

No. 828,309.

PATENTED AUG. 14, 1906

L. GARDY.

SOUND BOX WITH COUPLED DIAPHRAGMS FOR DISK TALKING MACHINES.

APPLICATION FILED NOV. 29, 1905.

FIG 1

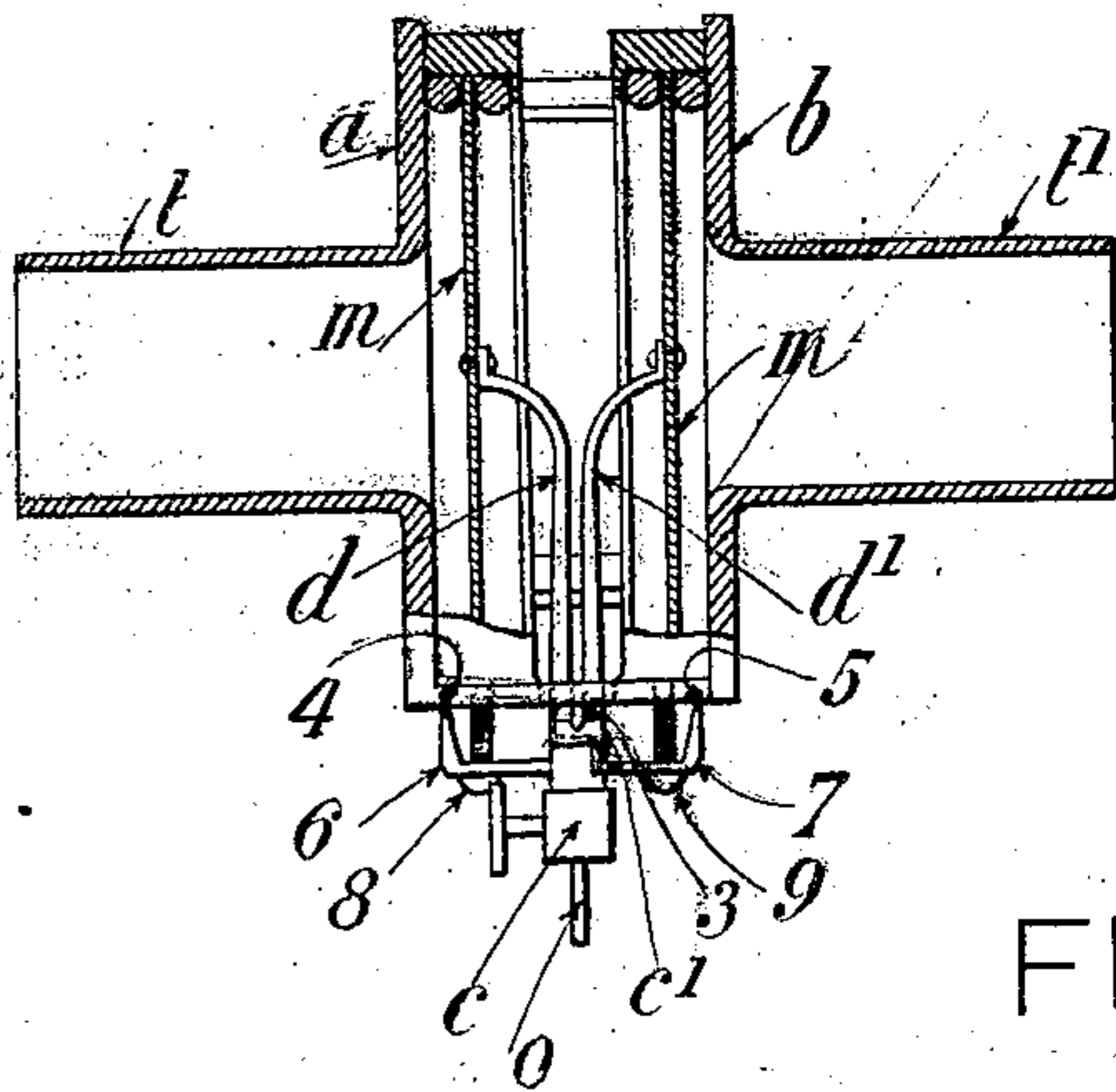


FIG 2

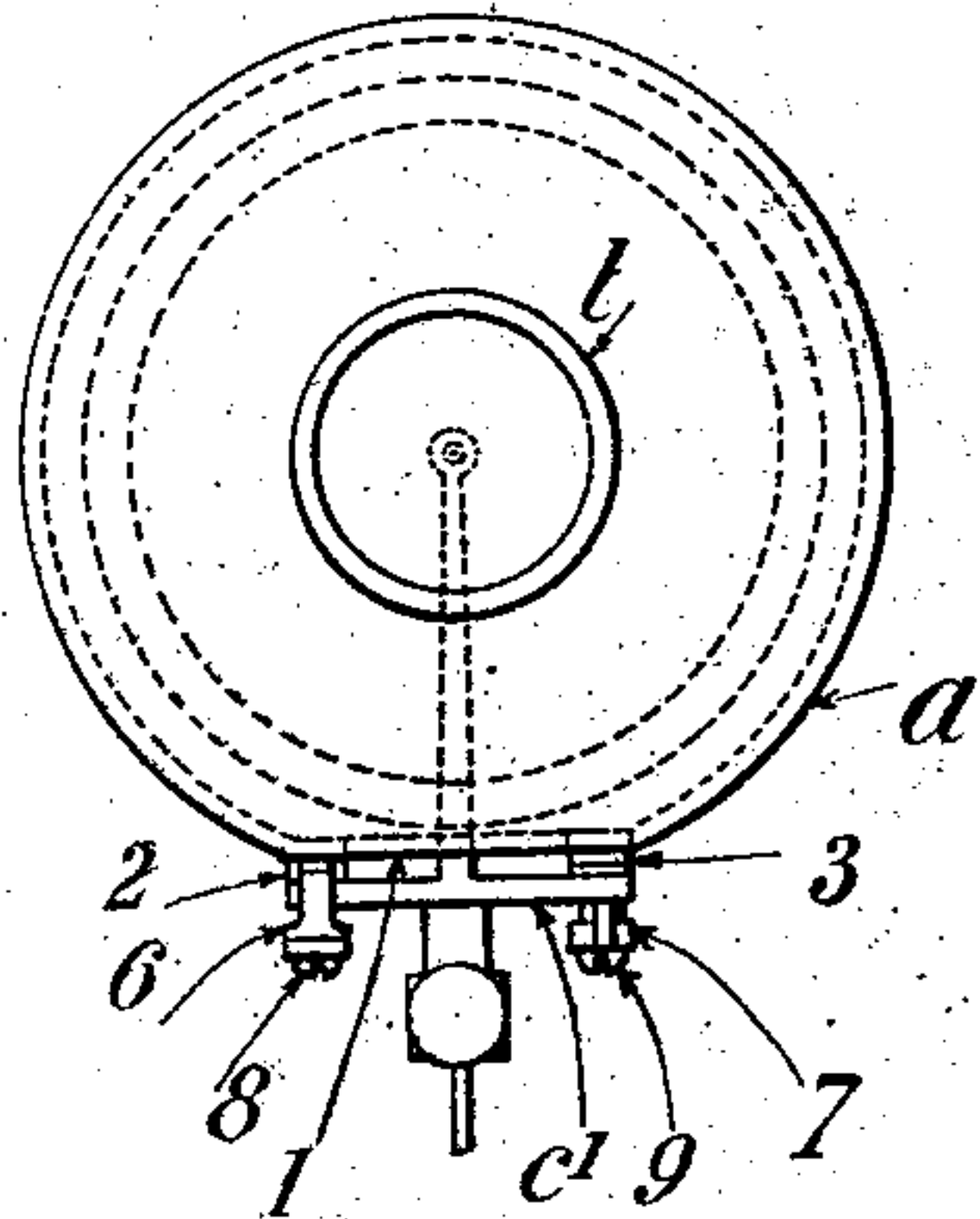


FIG 3

