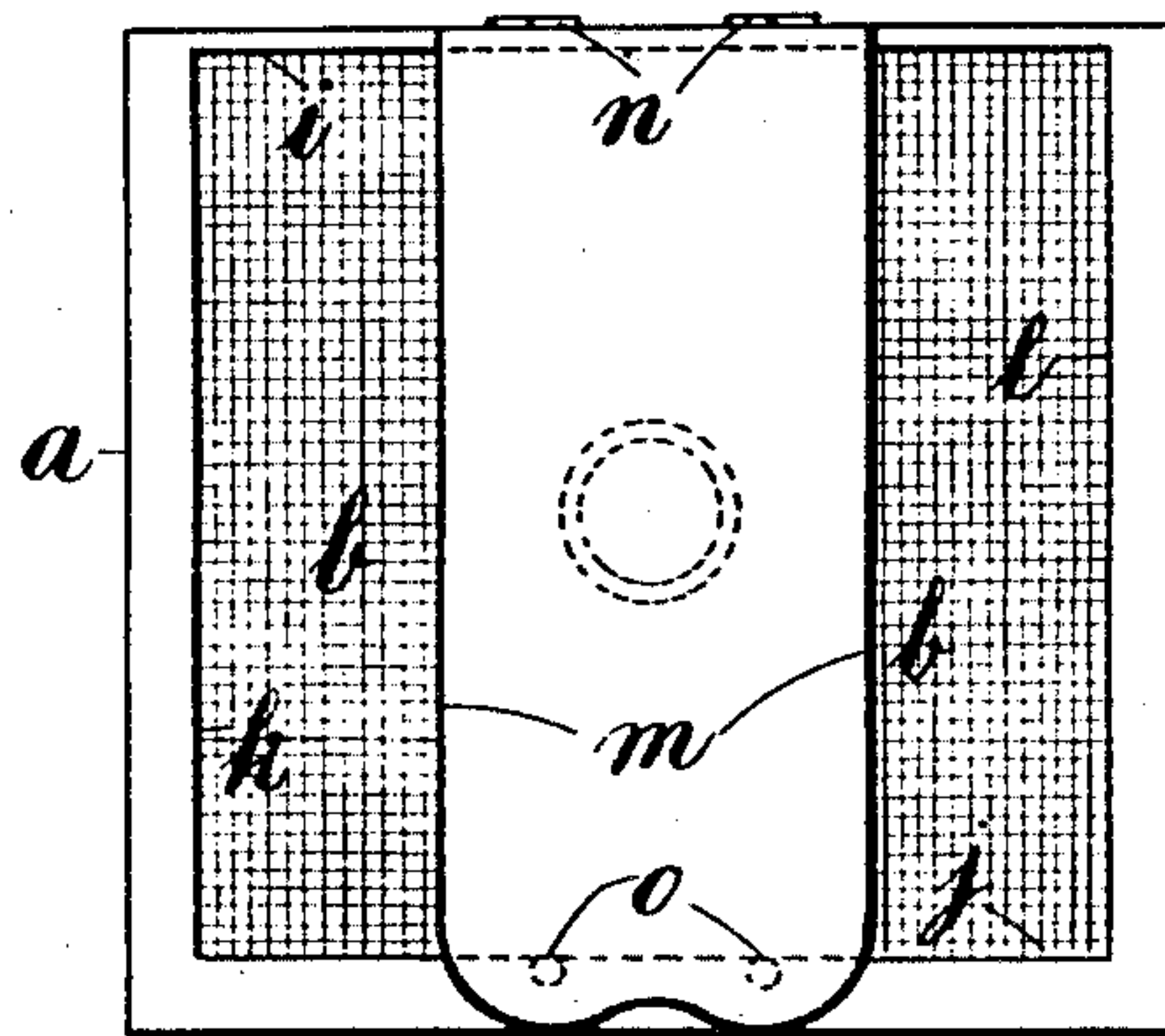
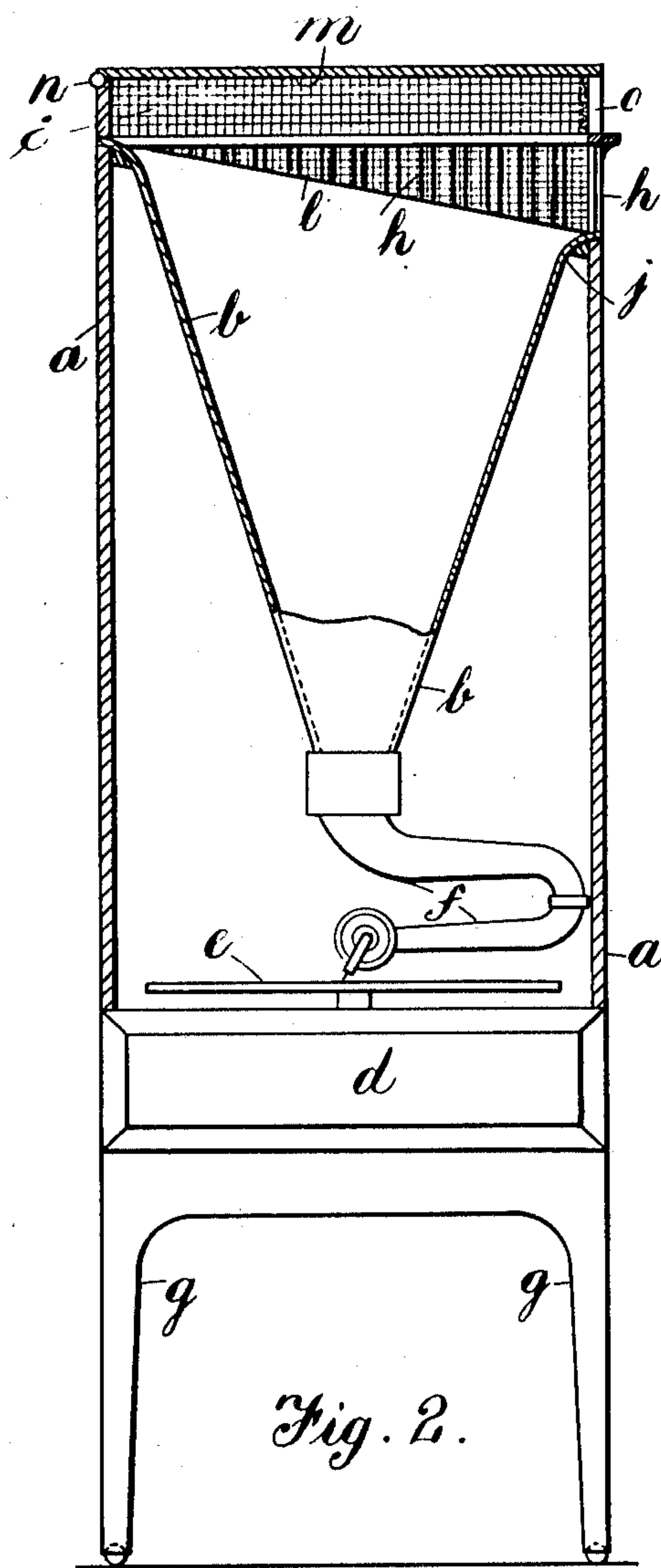
