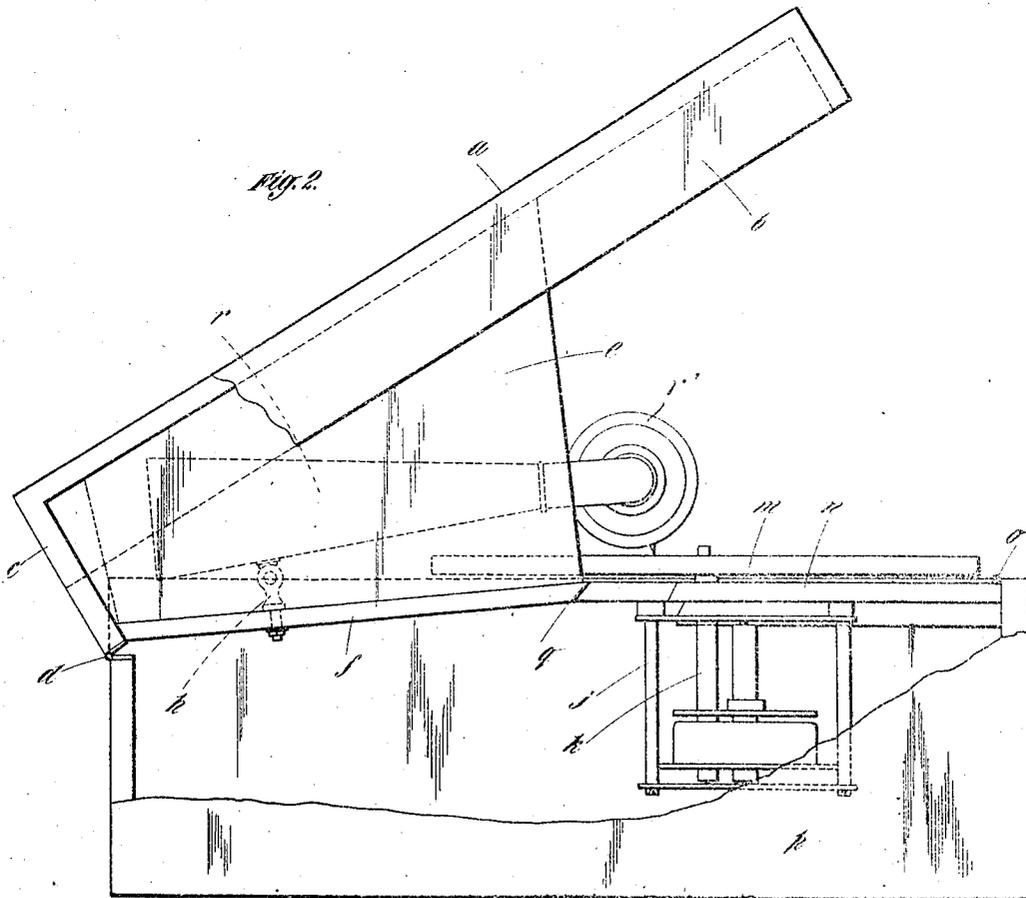
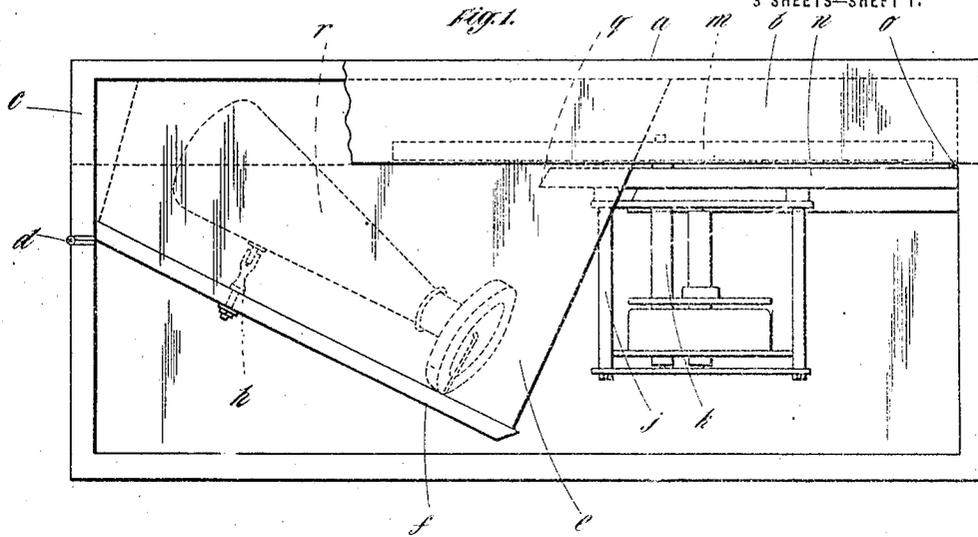


