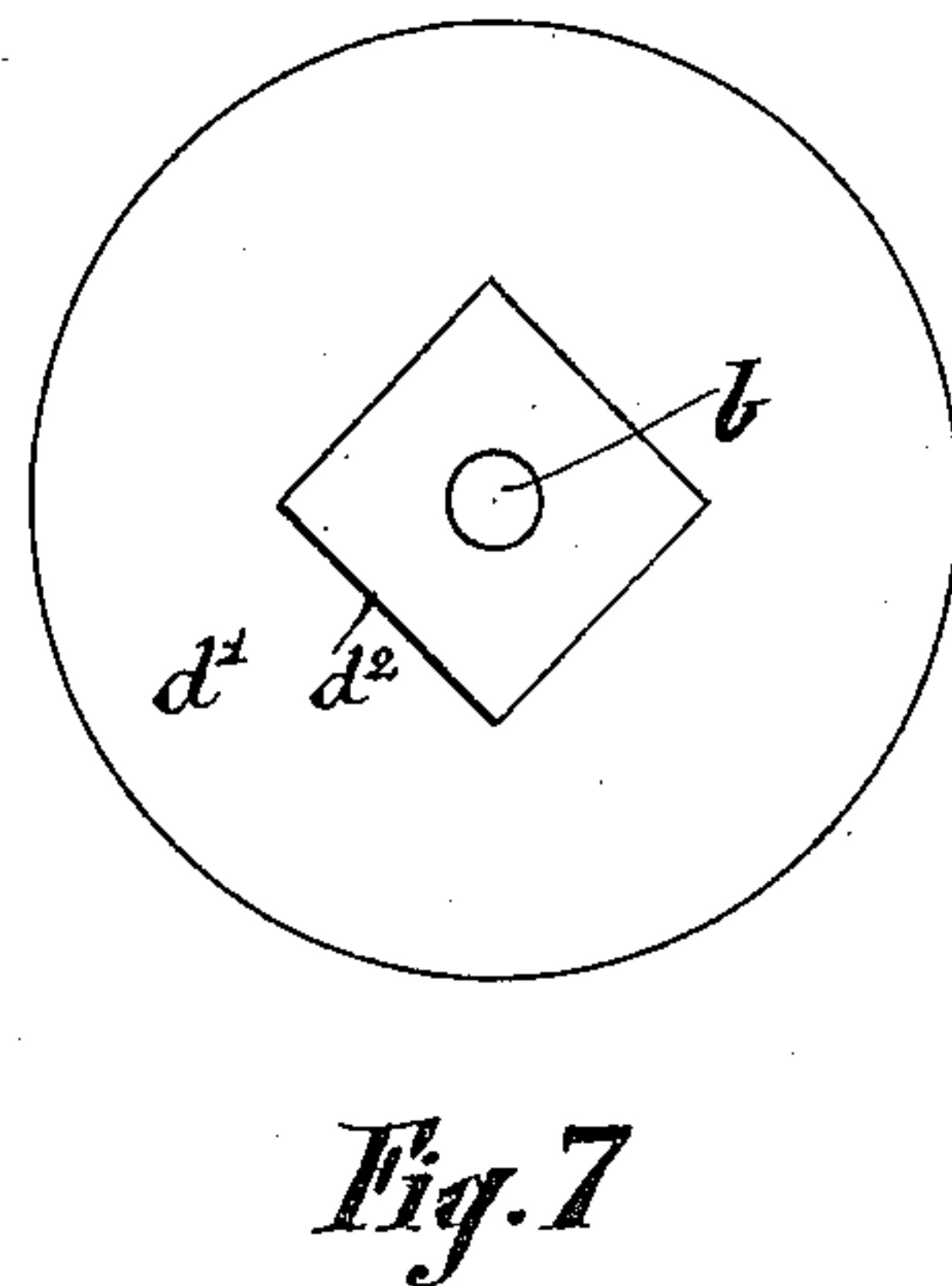
