N° 15,046 A.D. 1909

Date of Application, 28th June, 1909—Accepted, 27th Jan., 1910

COMPLETE SPECIFICATION.

Improvements in and relating to Leaf-turners for Music.

I, KARL WACKERMANN, of No. 10, Schulstrasse, Schwientochlowitz (Silesia), Germany, Cashier, 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:—

This invention relates to leaf turners for music of that type in which a clock work is made use of for making the arms swing out. The swinging out of the successively releasable arms is effected by means of a special driving arm. The construction of such leaf turners is improved by the particular construction and arrangement of the frames which carry the leaves and by the particular construction of the escapement for the clock work.

In the accompanying drawings the improved leaf turner is shown diagrammatically, the casings and several other parts which are not indispensable for the explanation of the invention having been omitted so as not to complicate the drawings.

Figure 1 represents one of the frames which serve for turning the music leaves and the driving arm.

Figure 2 shows in a similar view several superposed frames.

Figure 3 is a front view of the upper leaf frame and

Figure 4 represents in a similar view the next lower leaf frame.

Figure 5 shows in an end view several superposed leaf frames.

Figure 6 is a diagrammatical view of the device with its clock work.

Figure 7 shows a constructional detail.

The improved leaf-turner is constructed as follows:—

The frame *a* (Figure 1) upon which one sheet of the music is attached in any convenient manner, is adapted to swing round the pivot *b* in the direction of the arrow A, and is pushed by the driving arm *c* into about the position which is shown in dotted lines, continuing its movement in the direction of the arrow A^1 owing to the acquired speed. The driving-arm *c* is mounted on the shaft *d* and actuated in the well known manner from a clock-work. Figure 2 shows how the several frames, *a*, a^1, a^2 are superposed, each frame being pivoted on a separate axle *b*, b^1, b^2. In order to operate only the upper leaf frame, the driving-arm *c* swings in a plane which is inclined with regard to the pivots of the leaf-frames. The leaf-frames further have flaps *f* which are destined to retain the next lower frame in its position (Figures 3 and 4). The frames are somewhat larger at *e* where the driving-arm is applied to the same. The flap *f* of the upper leaf-frame *a* retains the next lower leaf-frame a^1 whilst itself is being swung by the driving-arm *c*, which thus does not come in contact with the leaf-frame a^1, but only bears against the leaf-frame *a* at *e*. Each leaf-frame with the exception of the upper one *a*, is controlled by a spring *g* (Figure 4), which shifts the frame in axial direction as soon as it has been released by the flap *f* of the turned over frame, this displacement of the leaf-frames being limited by suitable stops. The leaf-frame which has now become the upper frame is thus brought into proper position so that the driving-arm *c* after having completed its revolving motion, grips under said upper frame.

Figure 5 shows how the various superposed leaf-frames are retained by the flaps *f*, f^1 of the upper frames.

[*Price 8d.*]

Figure 6 represents the disposition of the driving-arm which in the well known manner is actuated by a clock-work. Said arm *c* is fixed upon an inclined shaft *d* upon which is keyed a cog-wheel *h* which meshes with the cog-wheel *i*. The axle of said cog-wheel or pinion *i* carries a toothed wheel *k* which meshes with the toothed wheel *l* which receives its revolving motion by means of the toothed wheel *m* keyed upon the same axle and meshing with the toothed wheel *n* of a clock-work of suitable construction, the driving gear is locked by the arm *o* fixed on the axle of the toothed wheels *m*, *l* which is stopped by means of an arm *p* controlled by a spring and adapted to be pulled away from arm *o* by means of a string *q*. As shown in Figure 7, the arm *o* when being liberated by the withdrawal of stop *p* swings round with the axle of the driving gear until it is stopped again by the stop *p* which immediately returns to its original position, as soon as the string *q* is released. The revolving motion of the toothed wheel gear is transmitted to the inclined driving-arm *c* which swings through one complete revolution whereby it grips the upper frame *a* at the enlarged part *e* turns the same and finally grips under the next lower frame a^1 which in the meantime has been shifted in axial direction as hereinbefore described.

