G. M. Hopkins,

Music-Leaf Turner,

No. 51,999. Patented Jan. 9, 1866.

Fig. 3.

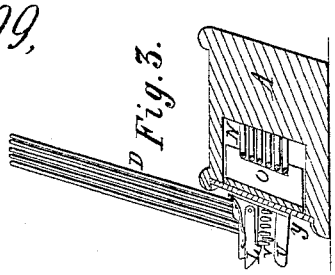


Fig. 4.

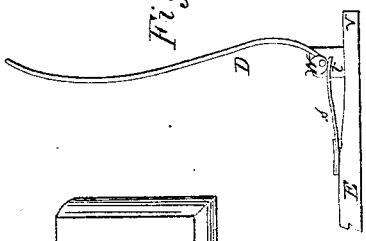


Fig. 1.

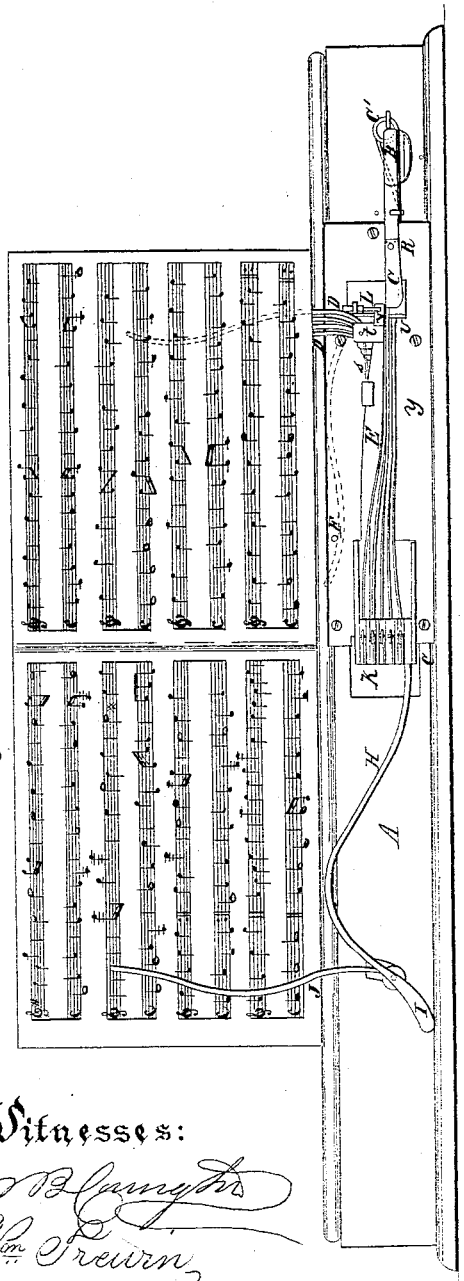
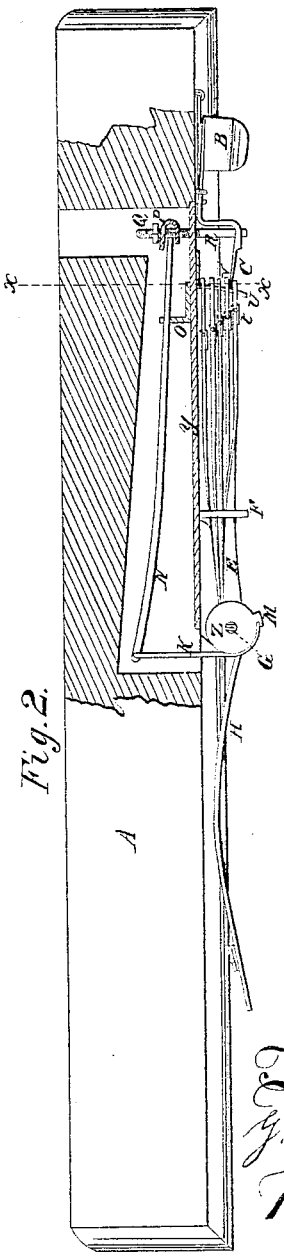


Fig. 2.



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UNITED STATES PATENT OFFICE.

GEORGE M. HOPKINS, OF ALBION, NEW YORK, ASSIGNOR TO HIMSELF AND W. R. SMITH, OF SAME PLACE.

APPARATUS FOR TURNING THE LEAVES OF MUSIC.

Specification forming part of Letters Patent No. **51,999**, dated January 9, 1866.

To all whom it may concern:

Be it known that I, GEORGE M. HOPKINS, of Albion, in the county of Orleans and State of New York, have invented a new and useful Improvement in Apparatus for Turning Music; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents an elevation of an apparatus made according to my invention. Fig. 2 represents the same turned partly over, so as to show part of it in top view, the box to which the apparatus is attached being partly broken away to show the spring K and other parts which are concealed therein. Fig. 3 is a cross-section on the line *x* of Fig. 2. Fig. 4 is a detailed view of part of one of the arms E and of one of the fingers, D.