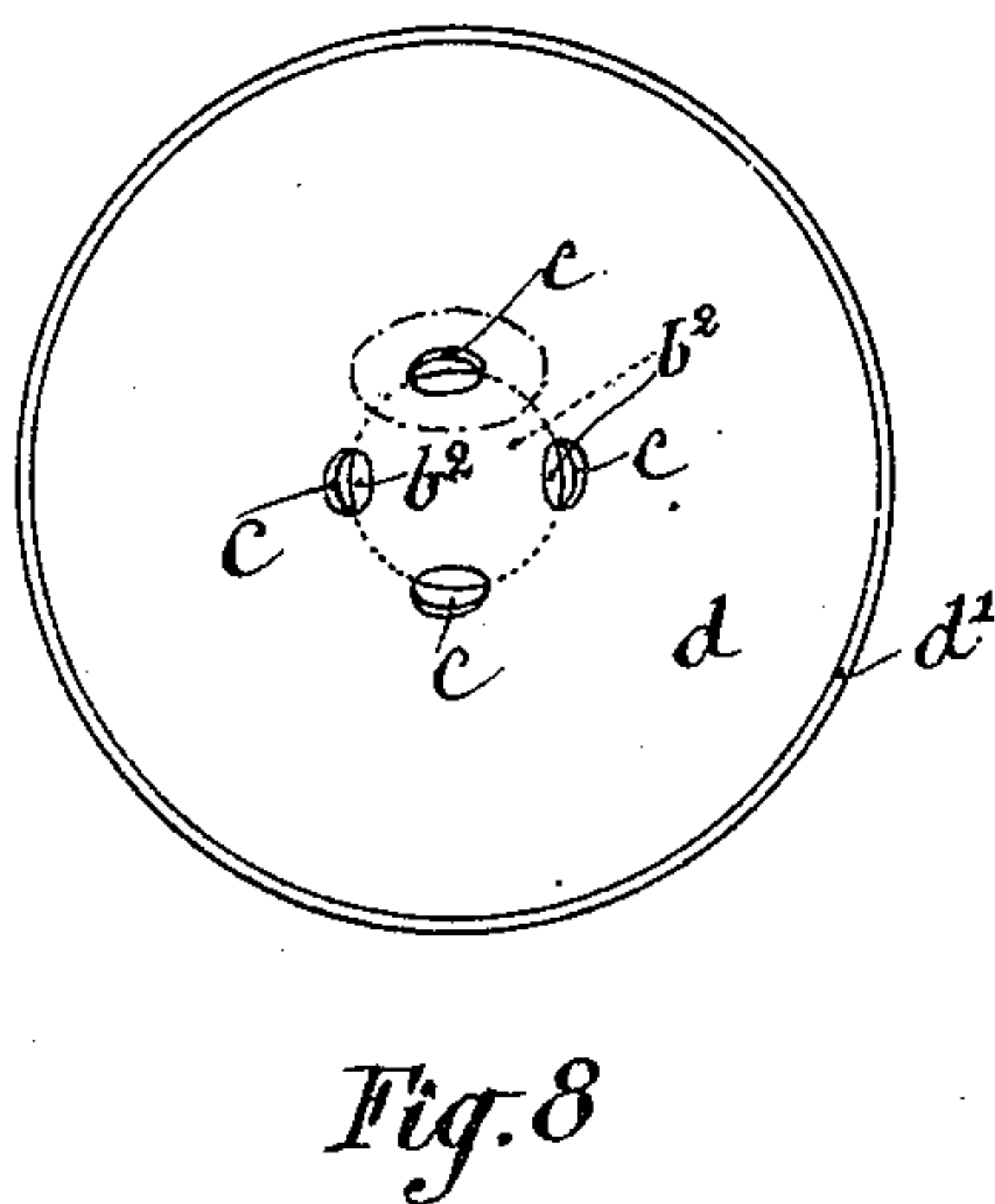
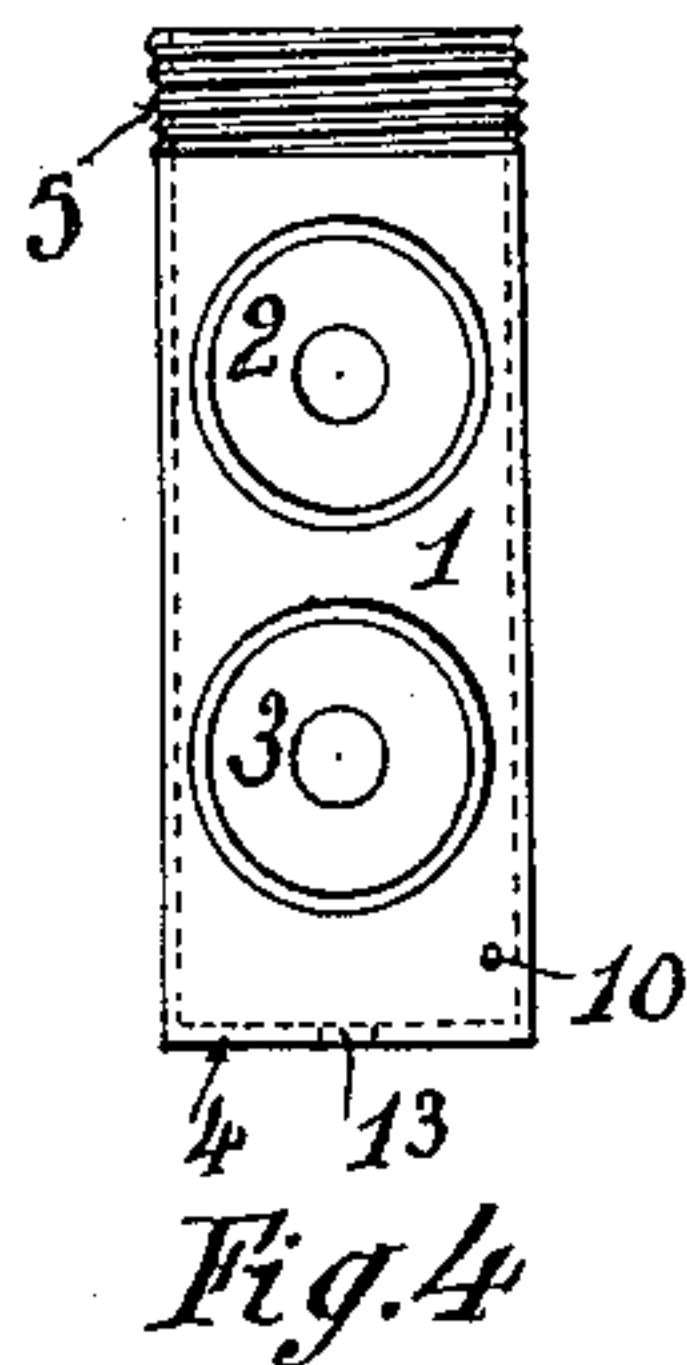