If the leaf-turner is to be used, the several frames are inserted between the leaves of the music and the lower frames are pushed downwards against the action of the springs *g* and secured in this position by the flaps *f*, f^1 of the next higher frame.

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:—

An improved leaf turner of the type in which the leaf-frames are swung round or turned by means of a special arm which is actuated by clockwork, characterised by the arrangement that the leaf-frames are not only pivotably mounted upon their axles but also displacable on the same in axial direction against the action of a spring, to be secured in tensioned position by means of flaps projecting from the next higher leaf-frame, so that after the upper leaf-frame has been turned by the special arm, the following leaf-frame automatically assumes the position of the removed frame, the transmitting gear between the clockwork and the special arm being stopped by means of a convenient stopping device, substantially as described and shown and for the purpose set forth.

Dated this 28th day of June, 1909.

CHATWIN, HERSCHELL & Co.,
London, W.C.,
Patent Agents for the Applicant.

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WACKERMANN'S COMPLETE SPECIFICATION.

(2 SHEETS)

SHEET 1

Fig. 1.

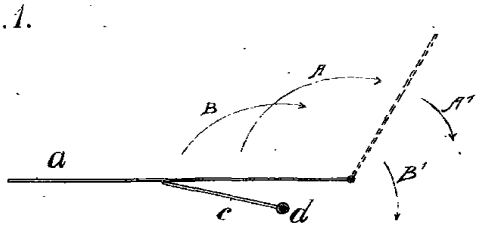


Fig. 2.

Fig. 3.

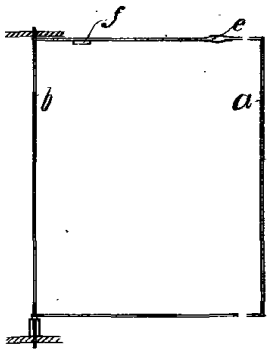


Fig. 4.

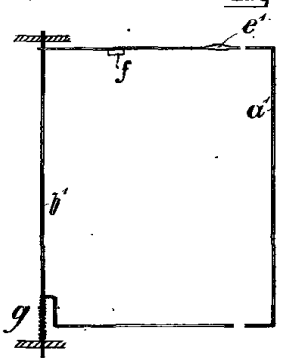
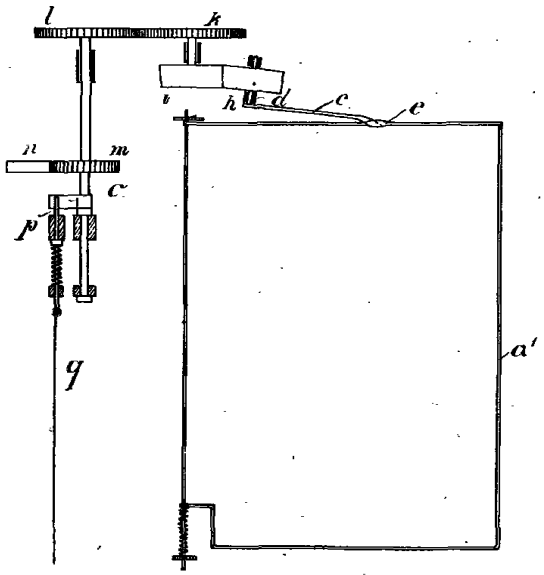


Fig. 5.

SHEET 2

Fig. 6.



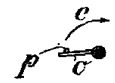


Fig. 7.

Malby&Sons, Photo-Lith.

Fig. 1.