The object of this invention is to turn leaves of music, whether of sheets or bound in book-form, by mechanical means in order to save a player the embarrassment of losing time and dropping the music in turning the leaves by hand, and to save wear and tear of the music. It is to be attached to the note-board of an organ or piano, or other musical instrument with keys, or to a music-stand.

It consists of a series of arms with fingers, which are operated by means of springs that carry them from one side of the apparatus to the other side, one at a time, the leaves of music being engaged by the fingers and therefore carried over with them.

A designates the base or lower part of the note-board of a musical instrument, like a piano, or of the note-board of a music-stand. A cavity is made in the said base to receive a series of springs, N, whose left-hand ends are connected with and operate the arms E through flexible wires or cords K, and their right-hand ends are held in a movable clamp, P, which is placed upon a pin, Q, so as to be capable of being moved to and fro thereon. The pin Q has a screw-thread cut on it, and a nut placed thereon serves to hold the clamp P in the desired position on the pin. The cavity in the base A of the note-board is closed in front by a metallic plate, Y, from whose inner face projects a fulcrum-plate, O, over whose edge lie the springs N. When the tension of these springs is to be diminished the clamp P is moved toward the end of the pin Q. When their tension is to be increased it is moved toward plate Y.

G is the axis, upon which are mounted, side by side, circular plates Z, which are each connected with an arm, E. These arms E are twisted after they leave the plates Z so as to be parallel with the back plate, Y, to which the bearings of the axis G are attached. The wires or cords K are carried partly around the circular plates Z, and are severally connected to them at the projections, (marked M,) not far from the arms E.

The letter V designates the free ends of the arms E. These free ends reach past a spring-latch, L, which projects from the back plate, Y, at a right angle, and which has sufficient length to receive and retain all the arms E, which, in this example, are five in number. Below the latch L is a fixed plate, U, which extends from the plate Y in a direction parallel with said latch, and at a sufficient distance therefrom to allow the ends V of the arms E to enter between the latch and itself. The arms E are thus provided with a support and a guide, which will cause them to be properly presented to the latch, so as to be engaged by it, and which will also keep them from striking against the lifter or escapement C while the latter is at rest. Each arm E has a finger, D, working severally on a pivot in pockets *t* formed on the upper edges of said arms. An eccentric or cam, W, is made on the pivoted end of each finger, beneath which is placed the free end of a flat spring, *s*, whose office is to keep its finger D erect, as shown in Figs. 4 and 1. When the fingers are to be put out of the way, as when music is to be changed, the fingers D are pressed down upon their springs *s* and pushed beneath the pin F, as indicated in red outline in Fig. 1. The lifter or escapement C is pivoted at R, and is raised by pressure made on the finger-piece B. The lifter is kept below the upper edge of guide U by means of a spring, C′. The tendency of the arms E is always against the hook of the latch L, so that when one arm is released from the latch the next arm is brought, by its spring N, against it. When the lifter or

escapement C is raised it moves upward between the outermost arm, E, and the next arm, and lifts the latch, so as to release the outermost arm, which is at once carried around on its axis to the opposite side of said axis G, its finger D carrying before it the leaf of music behind which it is placed. The lifter or escapement also serves to retain those arms which are below it, so that none of the arms are allowed to escape except that one which is without the lifter at the time the latch is raised.

H is a supplementary arm, which, like the arms E, sets forth from a circular plate Z, that revolves on the axis G, but is not engaged by the latch L. It has a finger, J, pivoted to it near its end, so that the finger can be raised to stand at a right angle or at any other angle with the arm, and can be brought down parallel therewith when music is to be changed. The end of the arm H is formed to the shape of a finger-piece, I, for convenience of handling. This arm, moreover, is held down by one of the springs N, upon or against the face of the base A, and it can be at any time turned toward the right when it is desired, for any purpose, to bring it to that side. The office of the arm H is to bring all the pages of the music which have been turned by the arms E back again toward the right-hand side, as when there is a *da capo*, in which operation the leaves engaged by the fingers D are retained on the right-hand side, because the arms E will be caught by the latch L, while the first page of the music can be turned back toward the left by turning the arm H back toward that side, such first page being held by its upturned finger J.

This apparatus can be used also for turning leaves or pages of books and manuscripts.

I claim as new, and desire to secure by Letters Patent—

1. In apparatus for turning leaves of music, keeping the fingers which engage the leaves in an erect position by means of springs, which act against eccentrics or cams formed on the fingers at the places where they are pivoted to the swinging arms E, substantially as above described.

2. The detaining-rod F, in combination with the fingers D, substantially as shown and described.

3. The supplementary arm H, with its finger-piece I and finger J, by means of which the whole series of arms E can be turned back at once, and the first page or leaf of music can be re-opened by means of finger J, substantially as shown and described.

4. The manner, substantially as above shown and described, of applying the springs N to the arms E and the arm H, in combination with the means of adjusting said springs through the agency of rod or pin Q, clamp P, and fulcrum-plate O, as above set forth.

5. The lifter or escapement C, applied and operated as shown, in combination with the latch L, substantially as above described.

The above specification of my invention signed by me this 8th day of September, 1865.

GEO. M. HOPKINS.

Witnesses:
M. M. LIVINGSTON,
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