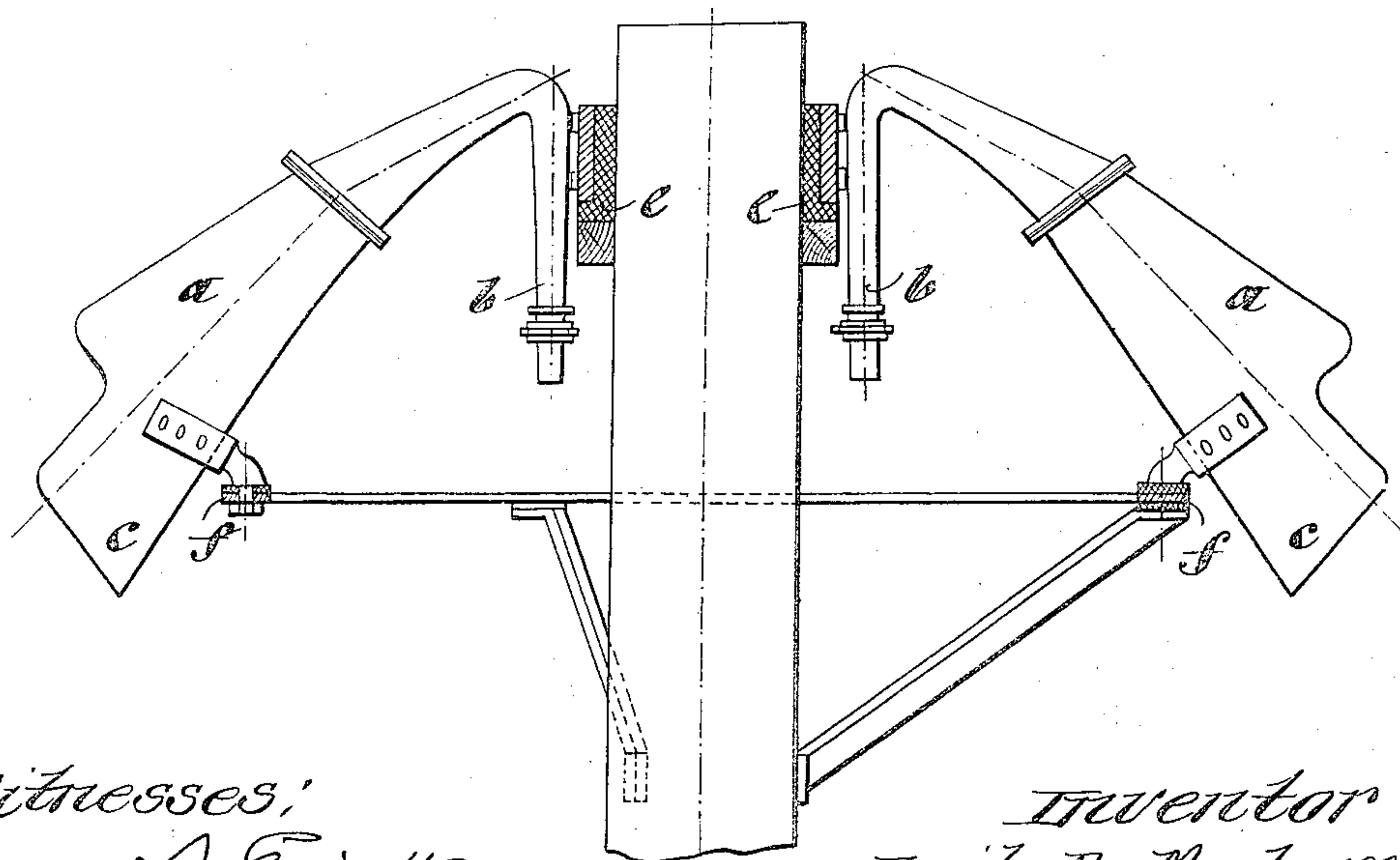


Fig. 4.



Witnesses:
Bruce S. Elliott.

[Signature]

Inventor
Emile De Meulemeester

By *[Signature]*
James L. Norrie.

Atty

No. 705,218.

E. DE MEULEMEESTER.

Patented July 22, 1902.