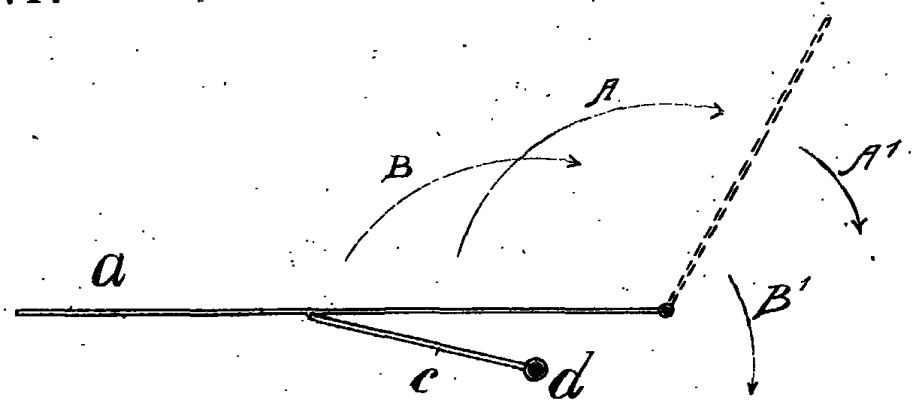


Fig. 2.

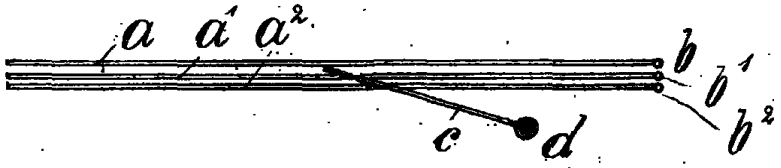


Fig. 3.

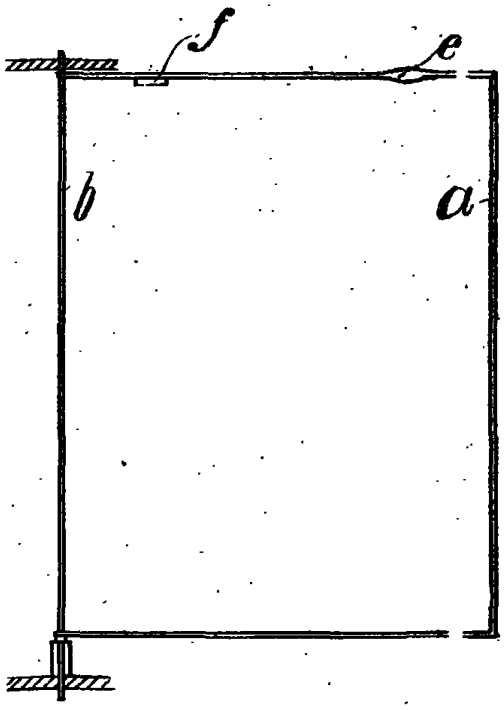


Fig. 4.

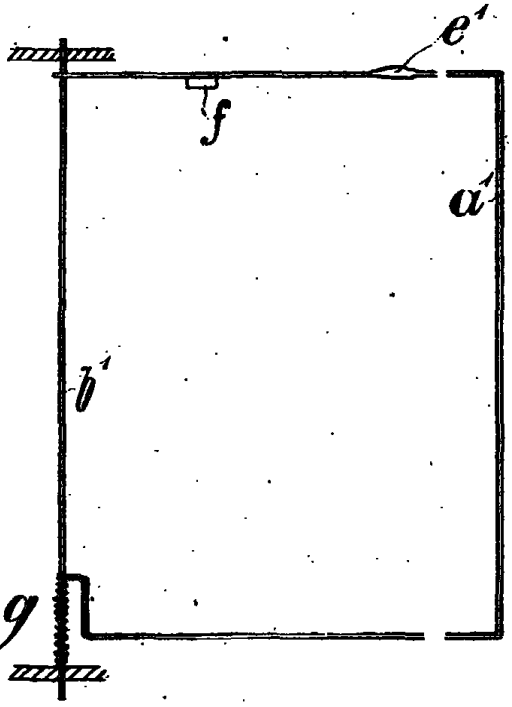


Fig. 5.