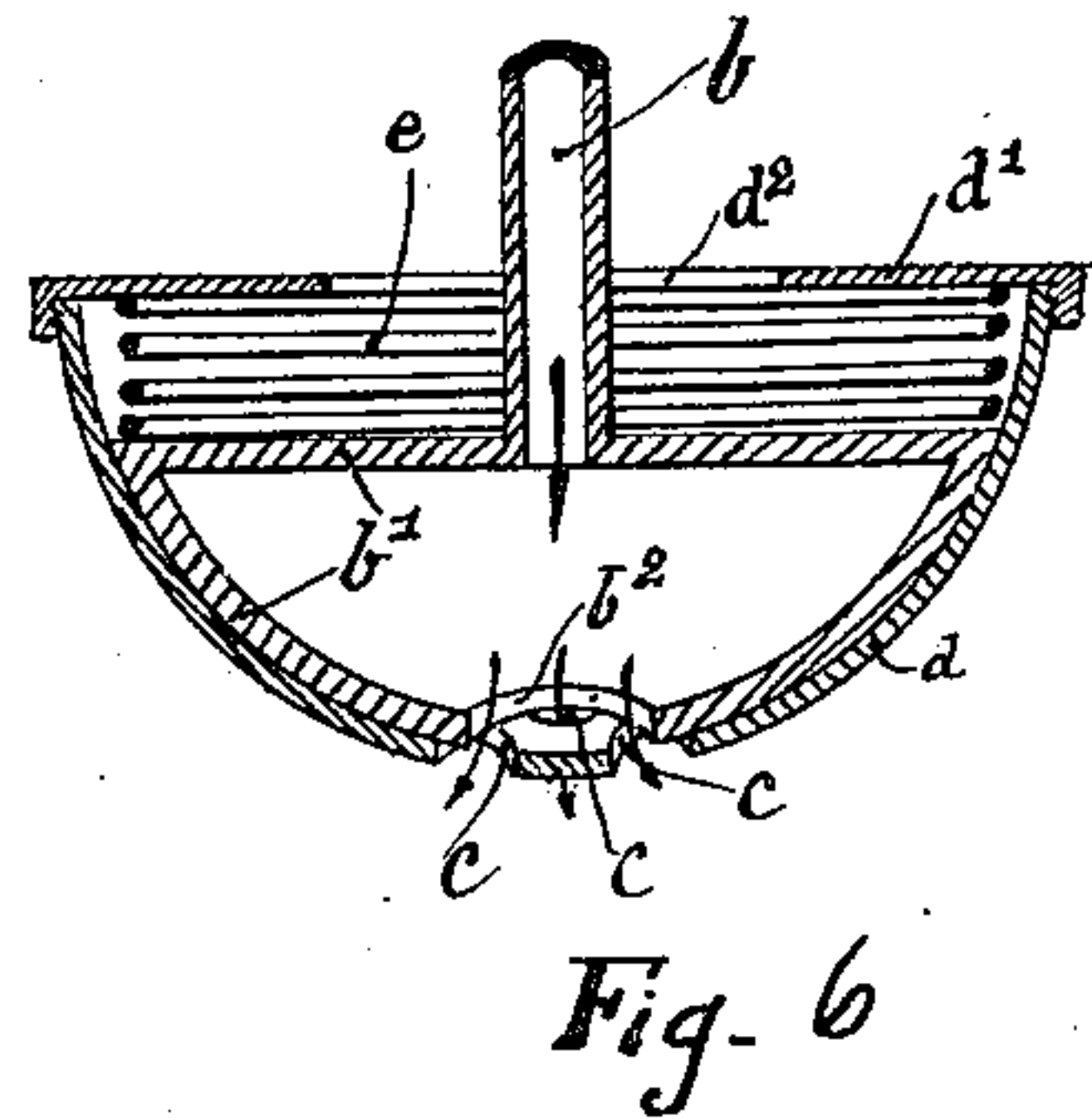