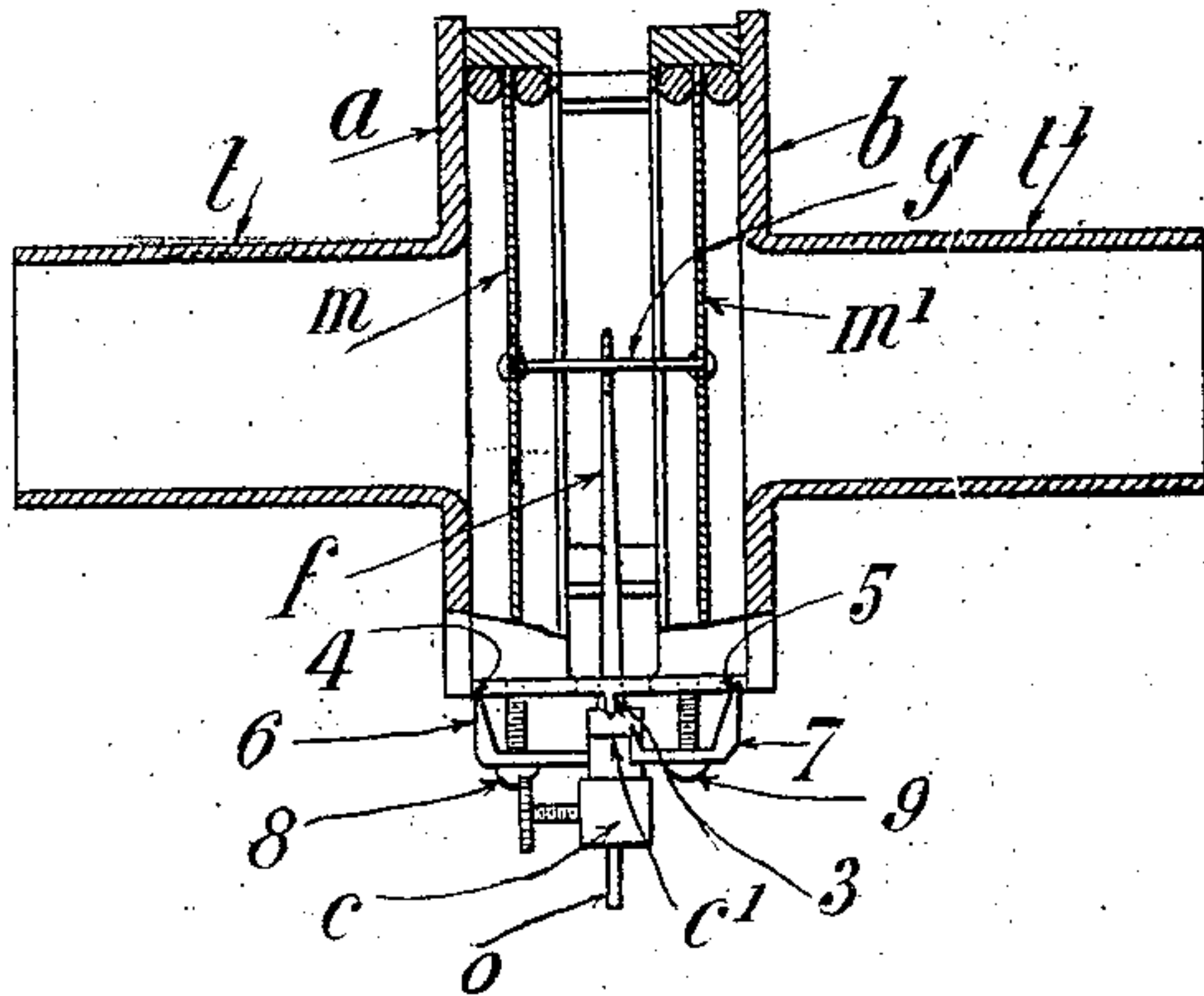
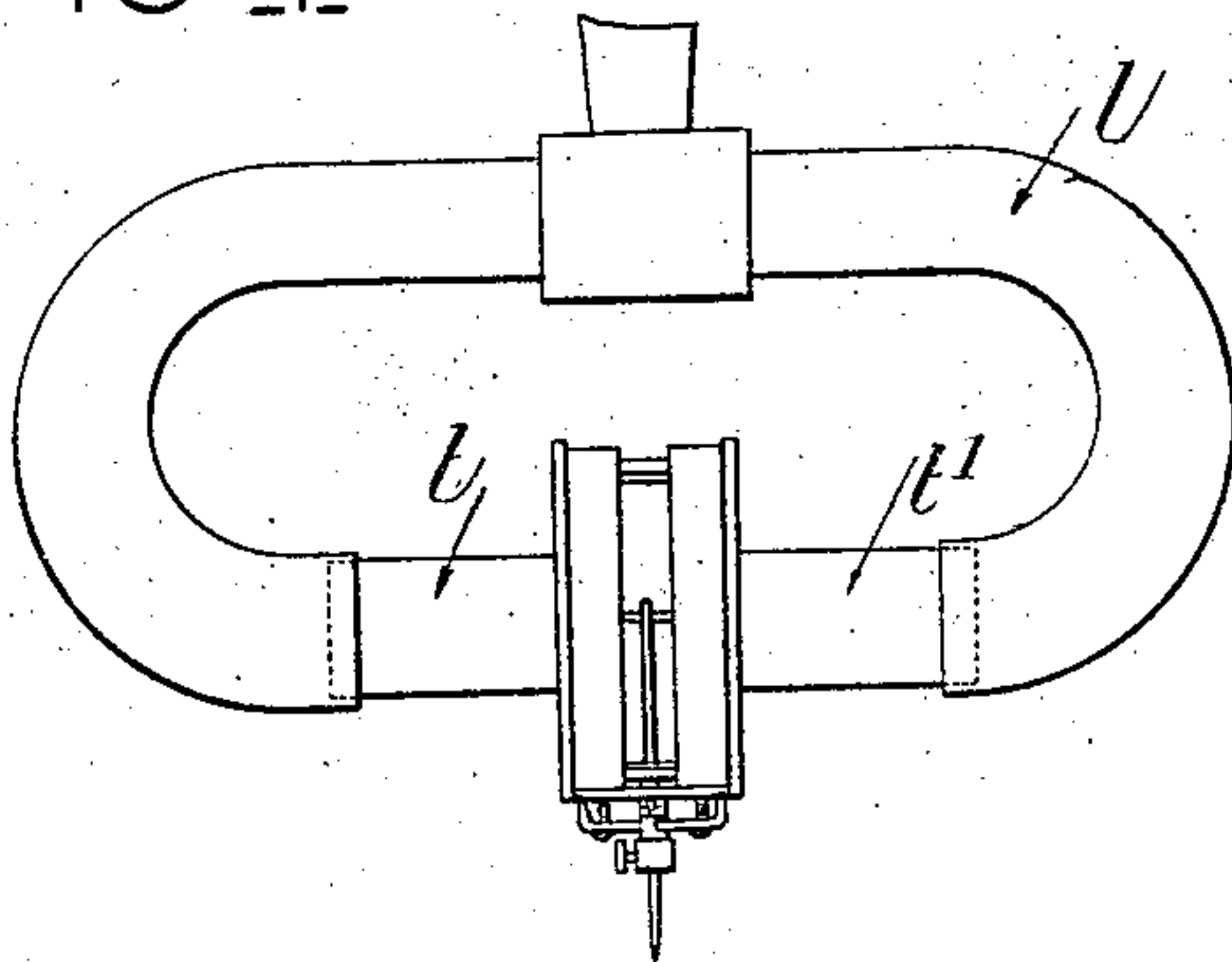


