

N° 17,318



A.D. 1895

Date of Application, 17th Sept., 1895—Accepted, 1st Feb., 1896

COMPLETE SPECIFICATION.

Improvements in or connected with Mechanical Musical Instruments.

I, Dr. FRIEDRICH ADOLF RICHTER of Rudolstadt in the Empire of Germany, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

5 The mechanical musical instruments forming the subject of this invention essentially differ from those heretofore constructed by reason of the oval or elliptical shape of the casing and by the arrangement of the lower part as a sounding box.

10 In the accompanying drawings, a mechanical musical instrument constructed according to this invention is illustrated in Figs. 1 and 2 by perspective views.

Fig. 3 is a cross section through the same,

Fig. 4 is a vertical section through the rear wall of the casing, and

Fig. 5 shows a modification of the casing.

15 As shown in Figure 1, the outer appearance of the musical instrument is quite different from that of the casings heretofore in general use. A is the oval casing, and B is the lower part serving as a sounding box. The oval form of the casing A has the great advantage that endless music sheets can not only be readily placed around the curved surfaces of the shell but also can be actuated with but a slight exertion of power.

20 The novelty and peculiarity of the casing further consists in that the rear wall *a* of the oval casing A is extended downwards in such a manner (Fig. 4) as to constitute at the same time the rear wall of the sounding box B, while however leaving sufficient room between the latter and the lower surface *a*¹, Figs. 3 and 4, of the oval casing, to ensure freedom of movement of the endless music sheet around the

25 This arrangement alone would however not be sufficient to impart proper strength (during the playing) to the oval casing when weighted with the musical warps or sheets and to allow the sounding box to act to its fullest extent; in fact the oval casing would be to some extent pressed forwards by the weight of the playing and actuating mechanism, while the music would appear thin or weak and not so expressive. Now in order to obviate these drawbacks and at the same time to impart an elegant appearance to the casing, the sounding box is provided with a drawer *b*, Fig. 1, the front wall *c* of which is made higher in front to such an extent that when pushed in, it fits tightly up against the underside of the front wall *a*²

30 of the oval casing as shown at Fig. 2, and thus serves as a support for the said front wall and also for the freely suspended oval. The result is that the front wall of the oval casing is connected, during playing, firmly with the sounding box. This arrangement is particularly important for mechanical musical instruments with reed combs, because by this means the vibrations of the music plate are transmitted on two sides directly to the sounding box underneath whereby the tone (which would be otherwise hard and sharp) of such instruments is rendered agreeably soft and full. The fullness or richness of tone of the instrument is still further increased by the fact that the inner space of the oval casing A is divided into three parts *x y z*, Fig. 3, the middle one *y* of which contains the music plate *d*

40 with the works. The two side compartments receive the vibrations of the separating partitions *f*, and thus act as sounding boxes, and are therefore provided

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1895
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with sound openings *g*, Fig. 1. In this manner the vibrations of the separating or dividing walls or partitions and of the curved walls *h* (Fig. 3) which are composed of thin small wooden boards, are enabled to act to their fullest extent, so that the music has imparted to it a peculiarly soft and full tone.

In order to keep down or reduce the height of the whole casing of the instrument, the bottom of the oval is preferably flattened and replaced by a straight board *a*¹ (Fig. 3). But the bottom may also be oval, particularly in the case of small instruments in which the height is not of such great importance. In such a case the casing is made of the form as shown in Fig. 5.

The cover plate of the bottom sounding box may be provided with openings *i* Fig. 1 for the purpose of strengthening or intensifying the tone or sound. Also, the sounding box may, in place of a drawer, be provided with a simple slide or with a flap which is turned down for the insertion of the music sheet, but which serves, during the playing, as a support for the front side *a*² of the oval casing.