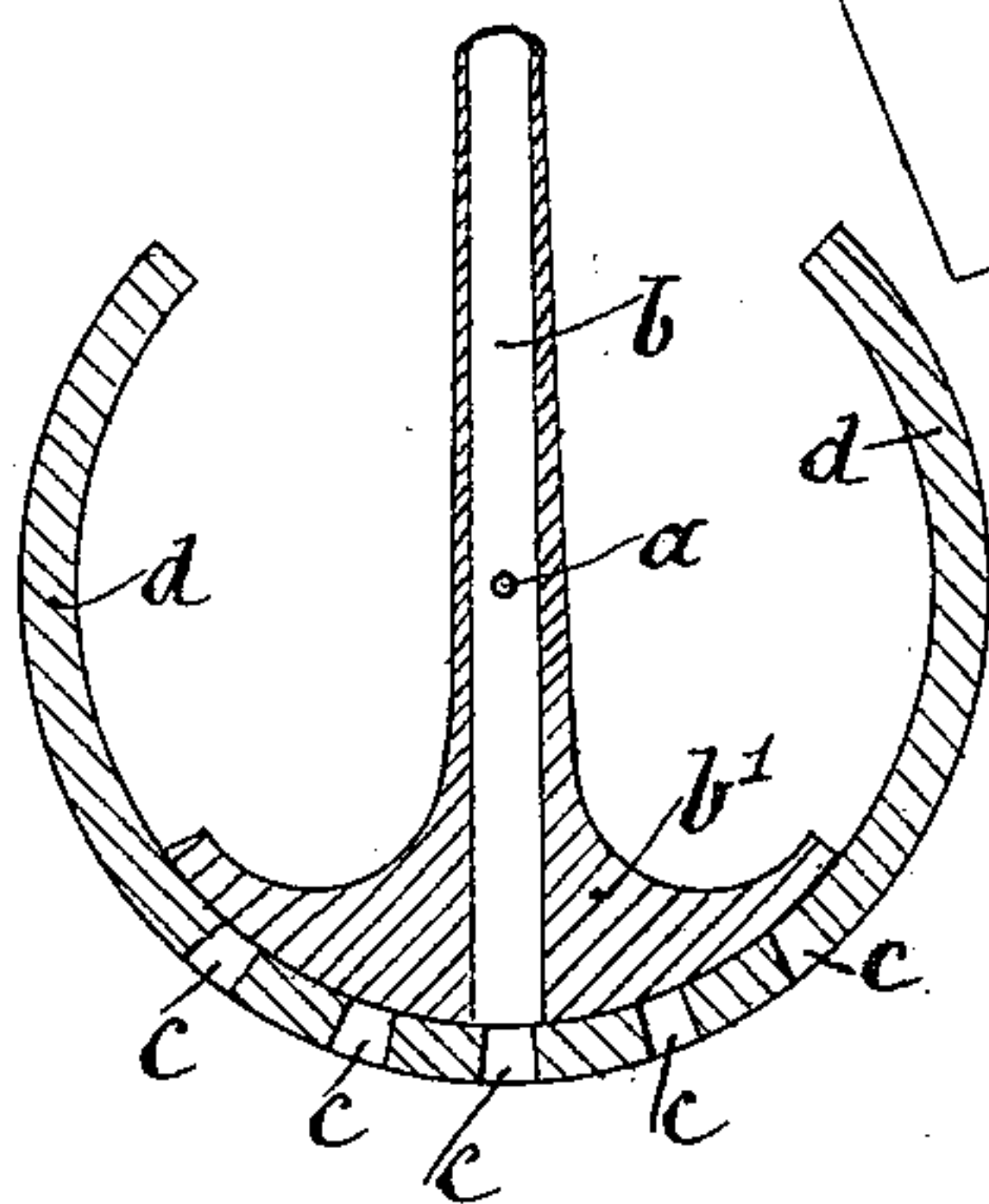