C. J. RYAN.  
GRAMOPHONE AND THE LIKE.  
APPLICATION FILED MAY 24, 1917.

1,298,406.

Patented Mar. 25, 1919.

3 SHEETS—SHEET 1.



INVENTOR:  
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3 SHEETS—SHEET 2.

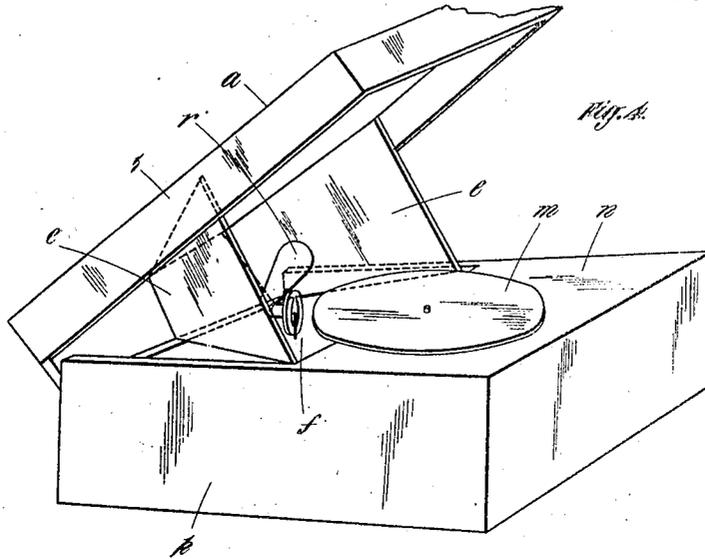


Fig. 1.

