

(No Model.)

2 Sheets—Sheet 1.

A. RICHTER.
MECHANICAL MUSICAL INSTRUMENT.

No. 552,303.

Patented Dec. 31, 1895.

Fig. 1

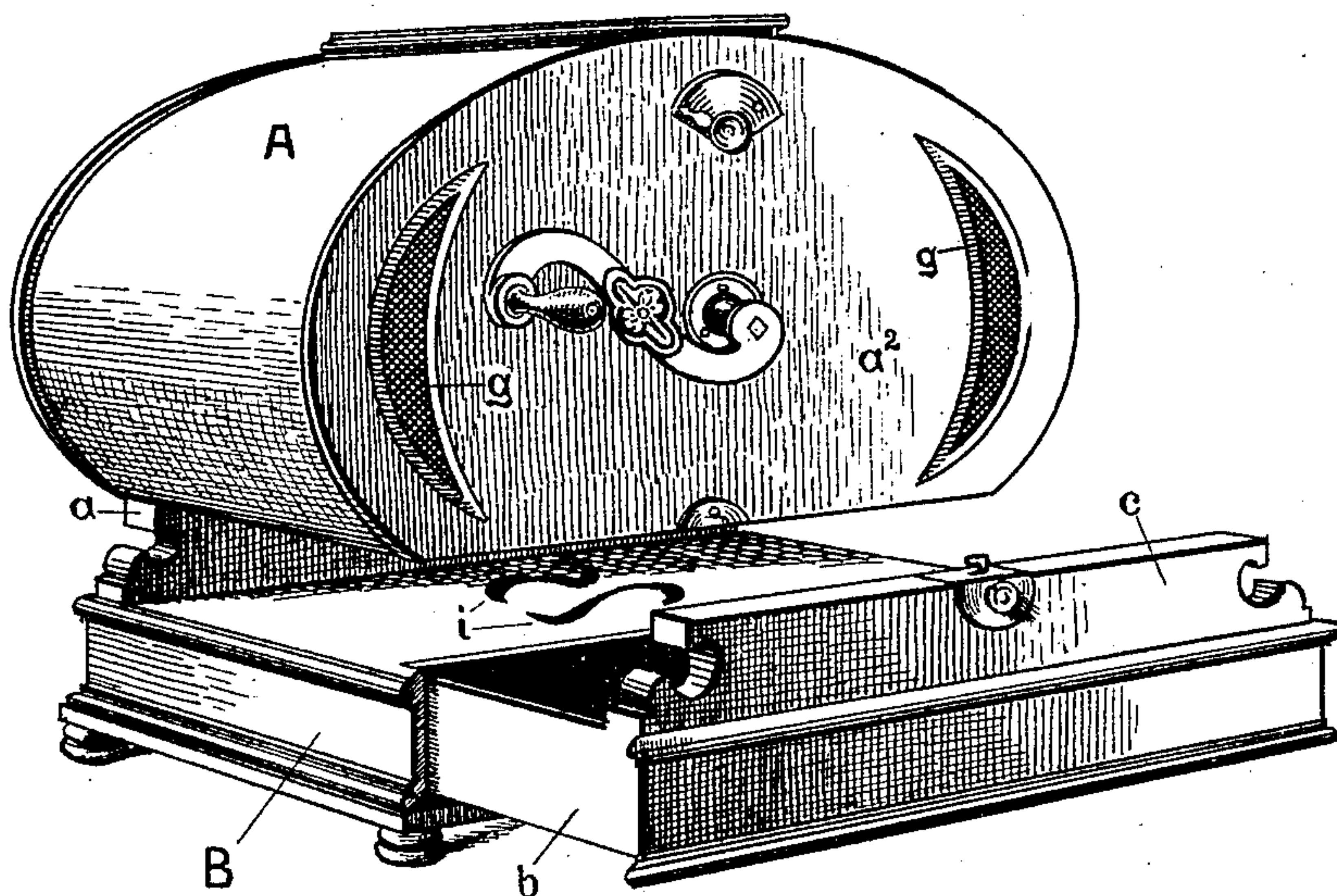
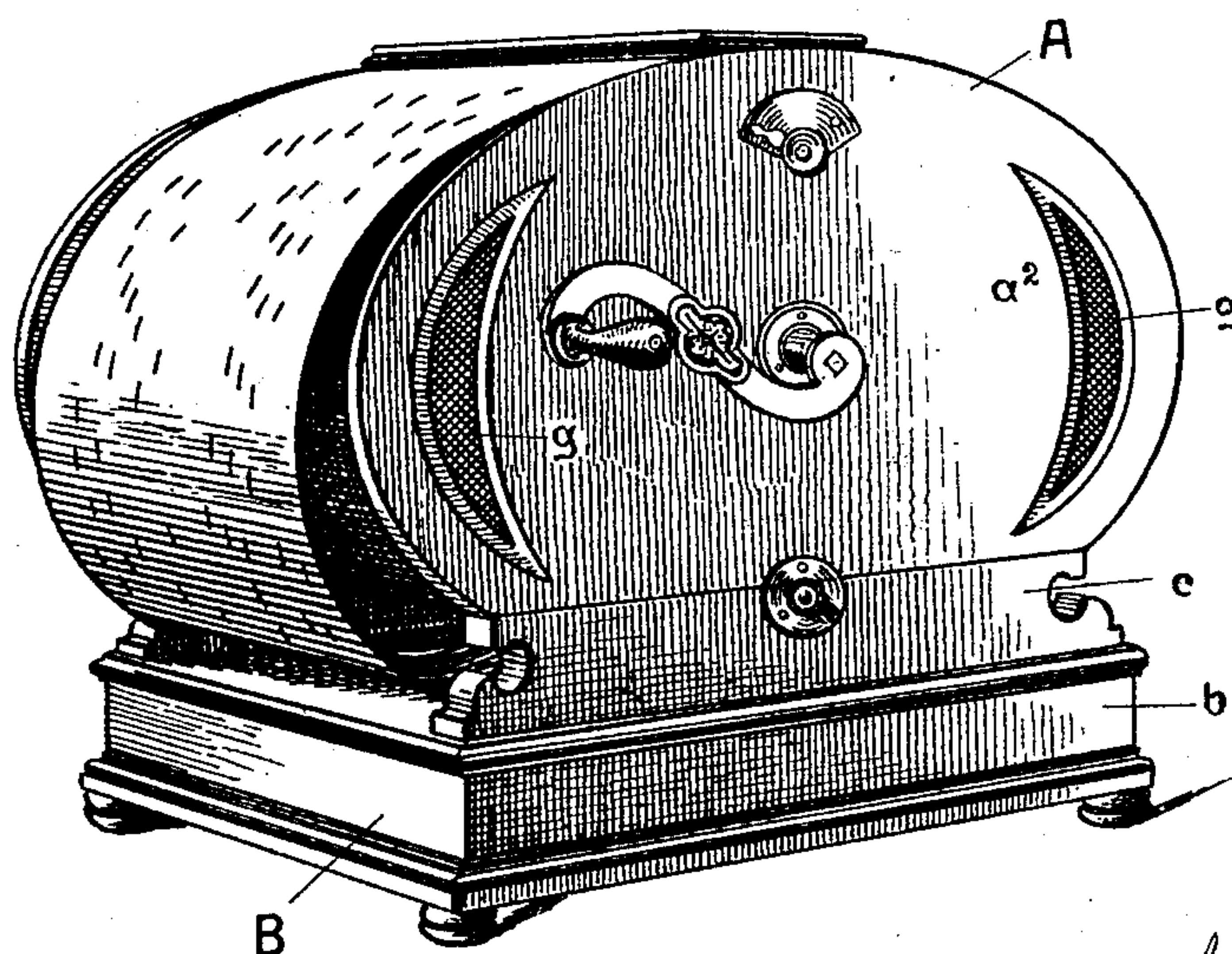