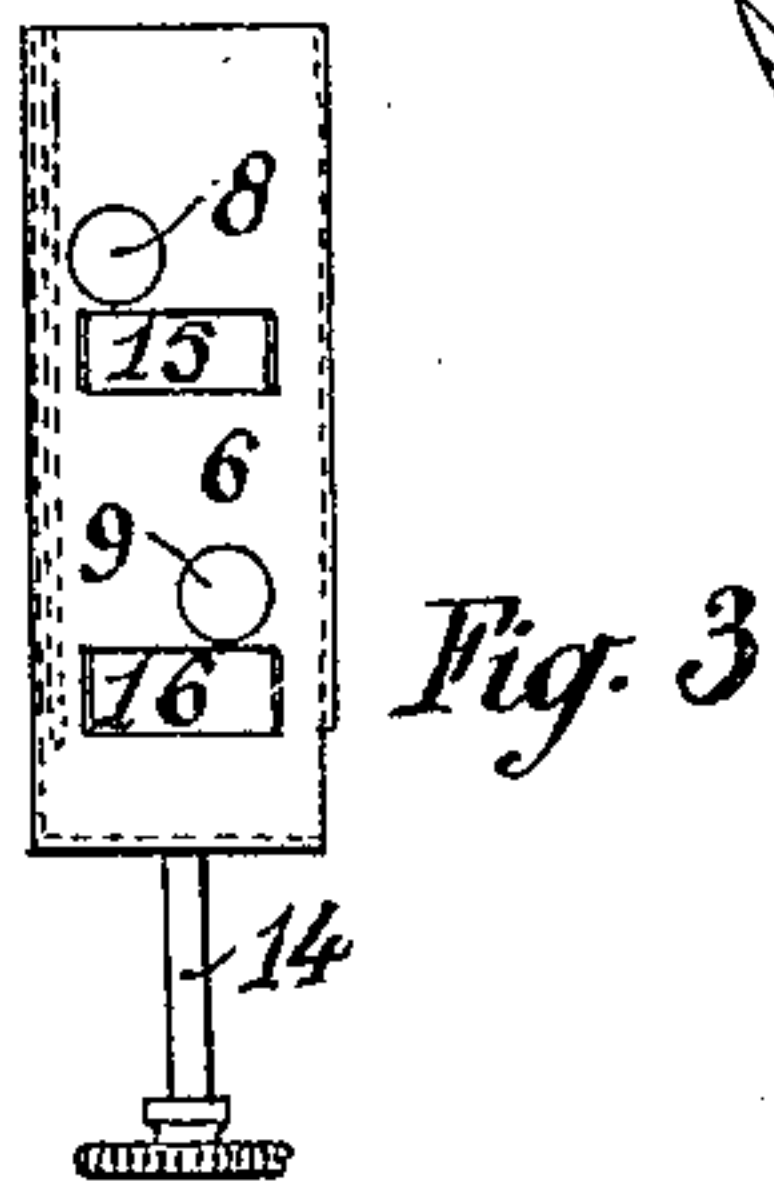
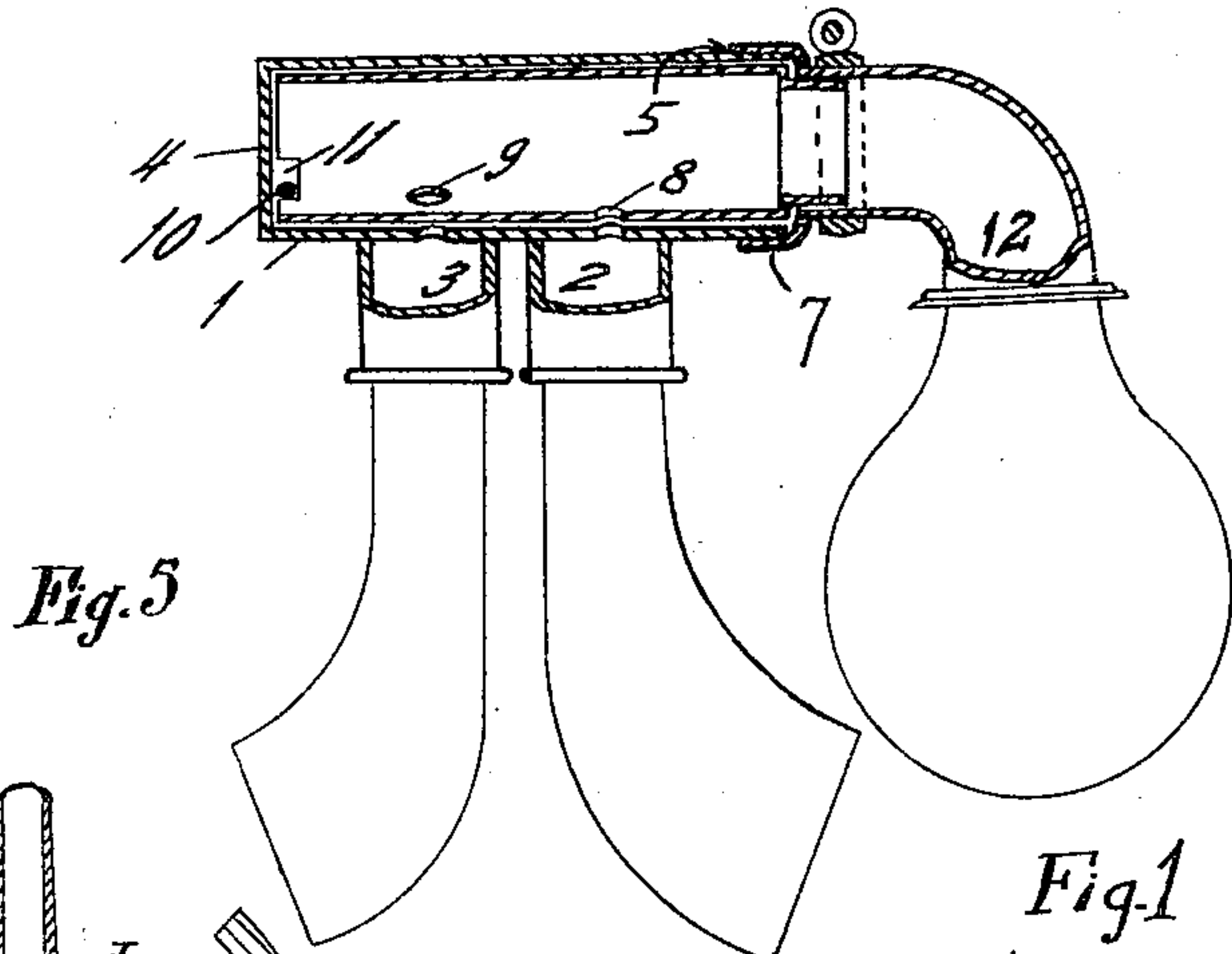