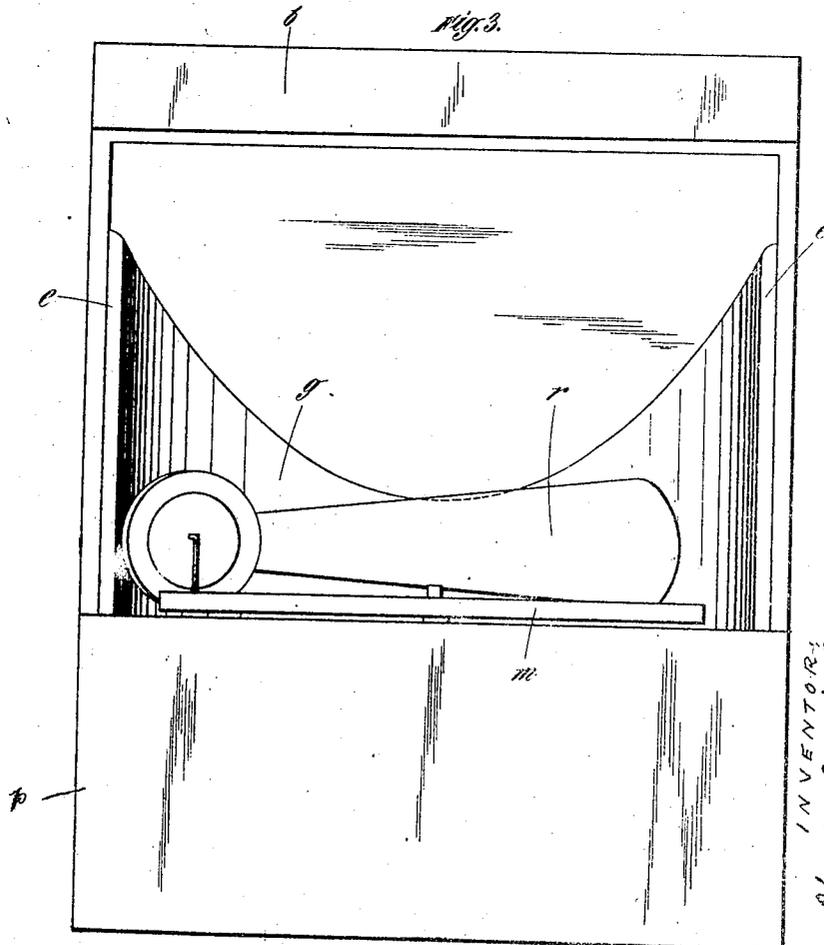


Fig. 3.

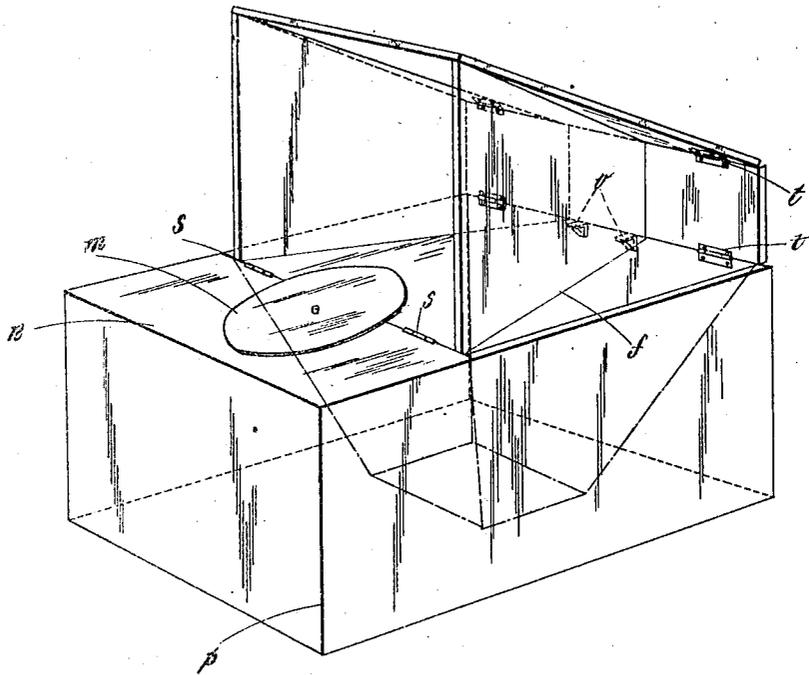
INVENTOR:  
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3 SHEETS—SHEET 3.

*Fig. 5.*



INVENTOR:  
Charles Joseph Ryan  
BY  
*W. M. McLean*  
ATTY

# UNITED STATES PATENT OFFICE.

CHARLES JOSEPH RYAN, OF ACTON, ENGLAND.

GRAMOPHONE AND THE LIKE.

1,298,406.

Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed May 24, 1917. Serial No. 170,766.

To all whom it may concern:

Be it known that I, CHARLES JOSEPH RYAN, a subject of the King of Great Britain and Ireland, and residing at Acton, Middlesex, England, have invented certain new and useful Improvements in or Relating to Gramophones and the like, of which the following is a specification.

This invention relates to gramophones and the like of the type in which the horn or sound wave reflector is disposed on the underside of the lid or cover of the cabinet inclosing the working parts or in which the cover or lid forms part of the horn or sound wave reflector.

A gramophone made in accordance with this invention comprises a box or casing, a member hinged to, resting on, or sliding in said casing, and adapted to carry the motor and record, and a lid to said casing. On the underside of said lid is disposed a horn or sound wave reflector which is adapted to reflect the sound waves when the lid is placed in an inclined position, the lid itself in some cases forming a part of the horn or sound wave reflector, the arrangement being such that the mouth of the tone arm is disposed near and directed toward the narrow or inner end of the horn or sound wave reflector, so that all sound waves are reflected outwardly toward the mouth or wide part of the horn or sound wave reflector.