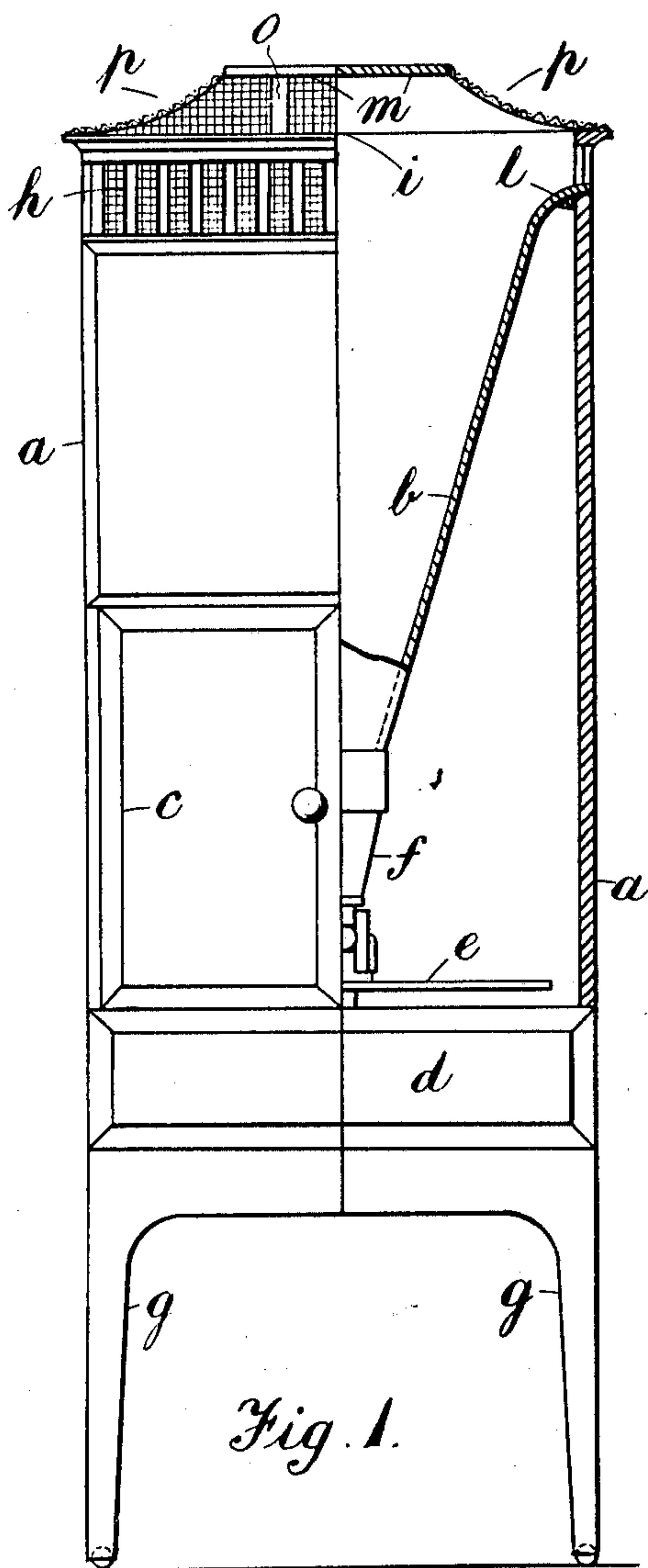