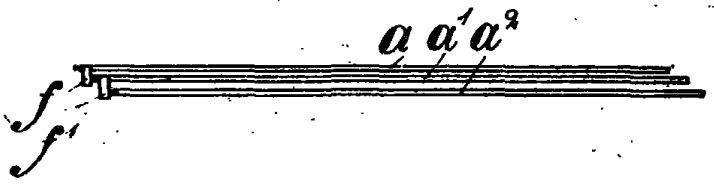
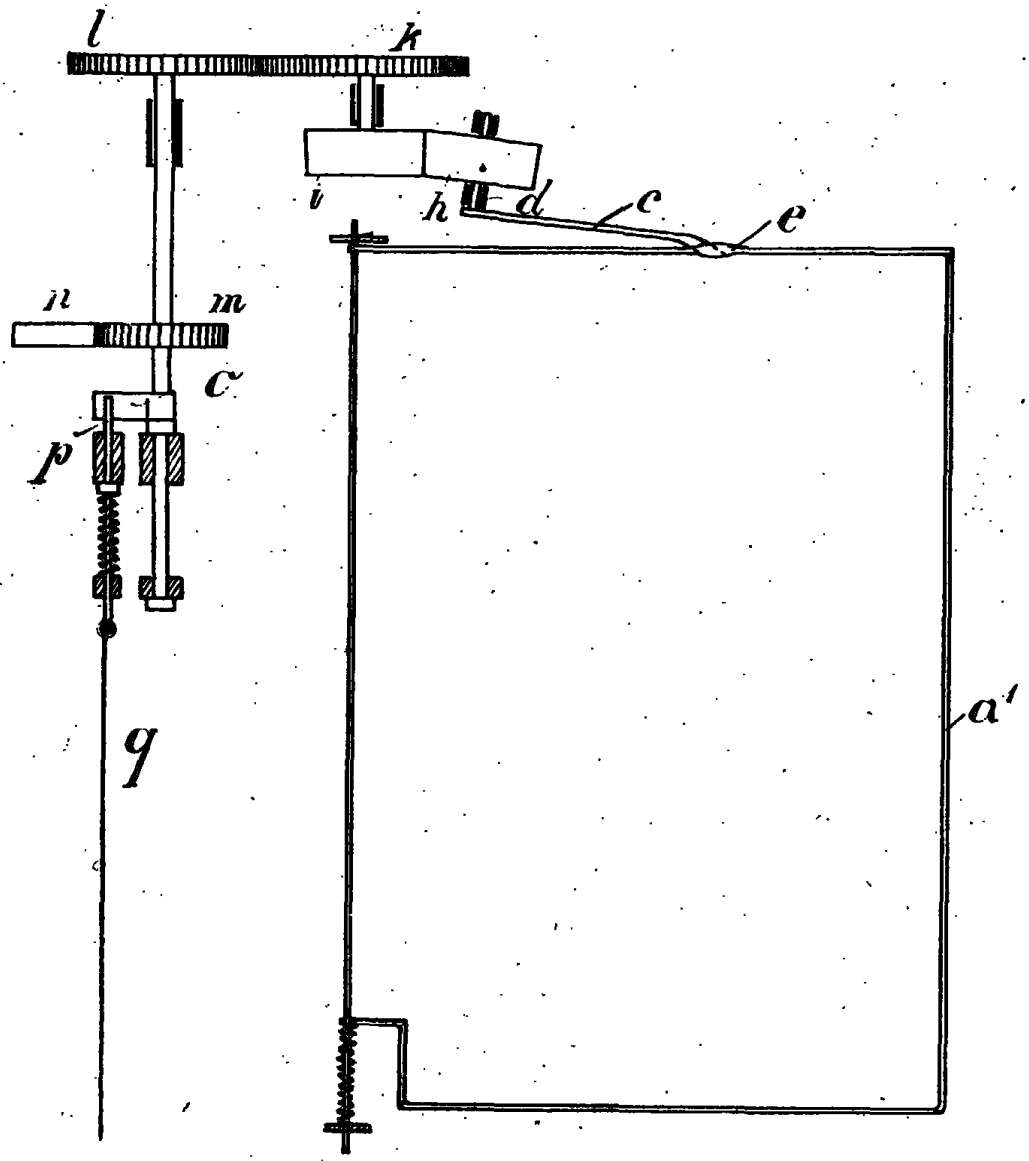


Fig. 6.



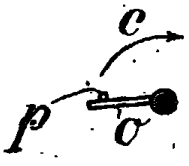


Fig. 7.

Malby&Sons, Photo-Litho.