As already stated, the insertion of endless music sheets is very easily effected with the casing hereinbefore described. The drawer *b* is drawn out to a suitable extent; the music sheet is then slipped over the oval casing which is now hanging down free, the music clip is then slipped over the same, and the drawer is pushed in again.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is:—

1. A mechanical musical instrument the casing of which is of oval or elliptical shape, the said casing being connected with an underlying sounding box by means of a common rear wall in such a manner as to leave between the two a space sufficient to allow of passing an endless sheet easily through the same, said casing being also adapted to be supported at its forward end by means of the extended front wall of a drawer provided in the sounding box (or of a slide or of a flap) and being adapted to be connected to the sounding box thereby and substantially as set forth.

2. In a mechanical musical instrument as claimed by Claim 1, the employment of two partitions *f* in the oval casing for the purpose of thereby obtaining two further sounding boxes or sounding chambers, from which the sounds can issue through sound holes substantially as hereinbefore described and illustrated with reference to the accompanying drawings.

Dated this 17th day of September 1895.

BREWER & SON,
London and Leeds, Agents for Applicant.

Fig. 1

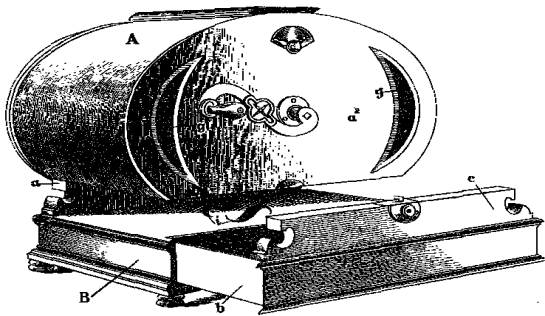


Fig. 2

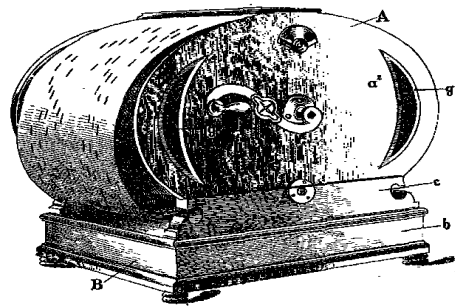


Fig. 3

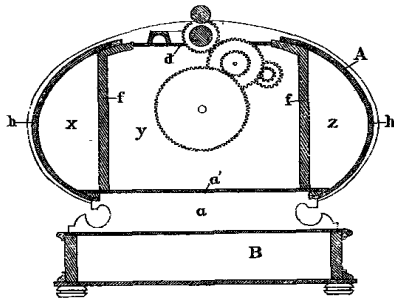


Fig. 4

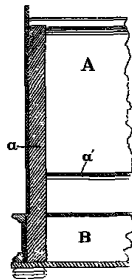
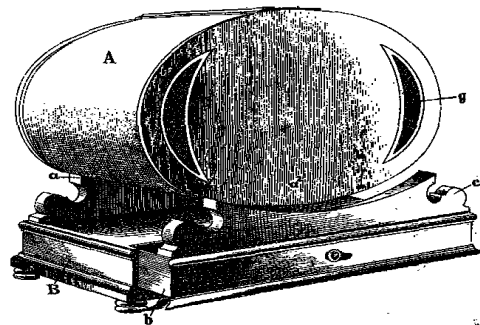