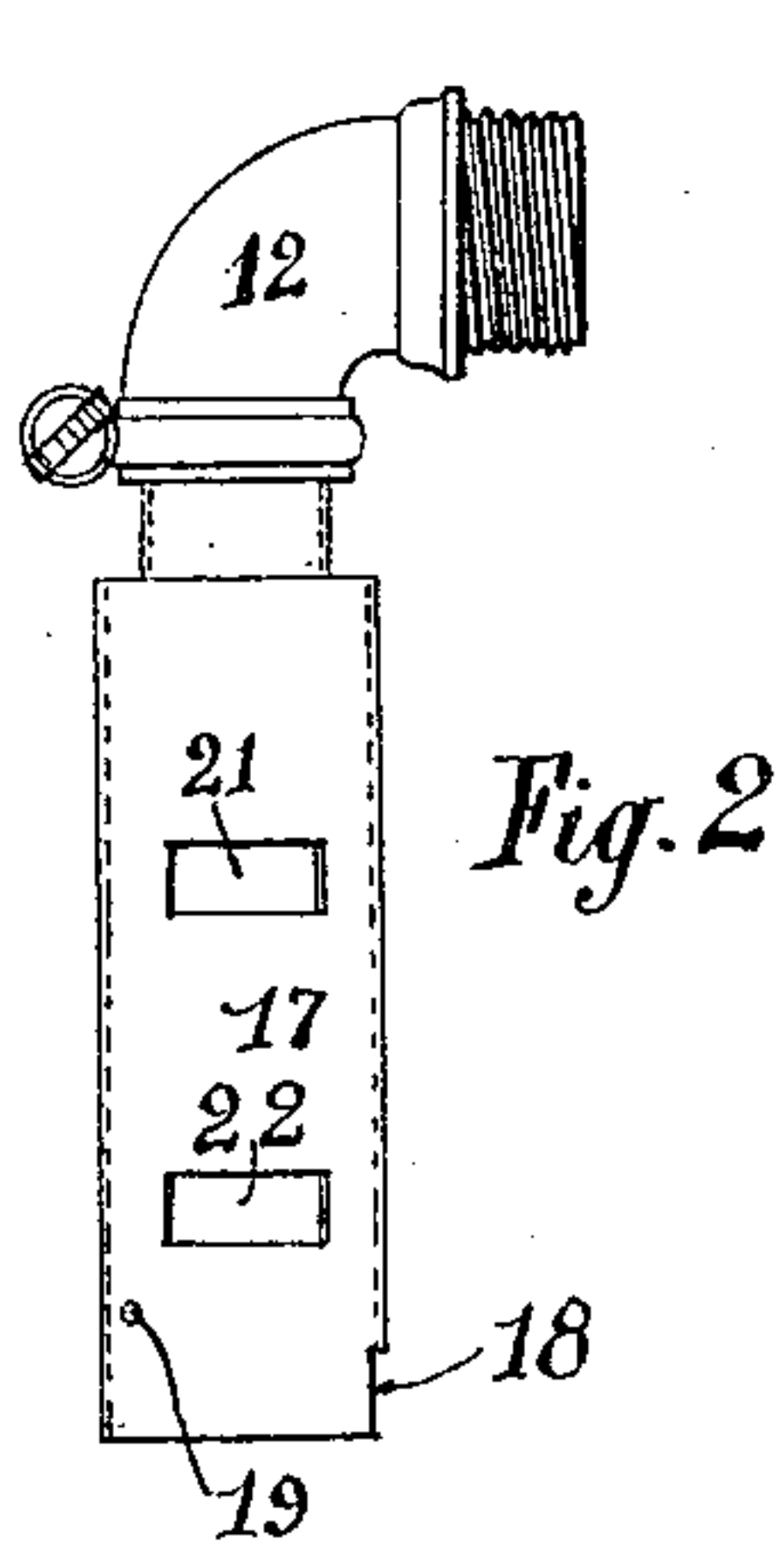


