W. MILLER.

MUSIC LEAF-TURNER.

No. 170,103. Patented Nov. 16, 1875.

Fig. 1.

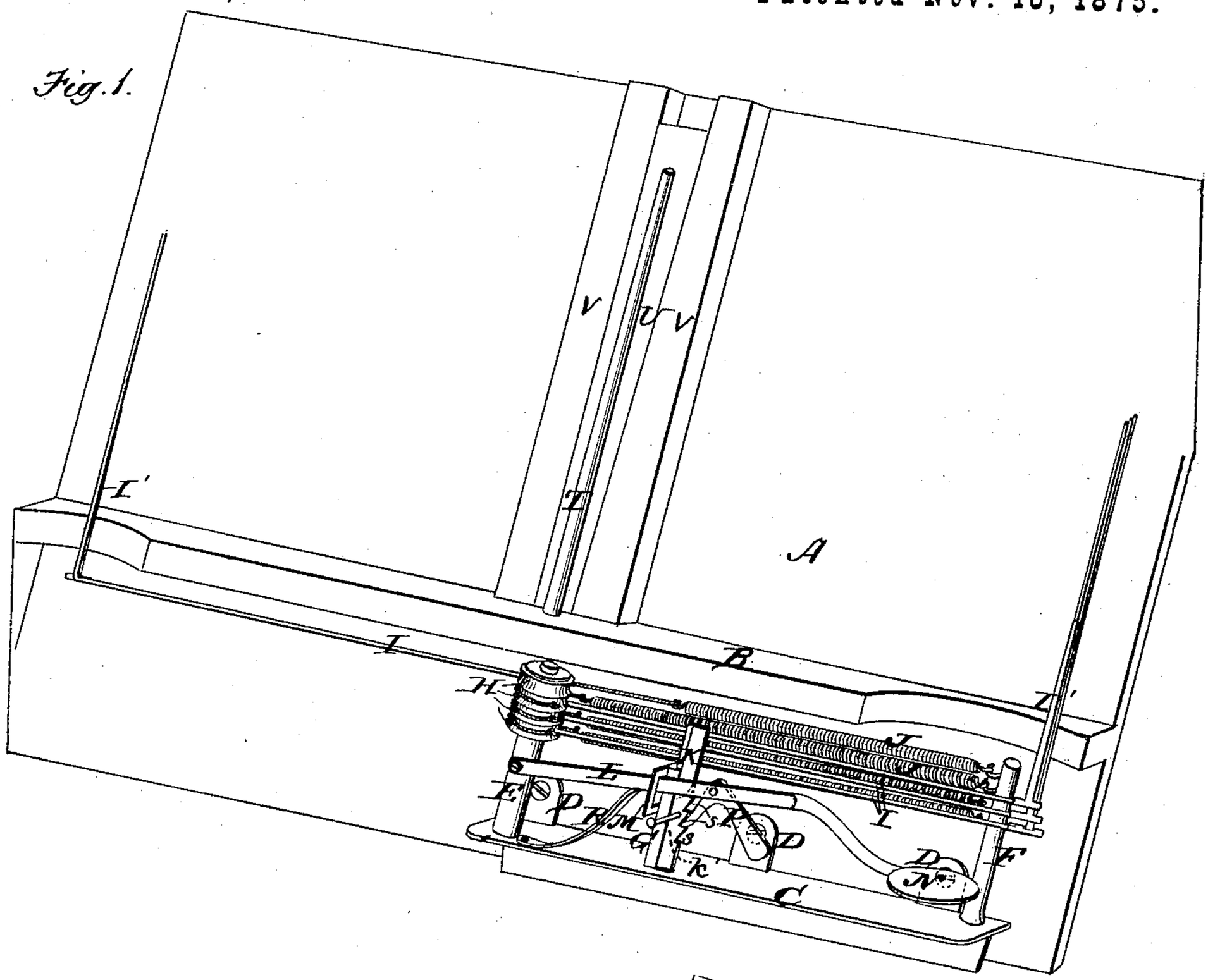
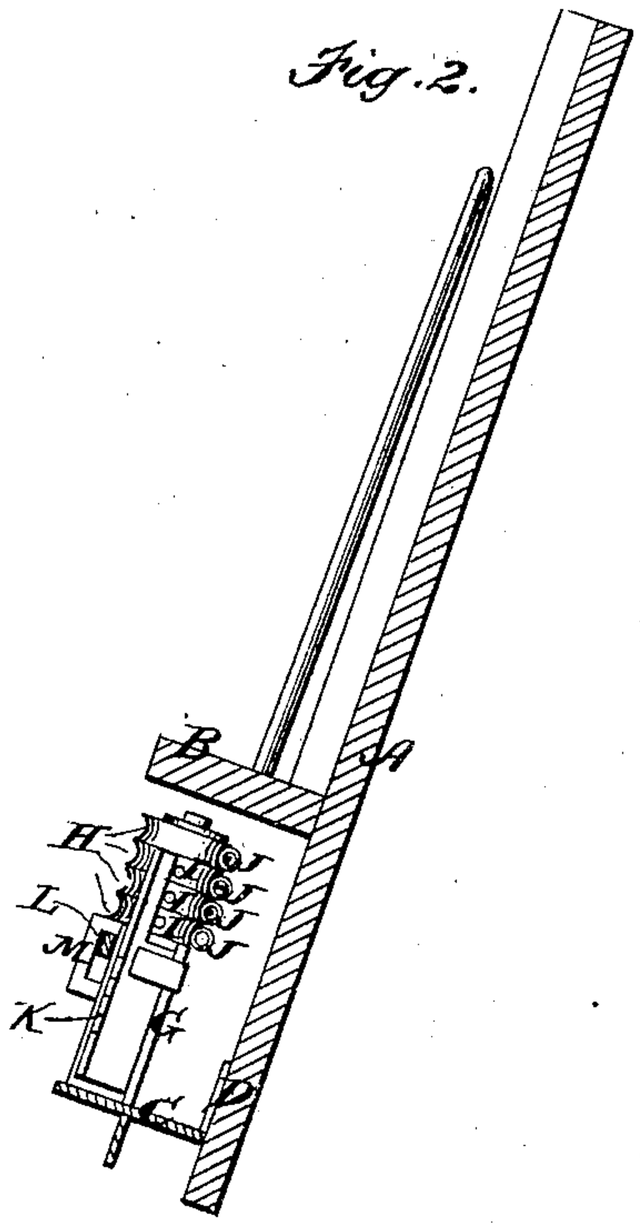