Fig. 5



[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1

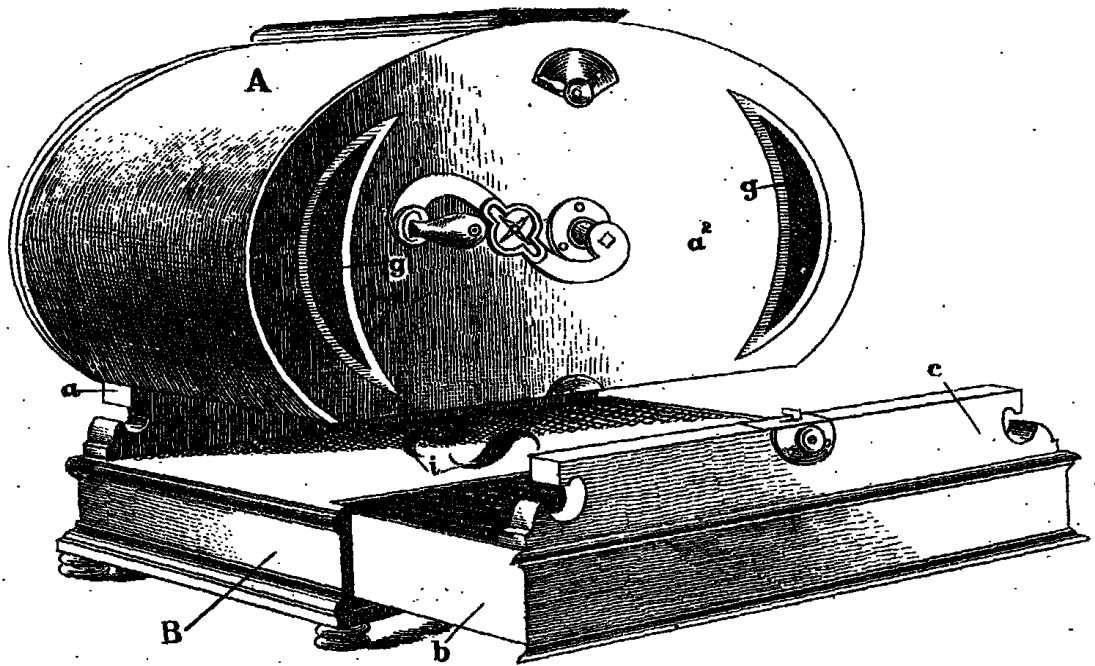


Fig. 3

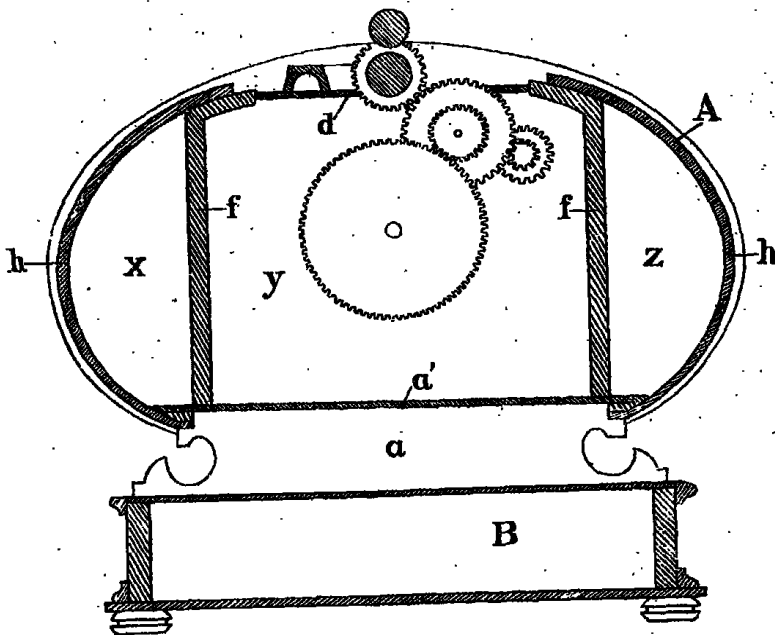


Fig. 4

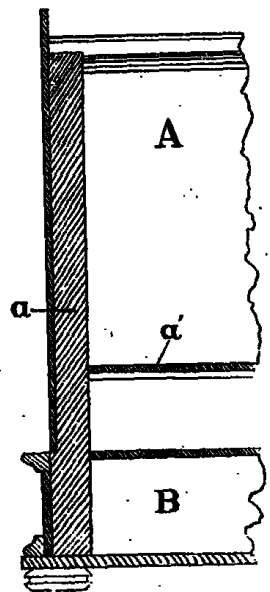


Fig. 2.