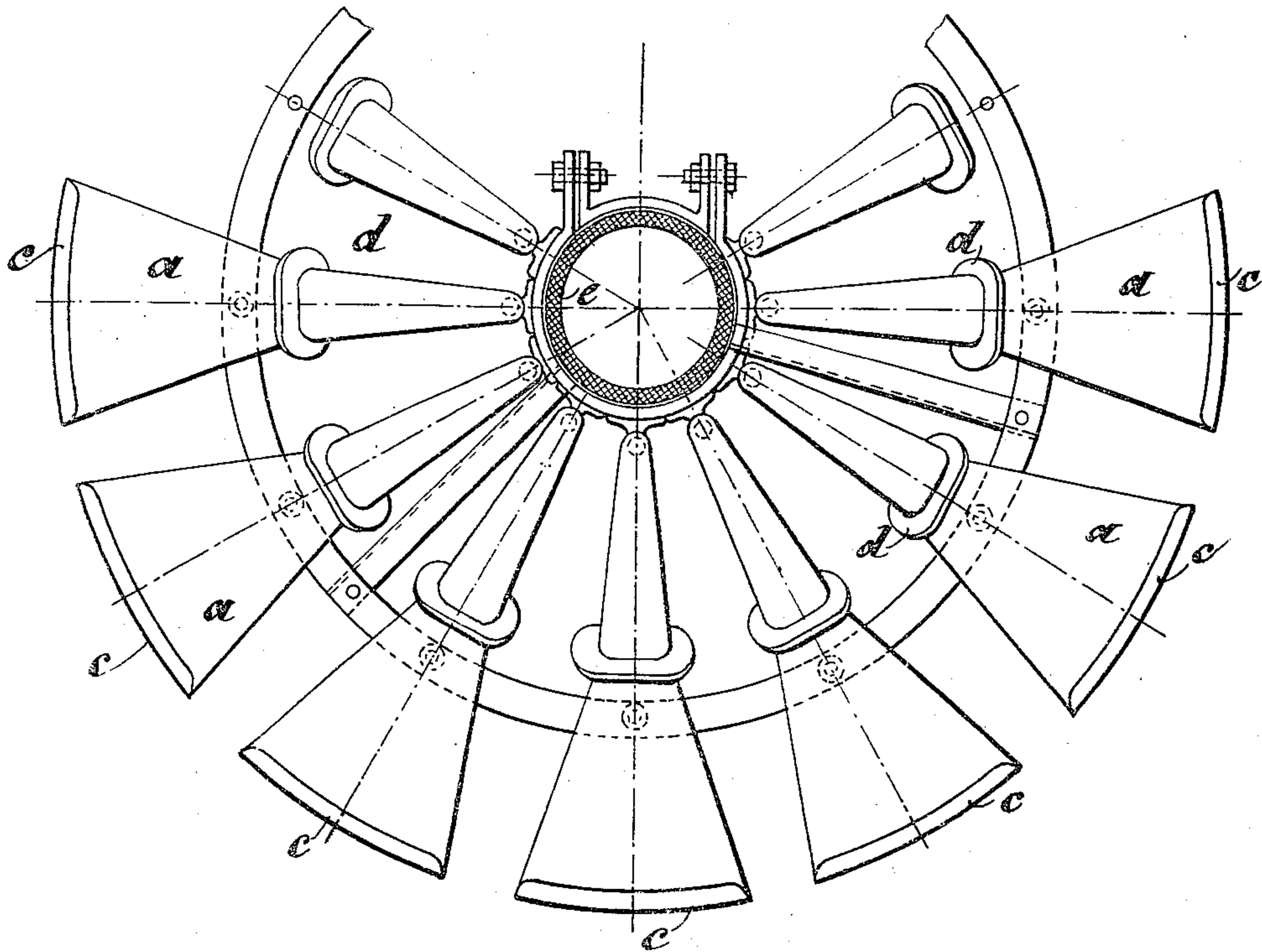
EAR TRUMPET.

(Application filed Jan. 18, 1902.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 5.



Witnesses:
Bruce D. Elliott.
[Signature]

Inventor
Emile De Meulemeester
By *James L. Norris*
Atty

UNITED STATES PATENT OFFICE.

EMILE DE MEULEMEESTER, OF BRUSSELS, BELGIUM.

EAR-TRUMPET.

SPECIFICATION forming part of Letters Patent No. 705,218, dated July 22, 1902.