A. H. FEUGUEUR.
HORN FOR CYCLES, MOTOR CARS, AND THE LIKE.
APPLICATION FILED SEPT. 29, 1910.

993,233.

Patented May 23, 1911.



Witnesses

E. Larson
H. Brooks

Inventor

A. H. Feugueur
By Arthur Robb
J. H. Robb
his attorney

UNITED STATES PATENT OFFICE.

ALBERT HENRI FEUGUEUR, OF PARIS, FRANCE.

HORN FOR CYCLES, MOTOR-CARS, AND THE LIKE.

993,233.

Specification of Letters Patent. Patented May 23, 1911.

Application filed September 29, 1910. Serial No. 584,561.

To all whom it may concern:

Be it known that I, ALBERT HENRI FEUGUEUR, a citizen of the Republic of France, residing at Paris, in the Republic of France, have invented certain new and useful Improvements in and Relating to Horns for Cycles, Motor-Cars, and the Like, of which the following is a specification.

This invention has for its object a signal or warning horn for cycles, motor cars and other like purposes enabling two or more different notes to be sounded at the will of the driver without any mechanism and without the air compressed and discharged by the bulb having to act otherwise than for producing the vibration of the reeds. The instrument can constantly sound either of the notes, or sound the notes alternately at will. A supplementary arrangement enables several notes to be sounded simultaneously.

In the accompanying drawings to which reference will be made in the following specification:—Figure 1 represents in section means for carrying out the invention for the case of two notes; Figs. 2, 3 and 4 represent the parts of a modified horn; Figs. 5 to 8 relate to modifications.

Nozzles or ajutages 2, 3, in which are fixed as usual the reeds connect with a barrel 1 fixed to the mounting attachment (Fig. 1). This barrel 1 is closed at one of its ends 4, the other end 5 being open and threaded, in which a hollow box or shell 6 may be inserted which extends to the bottom and is fixed by a screw collar 7, this collar 7, however, leaving the box free to turn on its axis. This box has apertures 8, 9, situated on different lines but in planes corresponding to the level of the ajutages 2, 3, and these apertures 8, 9, may be brought opposite the said ajutages by rotating the box in the barrel. A riveted point 10 projecting into the barrel 1 enters a notch or groove 11 of the box 6 and the two extreme abutment positions correspond to the outlet of one or other of the apertures 8 and 9. This movement of the box in the barrel is simply operated by the hand which holds the ball mounted on the pipe 12 of the box 6. If the bulb or ball be left motionless the same note will always be sounded, one note or the other according to its position. If the contrary a displacement be made which causes the box to turn, between two emissions of the sound, different notes may be produced at will.

By adding a special piece to the two fore-

going ones (Fig. 1) and by making suitable apertures, it is possible to obtain at will alternate emissions of sound or the whole of the sounds may be made simultaneously.