J. MORTON.
SOUND RECORDING AND REPRODUCING INSTRUMENT.
APPLICATION FILED FEB. 13, 1911.

992,029.

Patented May 9, 1911.



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UNITED STATES PATENT OFFICE.

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SOUND RECORDING AND REPRODUCING INSTRUMENT.

992,029.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed February 13, 1911. Serial No. 608,251.

To all whom it may concern:

Be it known that I, JOSEPHINE MORTON, a subject of the King of Great Britain, residing at 33 Furnival street, London, in the county of Middlesex, England, have invented a new and useful Improvement in or Relating to Sound Recording and Reproducing Instruments, of which the following is a specification.

10 This invention relates to sound recording and reproducing instruments such as gramophones, phonographs and the like, and it has more particular reference to the construction of the cabinets for containing the
15 entire mechanism, and which are provided with vertically arranged trumpets having their flared mouths directed toward fretwork covered sound openings in the casing. Instruments of the kind referred to usually
20 have one or more trumpets branching from the sound pipe vertically to the top of the inclosing cabinet; said trumpet or trumpets being fitted at or near their ends with sounding boxes for the intensification and mel-
25 lowing of the reproduction; or with bridge pieces near the mouth for transmitting the vibrations of the wider part of the trumpet to the casing without the vibrations of the narrower part affecting the strengthening
30 and refining of the sound.

One feature of my invention is to provide an improved construction of gramophone or phonograph cabinet of the foregoing type which is fitted with a novel sound
35 diffuser or deflector.

A further feature of my invention consists in the particular method of forming and arranging the mouth of the trumpet relative to its longitudinal axis or the sound
40 pipe and inclosing cabinet whereby the sounds reproduced are much more effectively diffused instead of being projected in one or more definite and distinct directions.