Application filed January 18, 1902. Serial No. 90,334. (No model.)

To all whom it may concern:

Be it known that I, EMILE DE MEULEMEESTER, a subject of the King of the Belgians, and a resident of No. 62 Rue de Meuchatel, Brussels, Belgium, have invented a certain new and useful Improvement in Ear-Trumpets Intended to Receive Sound Signals or Messages, of which the following is a specification.

10 This invention relates to apparatus intended to receive sounds, and more especially sound signals or messages between two ships or between a lighthouse or a point on the coast and a ship.

15 The object of my invention is to construct such apparatus so that it will readily collect all sonorous waves and so that it will not be affected in bad weather by the entrance of rain or snow into the trumpet or trumpets; and to this end my invention consists in the construction and arrangement of parts hereinafter described and claimed.

25 In the accompanying drawings, Figures 1, 2, and 3 represent in side and front views different modes of execution of the trumpets according to my invention. Figs. 4 and 5 represent in elevation and in plan one manner of fixing the trumpets around a mast, so that they may gather the sonorous waves coming from different directions. In Fig. 4 two trumpets only are represented for the sake of greater clearness.

30 In all the figures the trumpets *a* are inclined toward the ground to prevent the rain or snow from being driven by the wind into the pipes *b*, by which the sounds are directed toward the listener, and in order that the trumpets may present horizontally a receiving-orifice as large as possible for collecting the sonorous waves the anterior part of their upper wall may be cut, as shown at Fig. 1, in such a manner that the lower and lateral walls form at this part a sort of screen *c*, which directs the sounds to the interior of the trumpet and whose sides prevent the entry into the trumpet of the sonorous waves which are not directed directly toward its orifice. The screen *c* may be made of one separate piece fixed at the lower and lateral edges of the trumpet, or, again, it may be formed by cutting the edges of the orifice of the trumpet slantingly or whistle-shaped, as shown in

Fig. 2. In order to facilitate the entry of the sounds into the pipes *b*, the upper and lower sides of the trumpets may be slightly bent from top to bottom, as shown at Fig. 3.

In Figs. 4 and 5 the trumpets have the same form as that represented at Fig. 3; but they are made in two pieces connected by a uniting piece or joint *d* to facilitate their construction and to allow of the employment of different materials for the anterior part, which directly receives the sonorous waves, and the posterior part, which directs them into the pipe *b*. This latter is preferably cast of bronze to increase the solidity of the apparatus.

When a series of trumpets arranged in a circle, as shown at Fig. 4, is employed, it is advantageous to insulate them from their supports by means of washers or plates of rubber or similar material, as shown at *e* and *f*.

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

1. A sound-receiving device comprising a suitably-supported trumpet, the open end or mouth of which trumpet is directed downwardly at a suitable angle, and the lower and lateral portions of the mouth of which trumpet extend beyond the upper portion of said mouth, the small end of said trumpet being adapted to be connected with a suitable means for receiving the sonorous waves collected by said trumpet.

2. A sound-receiving device comprising a trumpet, made in one or more parts, of any suitable material, said trumpet being fixed to a support and having its mouth or open end directed downwardly at a suitable angle, the lower and lateral portions of said mouth being extended beyond the upper portion of said mouth, and the small or inner end of said trumpet being connected with a suitable means for receiving the sonorous waves collected by said trumpet.

3. A sound-receiving device comprising a plurality of trumpets fixed to a suitable support, the mouth or open end of each of said trumpets being directed downwardly at a suitable angle and the lower and lateral portions of the mouth of each of said trumpets being extended beyond the upper portion of the

mouth of each of said trumpets, the small end of each of said trumpets being connected with a suitable means for receiving the sonorous waves collected by said trumpet.

- 5 4. A sound-receiving device comprising a plurality of trumpets fixed to a suitable support, the open end or mouth of each of said trumpets being directed downwardly at a suitable angle and the upper portion of the mouth
10 of each of said trumpets being cut away, so that the lower and lateral portions of the

mouth of each of said trumpets extend beyond the upper portion of said mouth, the small end of each of said trumpets being connected with a suitable means for receiving the
15 sonorous waves collected by said trumpet.

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

EMILE DE MEULEMEESTER.

Witnesses:

H. T. E. KIRKPATRICK,
J. S. KIRKPATRICK.