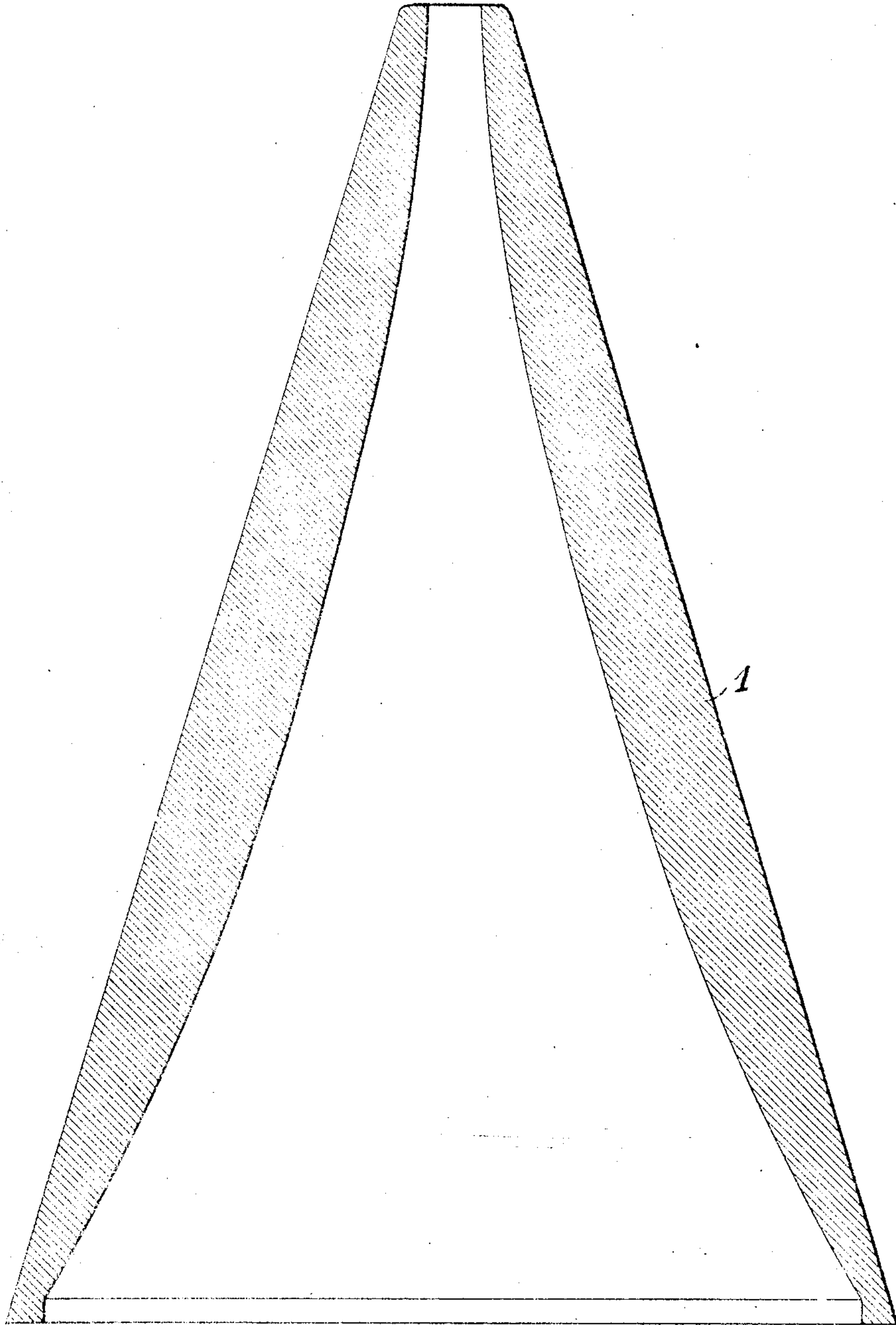


T. A. EDISON.
HORN FOR TALKING MACHINES.

APPLICATION FILED MAY 24, 1905. RENEWED JUNE 10, 1909.

943,663.

Patented Dec. 21, 1909.



Attest:
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UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF LLEWELLYN PARK, ORANGE, NEW JERSEY.

HORN FOR TALKING-MACHINES.

943,663.

Specification of Letters Patent.

Patented Dec. 21, 1909.

Application filed May 24, 1905, Serial No. 261,951. Renewed June 10, 1909. Serial No. 501,413.

To all whom it may concern:

Be it known that I, THOMAS ALVA EDISON, a citizen of the United States, residing at Llewellyn Park, Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Horns for Talking-Machines, (Case C.) of which the following is a description.

My invention relates to improvements in horns adapted for use with phonographs or other talking machines, and my object is to produce a horn adapted particularly for recording purposes and by which superior results will be secured. With funnels as heretofore used, the walls thereof have been capable of vibrating themselves, and are responsive to, and vibrate sympathetically with, certain musical notes, to result in the production of inharmonic sounds, which become recorded. Furthermore, in such vibration of the funnel walls, there is a considerable loss of energy and a proportionate reduction in the effect on the diaphragm, resulting in further weakening and distortion of the recorded sounds.

In carrying my invention into effect, I make use of a funnel that is incapable of vibrating under the effect of ordinary sounds used in this art, by forming it with thick walls presenting, at all points of its longitudinal section, the shape of a truss, and composed of some dead, non-metallic material, like plaster-of-paris, coated with a hard smooth varnish. I have, in fact, constructed a funnel for the purpose, weighing as much as a ton, and whose mouth is several feet in diameter, and which gives no sym-

pathetic tones, due to its walls vibrating, and which absorbs scarcely any energy from the sound waves by having its mass set in vibration.

Reference is hereby made to the accompanying drawing which shows in axial section a funnel constructed in accordance with my invention. It will be observed that the wall or walls 1 of the funnel are of maximum thickness at a point between its ends and that the thickness decreases gradually toward each end so that a section thereof is in outline the form of an ordinary truss.

I prefer to make the funnel of plaster-of-paris, since it may be readily cast, but obviously, other suitable materials may be made use of. The funnel is supported in any suitable way, and connection with the recording mechanism is made preferably through the usual rubber section.

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

1. A funnel for talking machines, the walls of which are of maximum thickness at a point between its ends, substantially as set forth.

2. A funnel for talking machines, which is of maximum thickness at a point intermediate its ends and whose thickness decreases gradually toward each end, substantially as set forth.

This specification signed and witnessed this 20th day of May 1905.

THOS. A. EDISON.

Witnesses:

FRANK L. DYER,
ANNA R. KLEHM.