FIG 4



Witnesses:-

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UNITED STATES PATENT OFFICE.

LAURENT GARDY, OF PERPIGNAN, FRANCE.

SOUND-BOX WITH COUPLED DIAPHRAGMS FOR DISK TALKING-MACHINES.

No. 828,309.

Specification of Letters Patent.

Patented Aug. 14, 1906.

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To all whom it may concern:

Be it known that I, LAURENT GARDY, a citizen of France, residing at 5 Rue de la Fusterie, Perpignan, Pyrénées-Orientales, France, have invented new and useful Improvements in Sound-Boxes with Coupled Diaphragms for Disk Talking-Machines, of which the following is a specification.

This invention has for its object a sound-box for disk talking-machines in which two vibrating diaphragms arranged opposite each other are directly connected to a single pin-holder placed between them. By such a construction a double reproduction in two distinct horns or an amplified reproduction in one same horn can be obtained, as will be hereinafter explained. The same device can also be used as recorder.

In the annexed drawings, Figure 1 is a longitudinal section of a form of construction of the sound-box with coupled diaphragms. Fig. 2 is a side view of the sound-box. Fig. 3 is a longitudinal section of a slightly-modified construction, and Fig. 4 shows the device by means of which a single horn can be employed in connection with the sound-box with coupled diaphragms.

Referring to Fig. 1 of the drawings, it will be seen that two ordinary single boxes *a* and *b* are coupled in such a manner that their vibrating diaphragms *m* and *m'* are placed opposite each other. These boxes are secured to each other by their periphery in a certain number of points, but in such a way as to leave the space between the two diaphragms in direct connection with the outside air. A pin-holder *c* is mounted on the wall of the whole thus formed and is extended between the two diaphragms by a yoke, the branches *d* and *d'* of which are properly separated in order to be fixed, respectively, on the diaphragms *m* and *m'*. The air-chamber behind each diaphragm is extended, as usually, by a tubulure *t* or *t'*, adapted to transmit the vibrations. The mounting of the pin-holder on the wall of the apparatus is assured in the following manner: On a flat portion 1 of the metallic frame of the apparatus are provided two V-shaped projections 2 and 3 and two V-shaped notches 4 and 5.

The cross-bar *c'*, made integral with the pin-holder *c*, has in turn two V-shaped notches on its lower face and two V-shaped notches on its upper face. The cross-bar is placed in such a manner that the notches of the lower face are astride with the projections 2 and 3, and the pin-holder is secured in position by means of two yoke-hoops 6 and 7, engaging their sharp ends, respectively, with the notches 4 and 5 and with the notches on the lower face of the cross-bar *c'* and by means of two screws 8 and 9, which wedge the yoke-hoops by being screwed into the flat portion 1 of the frame. By this way of mounting the pin-holder the latter is held tightly, though a certain movableness is afforded thereto and it can be very easily removed.

In the form shown in Fig. 3 the pin-holder *c*, instead of being extended by a yoke, is terminated in a branch *f'*, through the end of which passes a thin rod *g*, secured by the middle to said branch and by its ends to the diaphragms *m* and *m'*, respectively. The rest of the construction is not altered.

It will be understood that in either case when the pin *o* moves along the grooves of a recorded disk it will transmit to the two diaphragms *m* and *m'* simultaneous and concurrent vibrations, which may be received in two horns, respectively, connected to the tubulures *t* and *t'*.

If it is desired to obtain a reproduction in only one of the horns, it will only be needed to connect the two tubulures *t* and *t'* by means of a C-shaped conduit *l* and to join the middle part of said conduit provided with an opening to the nozzle of a single horn.

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

A sound-box for disk talking-machines, comprising two metallic boxes, means for securing these boxes together and opposite to each other, two parallel vibrating diaphragms fixed respectively in each box, a pin-holder placed between the two diaphragms, means for connecting said pin-holder to each diaphragm, an exterior cross-bar made integral with the pin-holder, notches provided in said cross-bar, projec-

tions and notches provided in the metallic frame, two yoke-hoops resting on the cross-bar and on the metallic frame, and two screws wedging the said yoke-hoops by being
5 screwed into said metallic frame, substantially as described and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LAURENT GARDY.

Witnesses:

H. ALIN,

A. W. BRANN.