The accompanying drawing is in illustration of my invention, Figure 1 being a front elevation, partly in section, of one convenient embodiment of the present improvements; Fig. 2 is a central vertical section taken at right angles to Fig. 1, and Fig. 3 is
45 a plan view.

According to the illustrated way of carrying my invention into effect I construct a wooden or other suitable cabinet *a*, rectangular in plan and of a sufficient depth to

contain the sound recording and reproducing mechanism as well as the trumpet *b*, and provide it with a door or doors *c* for giving access thereunto. In the drawing the mechanism is arranged in a compartment *d*, below the record carrier *e*, and *f* is the sound
55 arm and connection to the trumpet *b*. This cabinet is provided with legs *g*, *g*, of any desired shape and height, or a stand may be used for supporting the cabinet, and for an appropriate depth from the upper edge
60 of the cabinet around three of its sides—for example—I form openings or sound apertures of any of the well known types, but preferably I fit these openings with fretwork or the like *h*, *h*, behind which I ar-
65 range fine silk to give a finished appearance to the entire cabinet.

Internally of the cabinet *a* and extending vertically upward from the sound pipe *f* I arrange the trumpet *b* which may be of any
70 desired cross section and material, the upper edge of which is outwardly flared at one part *i* to the extreme upper edge of that side or back of the cabinet which is not furnished with an opening or sound aperture.
75 The opposite side *j* of the trumpet *b* is correspondingly flared and joined to the lower edge of the front one of the aforesaid openings or that opposite the back or blank side of the cabinet. The two other sides *k*, *l*, of
80 the trumpet *b* are similarly flared and downwardly inclined in an oblique plane as shown in Fig. 2, from the higher to the lower sides above described, and it is also to be observed that the fretwork *h* is correspondingly in-
85 clined.

Over the top of the cabinet *a*, and to prevent the ingress of dirt and dust to the trumpet, I may arrange a thin perforated cover of silk gauze or other light material
90 which does not interfere with the sound reproduction. Above this gauze covering, and at a short distance therefrom, but, preferably, of less area, I mount or support a thin sheet of wood, metal or analogous ma-
95 terial *m* which constitutes a sound diffuser and tends to deflect the reproductions effectively in all directions. In the drawing this diffuser *m* is hinged at *n* to an upstanding part of the back of the cabinet *a* and it is
100 supported in the front by pegs or posts *o*, *o*; and I wish to here point out that I am fully aware sound deflectors consisting of two

layers of wire gauze with an intervening layer of cotton wool have been applied to the sound gratings of instruments of the above type.

5 In some cases I may dispense with the openings and fretwork coverings *h*, *h*, and flare the trumpet all around to the upper edge of the cabinet, and inclose the spaces intervening between the sound diffuser *m* and said upper edge by means of inclined strips of silk backed fret work, as indicated by the dot-and-dash lines *p*, *p*, in Fig. 1.

Obviously the upper edge of the trumpet *b* may be flared outwardly in various ways to give a neat and artistic finish and I wish to point out that I do not restrict myself as regards its shape in plan, neither do I confine myself to a rectangular cross-section of the cabinet, or the particular contour of the sound diffuser *m* shown and described.

From the foregoing it will be seen that by my invention I greatly improve the efficiency of gramophone, phonograph and the like cabinets, arranged in accordance therewith and that without adding in the least degree to the difficulty of construction,

whereas I effect a considerable reduction in the cost of manufacture.

What I claim as my invention and desire to secure by Letters Patent is:—

A gramophone or phonograph cabinet comprising a casing, an instrument and a trumpet therefor in the casing, the trumpet being arranged in a vertical position with its mouth in an inclined plane, fret-work forming the upper portion of the casing from the inclined plane of the mouth to a horizontal plane from the high point of the mouth of the trumpet, a covering of silk arranged above the end of and falling down below the fret-work to prevent ingress of dirt, and a hinged horizontal sound deflector of less width than the width of the casing arranged in contact with the top of said covering, substantially as described.

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

JOSEPHINE MORTON.

Witnesses:

EDWARD LAURENCE HEYWOOD ELLIOTT,
JOHN OSWALD FARRER.