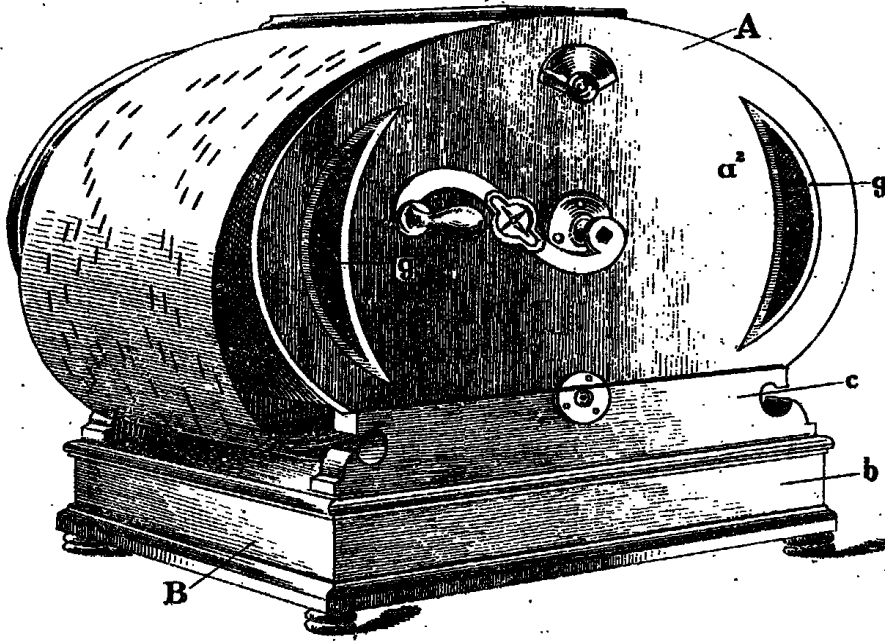
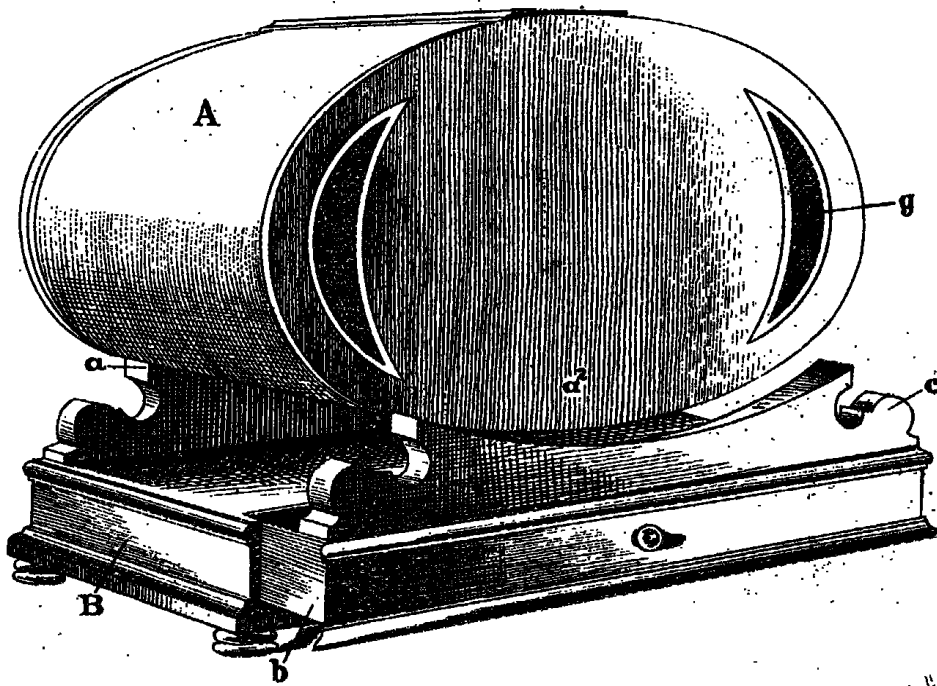


Fig. 5.



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