Referring to the drawings filed herewith:

Figure 1 is a section of one form of gramophone made in accordance with this invention;

Fig. 2 is an elevation with part of the casing broken away showing the box open;

Fig. 3 is an end view showing the box in the open position;

Fig. 4 is a perspective view showing a modified construction;

Fig. 5 is a perspective view showing another construction.

In Figs. 1 to 3 the box or casing of the gramophone is provided with a cover or lid *a* having a narrow ledge *b b* on the front and sides, and a ledge *c* at the back which is rather deeper. The lid *a* is hinged to the box at *d*. To the lid of the box is secured side members *e* and a bottom member *f* of the sound reflector. The inner surface of the side members may be shaped or lined with a curved plate *g*. The bottom member *f* is provided with a slot or hole through which passes the stem *h* of the tone arm

support. A clockwork motor *j* adapted to rotate a spindle *k* and record carrying table *m* is secured to a flap *n* which is hinged at *o* to the casing. The surface of the table *m* preferably lies above the base *p* of the cabinet. The flap *n* is chamfered at *q* to engage the bottom member *f* of the sound reflector when the reflector is in its raised position. The mouth of the tone arm *r* is disposed near and directed toward the back or inner end of the sound wave reflector. The front edge of the sides *e* and bottom *f* of the sound wave reflector are placed rearwardly of the record carrying table. The lid *a* is held in open position by means of a suitable catch (not shown), and as the reflector *f* is secured to the lid *a*, it is obvious that the reflector will be held in operative or inoperative position according as the lid is open or closed.

When it is desired to close the cabinet, the sound box *r'* is lifted off the record and the tone arm *r* is turned back so as to lie in the horn or reflector, and fastened in position by a suitable catch not shown. The lid *a* of the cabinet is raised, lifting the bottom member *f* of the horn off the beveled edge *q* of the flap *n*. The flap *n* is then raised on the hinge *o* which permits the horn to be lowered into the box in the position shown in Fig. 1. The sides and bottom of the horn are so disposed that when the lid is closed the horn or sound wave reflector is inclosed in the cabinet.

In the form shown in Fig. 4 the sides of the horn or sound wave reflector are inclined to each other and to the back ledge *c*.

In the form shown in Fig. 5 the bottom member *f* of the horn is hinged to the base part at *s* and the lid *a* is hinged in itself at *t*, and to the base part at *t'*. The lid when open takes up the position shown in Fig. 5 resting on the horn. The horn may have a separate top plate or the lid *a* may form the top of the horn. When the lid *a* is closed it rests on the base part *p* and may be recessed to provide space for the table *m*. The rear wall of the box may be provided with suitable spring catches (not shown) for retaining and supporting the same in elevating position.

When not in use the horn shown in Fig. 5 can be turned down on hinges *s s* into the box as shown in dotted lines.

Space is or may be provided for carrying records under the lid or motor.

With a gramophone made in accordance with this invention the sound waves are reflected in such a manner as to produce a good musical effect.

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

A gramophone comprising a base part, a lid, a sound wave reflector pivoted to the base part and having a bottom and sides adapted to be moved as a whole, the sound wave reflector being so formed and mounted as to lie within the cabinet when the cabinet is closed; a tone arm pivotally connected to the sound wave reflector, a sound box on the  
10 tone arm, said tone arm and sound box being connected to the sound wave reflector

so as to be raised and lowered with the sound wave reflector, a clockwork motor attached to the base part, a record carrying table driven by the motor, and a flap pivoted to the base part and supporting said motor, the parts being so formed and arranged that the bottom of the sound wave reflector coacts with the flap to support the sound wave reflector in its raised position. 20

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

CHARLES JOSEPH RYAN.

Witnesses:

REGINALD EATON ELLIS,  
ROBERT MILTON SPEARPOINT.