Fig. 2



Witnesses:
L. M. Hackelberger,
Geo. C. Morse.

Inventor
Adolf Richter
By Briesen Knauth
his Attorneys.

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2 Sheets—Sheet 2.

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Fig. 3

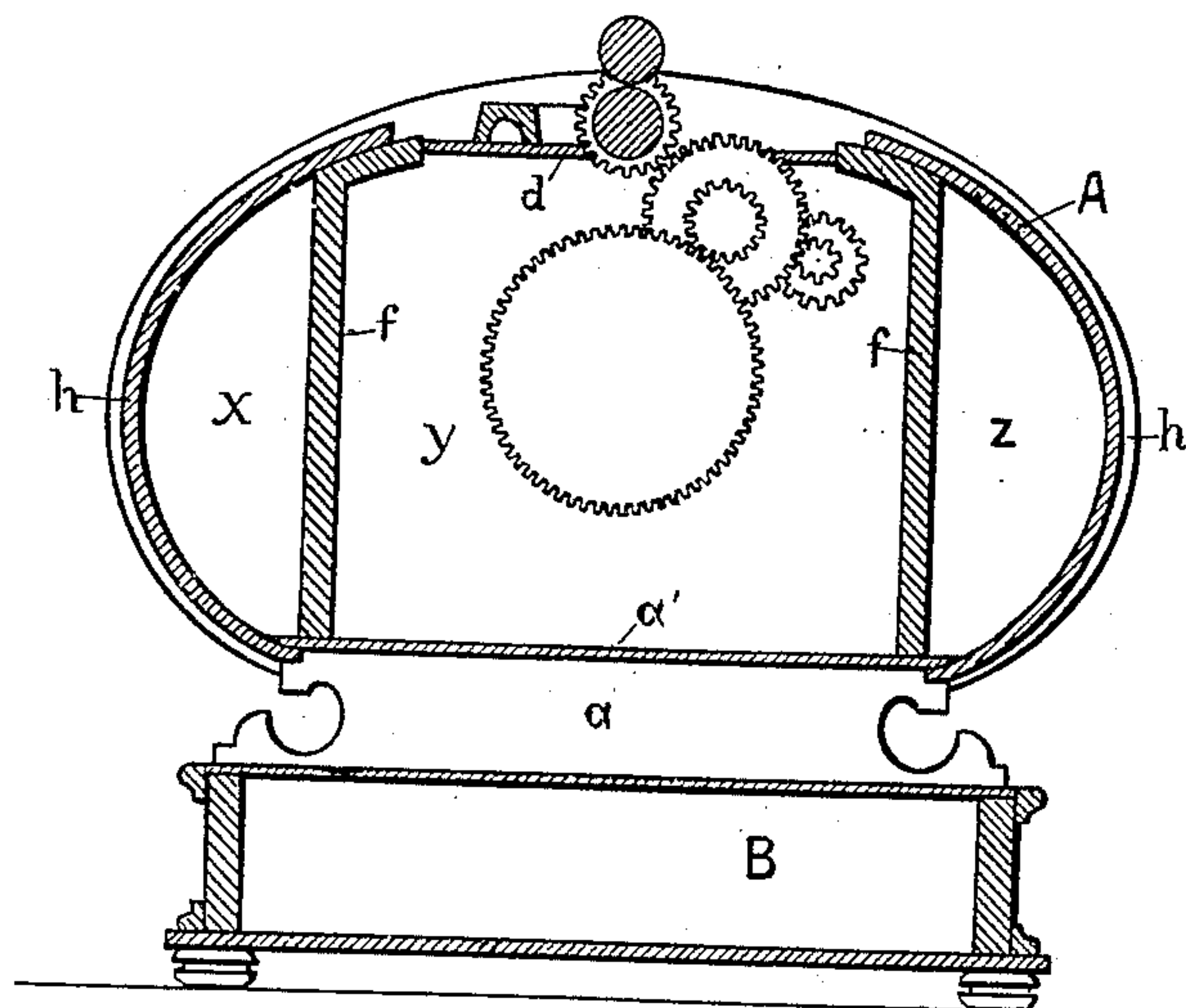


Fig. 4

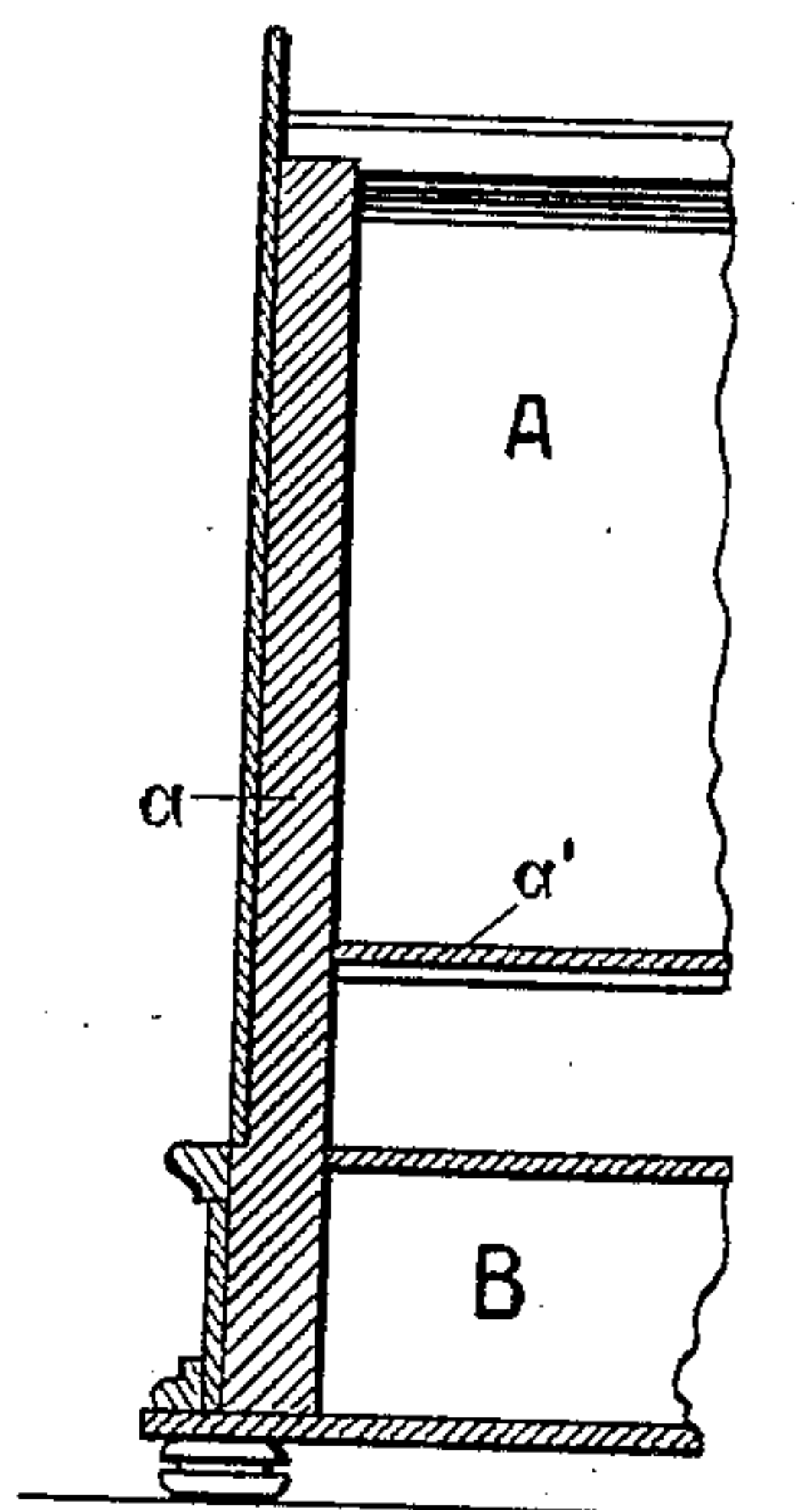
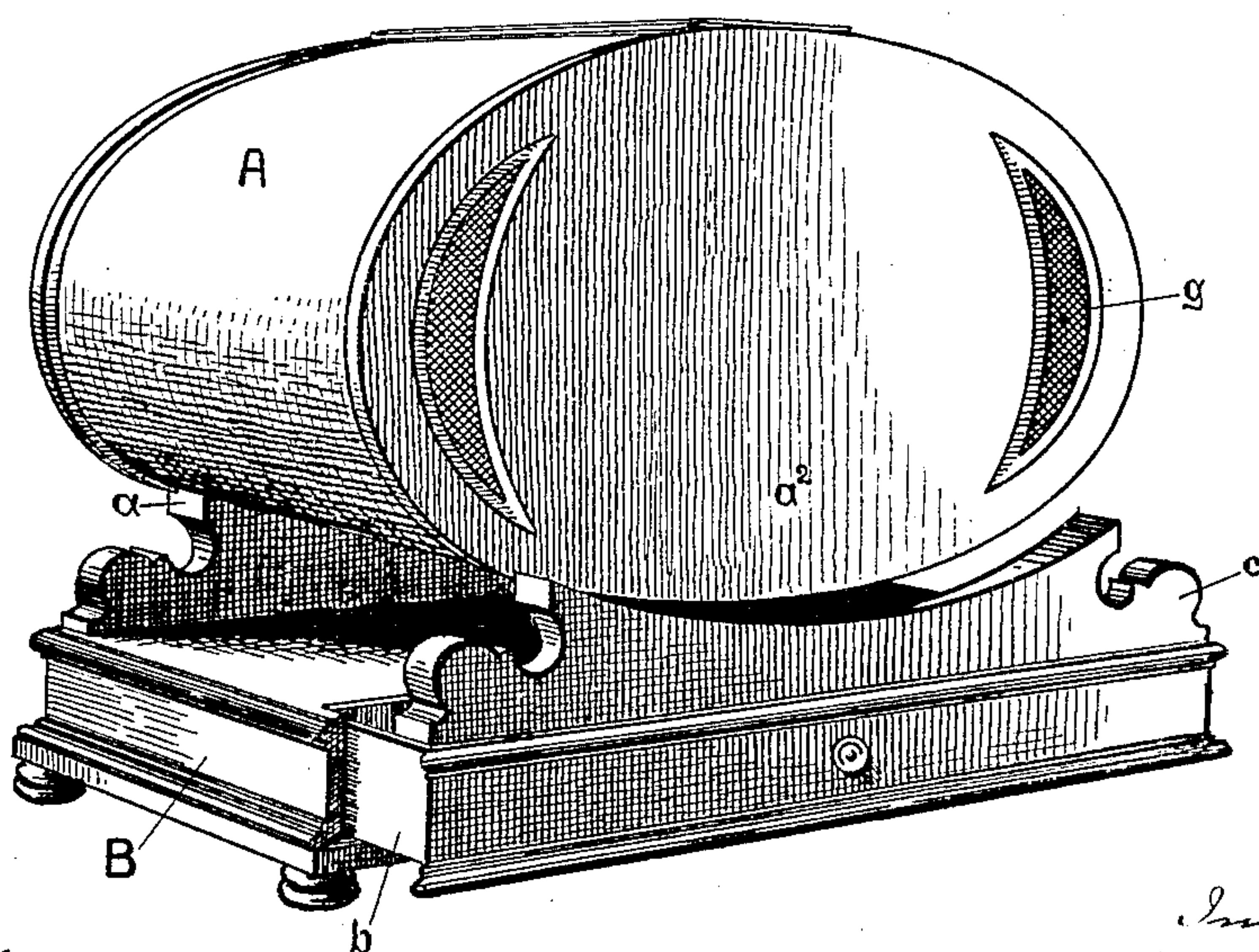