In Figs. 2, 3 and 4, the parts are shown taken apart from one another for the case of two notes; the drawing shows the exact relative positions for one case and the following explanations will enable the changes and the consequences of the variations in the relative positions to be easily deduced.

The barrel 1 comprises, as in the preceding case, the apertures of the ajutages 2 and 3 of the reeds. It also comprises a stop point 10 regulating the rotary movements of the box. The barrel is again threaded at one of its ends 5 for receiving a collar 7 which retains the box, but here the opposite end 4 instead of being completely closed has a push rod 14 fitted to the box 6 passing through it at 13. This box 6 must in fact be able to be displaced axially. It has in one of its positions opposite the ajutages 2, 3, apertures 8, 9 on two lines identically with the case described in Fig. 1; in the other position slots 15, 16, are provided opposite these ajutages, the width of which slots is such that during the whole rotation the apertures 2, 3, are uncovered. The necessity of longitudinal and transverse displacement renders it necessary, however, to interpolate between the box 6 and the barrel 1 an intermediate cylinder 17 and the connections may be thus dissected. The cylinder 17 is only adapted to revolve on its axis, its movements being limited by a pin 10 abutting against the edges of the notch 18. The pipe 12 from the bulb is fitted to this cylinder and it is by this means that the movement of rotation is made.

The box 6 may be longitudinally displaced in the cylinder 17 guided by a head 19 penetrating into a longitudinal slot 20. These displacements are produced by the push rod 14.

The cylinder 17 has in the planes of the ajutages 2, 3, two rectangular windows 21, 22, which uncover these ajutages whatever the relative positions of the cylinder 17 in the barrel 1 may be.

It is thus evident that if the box 6 is at one end toward the bottom, it will be the apertures 8, 9, which face the windows 21, 22, and by the rotation of the cylinder 17 involving this box 6, the ajutage 2 is opened and then the ajutage 3. If the box 6 is at the upper end it is the windows 15, 16, which coin-

cide with the windows 21, 22, and whatever may be the position of the cylinder 17 in the barrel 1, the two ajutages 2, 3, are uncovered together, thus emitting the two sounds simultaneously.

It is evident that the distribution may be made directly by the bulb pulling a piece which is displaced on a suitable concave slide bed with which the horns connect. Figs. 5 to 8 of the drawing relate to modifications of this kind.

In the arrangement shown in Fig. 5, the ball which is movable about an axis a enables air to be sent into a pipe b with which it is firmly connected and which feeds two or more horns, the entrance of which corresponds to apertures c formed in a spherical wall d on which the end b' of the pipe b which is suitably arranged for this object, slides.

In the arrangement shown in Figs. 6 to 8 the movable ball is mounted on a pipe b which discharges into a portion of a hollow sphere b' adapted to be displaced inside an envelop or cover d of the same form. In this cover apertures c intended to correspond with the horns are provided. A hole b^2 being formed in the hollow sphere b' it is evident that according to the position given to this latter, the ball will feed one or other of the horns. In order to facilitate the use of the horn, the cover d may be surmounted by a plate d' perforated at its center for the passage of the pipe b' and this aperture d^2 (Fig. 7) has preferably the shape of a triangle if the horn has three horns, of a square for four horns and so forth, in such a way that by causing the pipe b to slide against the aperture d^2 the position of the latter is insured for the working of the horn. A spring e arranged between the plate d' and the upper wall limiting the sphere member b' , enables the ball to be

brought back automatically into the central position. In this position by making the hole b^2 of suitable dimensions (see Fig. 8), the simultaneous operation of several horns may be obtained.

It is evident that there must be understood as falling within the scope of the invention, not only the rotary movement, but also a longitudinal displacement of the box 6 provided that it is produced by hand operation itself in such a way that the succession of the sounds is not necessarily always the same as is the case in an automatic movement, but is on the contrary variable at the option of the person who is sounding the horn. A longitudinal displacement of this kind may be produced by pulling or pushing the pipe of the ball.

I declare that what I claim is:—

1. A warning horn comprising in combination a bulb, an air distributing valve connected therewith, a casing for the said valve, a series of cornets attached to the said casing and adapted to be brought successively into connection with the bulb by the rotation of the said bulb and valve.

2. A warning horn comprising in combination a bulb, an air distributing valve connected therewith, an axially sliding sleeve inside said valve, a casing for the said valve, a series of cornets attached thereto and adapted to be brought either successively or simultaneously into connection with the bulb by the relative movements of the said valves and sleeves.

In witness whereof, I have hereunto signed my name this 8th day of September 1910, in the presence of two subscribing witnesses.

ALBERT HENRI FEUGUEUR.

Witnesses:

H. C. COXE,

ANTONIN MONTEILHET.