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM MILLER, OF BOSTON, ASSIGNOR TO HIMSELF AND HENRY M. WISWALL, OF WATERTOWN, MASSACHUSETTS.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. **170,103**, dated November 16, 1875; application filed September 4, 1875.

To all whom it may concern:

Be it known that I, WILLIAM MILLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Music-Leaf Turners, of which the following is a specification:

In the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of my invention, showing one of the turning-arms released, and the rest detained, and Fig. 2 a sectional view of the same.

This invention relates to that class of music-leaf turners in which the leaf-turning arms are operated by springs when released by appropriate mechanism; and it has for its object to provide a neat, simple, and cheap device for turning music-leaves, adapted to be readily applied to the music-rack of a piano or other instrument, and to perform its work with certainty and quickness.

To these ends my invention consists in the arrangement and combination of devices, which I will now proceed to describe and point out in my claim.

In the drawings, A represents the inclined music rack of a piano or other instrument, having a ledge or projection, B, which supports the music. C is a small bracket or shelf, preferably of metal, provided with ears D D, or other suitable means for attaching it to the rack A below the ledge B, in a position substantially at right angles to the rack. From the bracket C rise two standards, E F, one near each end, and a guide, G, near the center, these parts being substantially at right angles with the upper surface of the bracket C. The upper end of the standard E constitutes a bearing for the pulley-shaped hubs H of the turning-arms I, these arms being rigidly attached to the hubs H, which turn on the standard E. J J represent spiral springs, which are connected to the perimeters of the hubs H, and to the standard F, as shown in Fig. 1, the tension of the springs tending to rotate the hubs H, and swing the arms I from right to left across the rack A, in the manner common to many devices of this class. K represents a stop or detent, which slides in the guide G, and is adapted to hold the arms I against the right-hand end of the rack A, the stop K sliding longitudinally, and being substantially at a right angle with the horizontal portions of the arms I, as shown in Figs. 1 and 2. One edge of the stop K is provided with serrations *s s*, these serrations corresponding in number to the arms I. L represents a lever, pivoted at one end to the standard E, and passing through a slotted plate, M, on the guide G, its opposite end being provided with a suitable enlargement or finger-plate, N. P represents a weighted pawl, pivoted to the lever L, in such position as to engage itself automatically with the serrations *s* of the sliding stop K. The lever L is held against the upper end of the slot in the plate M by a suitable spring, R, as shown in Fig. 1.

The operation is as follows: The arms I being swung against the right-hand end of the rack A, the stop K is moved upwardly, so as to intersect the horizontal portions of all the arms, thereby holding them in this position. The music-leaves are interposed between the upright portions of the arms I, these portions being provided preferably with supplemental arms or clamps I′, which hold the leaves against the arms. When it is desirable to turn a leaf the performer depresses the outer end of the lever L, which causes the pawl P to slide the stop K downwardly far enough to release the first arm I, which, under the influence of its spring, swings over to the opposite side, carrying a leaf with it. The length of the slot in the plate M is sufficient to allow each depression of the lever L to move the stop K only a distance equal to the length of one of its teeth *s*, the spring R raising the lever after each depression, and causing the pawl P to engage with the next tooth above. The length of each tooth *s* is substantially equal to the width of each space between the horizontal portions of the arms I. It will be seen, therefore, that each depression of the lever L causes the release of the uppermost arm I, the arms being necessarily released consecutively. The stop K passes through a slot in the bracket C as it is moved downwardly, and is raised after being depressed to

its lowest extent by a suitable projection, K′, the pawl being disengaged from the teeth meanwhile.

This device is simple in its construction, and certain in its operation. The parts are all supported on the bracket C; consequently the device can be attached entire to the rack A, and no adjustment of the parts with reference to each other is required in attaching them.

The rack A may be provided with an arm, T, for confining a thin book or pamphlet between itself and the rack, and in case it is desired to use a single sheet it may be secured by a wedge-shaped piece, U, which fits between corresponding guides V V, one edge of the sheet being inserted between the piece U and one of its guides.

I do not claim the combination of the turning-arms and their actuating springs in a music-leaf turner; but

What I do claim as my invention is—

In a music-leaf turner, the combination of the standards E F, guide G, slotted plate or guide M, supporting shelf or bracket C, which is adapted to be attached to a music-rack or other support, as shown, the hubs H, arms I, springs J, lever L, having pawl P, toothed detent K, and spring R, all arranged and operating substantially as and for the purpose specified.

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

WILLIAM MILLER.

Witnesses:

C. F. BROWN,

A. E. DENISON.