Fig. 5



Witnesses:
L. M. Nachschlager,
Sec. C. M. M.

Inventor
Adolf Richter
By Briesen, Knauth,
his Attorneys

UNITED STATES PATENT OFFICE.

ADOLF RICHTER, OF RUDOLSTADT, GERMANY.

MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 552,303, dated December 31, 1895.

Application filed September 19, 1895. Serial No. 562,953. (No model.)

To all whom it may concern:

Be it known that I, ADOLF RICHTER, a subject of the King of Bavaria, residing at Rudolstadt, in the Principality of Schwarzburg-Rudolstadt, Germany, have invented certain new and useful Improvements in Mechanical Musical Instruments, of which the following is a specification.

The present invention consists of a mechanical musical instrument, which differs from those musical boxes hitherto known in that it is provided with an oval casing mounted upon a stand, constructed to form a sounding board or shell.

In order to render the present specification more easily intelligible, reference is had to the accompanying drawings, in which similar letters of reference denote similar parts throughout the several views.

Figure 1 is a perspective view of the instrument, showing the front support with its slide or drawer in the extended position. Fig. 2 is a similar view with the front support in position under the oval casing; Fig. 3, a vertical longitudinal section through the apparatus; Fig. 4, a part vertical cross-section through the back wall of the casing, and Fig. 5 a perspective view of a modified form of the casing.

As will be seen from Fig. 1, the exterior appearance of the casing of the instrument differs from that of instruments of the kind hitherto known.

A is the oval casing and B the support for the same, which is constructed to form a sounding board or shell. The oval form of the casing is particularly adapted to receive endless note-sheets, which may be conveniently and easily laid upon and moved round the same.

A novel feature of the present invention consists in the downward extension of the rear wall *a* of the oval casing A, so that the same may serve to form the rear wall of the sounding board or shell B, sufficient space being left between the bottom *a'* of the casing A and the upper surface of the sounding-board to allow the free passage between these parts of the note-sheet, Figs. 3 and 4.

The rear wall alone would not be sufficient to support the oval casing with the weight of the musical work therein with sufficient stability, and the pressure on the instrument

when being played would tend to push the oval casing forward and downward, while the tone of the instrument would not be audible to its proper fullness. In order to obviate these disadvantages and to render the general appearance of the instrument more artistic, the sounding board or shell is provided with a drawer *b*, Fig. 1, the front side *c* of which is extended upwardly and, when the drawer is in position in the shell, passes under the front wall *a'* of the oval casing and supports the same along the front. This arrangement is of particular advantage in connection with musical instruments having metal tongues, owing to the fact that by means of the same the vibrations of the plate will be transmitted to the sounding-board at both ends, which renders the otherwise somewhat sharp shrill tone of these instruments soft and full.

The fullness of tone of the instrument is still further increased by the oval casing A being divided into three compartments *x y z*, Fig. 3, the center one of which, *y*, serves as a casing for the tongue-plate *d* and the musical work. The side compartments having their curved walls *h* of wood, receive the vibrations of the partition-walls *f* and consequently also serve as sounding-shells, to which end they are provided with sound-holes *g*, Fig. 1. By means of this arrangement the tone of the instrument is rendered particularly soft and full.

In order to reduce the height of the instrument as far as possible the bottom of the casing is advantageously made flat and closed in by the bottom board *a'*, Fig. 3. The bottom may however be curved if desired, particularly in the smaller class of instruments in which the height of the same is of less importance. In this latter case the casing is formed as shown at Fig. 5.

The cover of the sounding board or shell may be provided with sound-holes *i*, as shown at Fig. 1, in order to strengthen the tone of the instrument, and the shell B may be provided with a slide instead of a drawer or with a flap only which may be turned down while the note-sheet is being placed in the instrument and afterward turned up to support the front of the casing.

As already mentioned, the note-sheet may

be very conveniently inserted in casings of the kind described, it only being necessary to pull the drawer *b* out sufficiently far, pass the note-band over the oval casing, turn down
5 the retaining-bow and again close the drawer.

I claim as my invention—

1. In a mechanical musical instrument the combination of an oval casing having a downwardly extending rear wall *a* a sounding board
10 below said casing and connected thereto by means of said rear wall, a space between said casing and sounding board and a removable front support to said casing extending between its lower front edge and the sounding
15 board substantially as described.

2. The combination of the oval casing *A* having a rear wall *a* extending downwardly, a sounding shell *B* arranged under said casing and connected thereto by said rear wall
20 and a drawer in said shell having an upwardly extending front wall to engage under and support the front of the said casing substantially as described.

3. The combination of an oval casing *A*
25 having therein three compartments *x y z*, of which the center one contains the musical works, a downwardly extending rear wall to said casing, a sounding shell arranged thereunder and connected to the casing by the said
30 rear wall, and a front support for the casing

arranged between the sounding shell and the casing substantially as described.

4. The combination of an oval casing *A* having therein three compartments *x y z*, a downwardly extending rear wall *a* to said casing, a sounding shell *B* below said casing and connected therewith by means of said rear wall, a drawer in said sounding shell having an upwardly extending front wall to engage under the casing when the said drawer is closed substantially as described. 35 40

5. The combination of an oval casing *A* having three compartments *x y z*, soundholes *g* to the two end compartments a downwardly extending rear wall to said casing, a sounding shell having holes *i* arranged under said casing and connected thereto by said rear wall a drawer in said sounding shell having an upwardly extending front wall to engage under the front of the casing in the manner and for the purpose substantially as described and shown. 45 50

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

ADOLF RICHTER.

Witnesses:

WM. HAUPT,
CHAS. H. WING.