W. ELLIS.

Music Leaf Turners.

No. 153,162. Patented July 21, 1874.

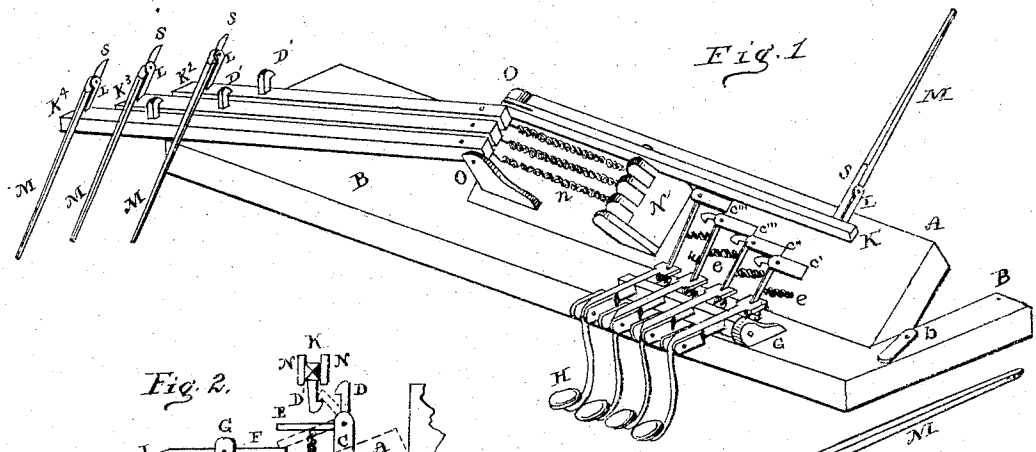

Fig. 1

Fig. 2.

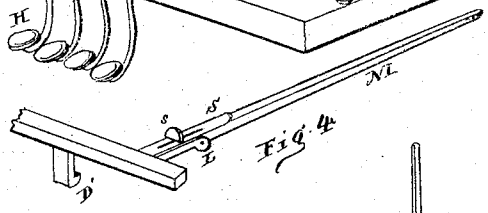

Fig. 4

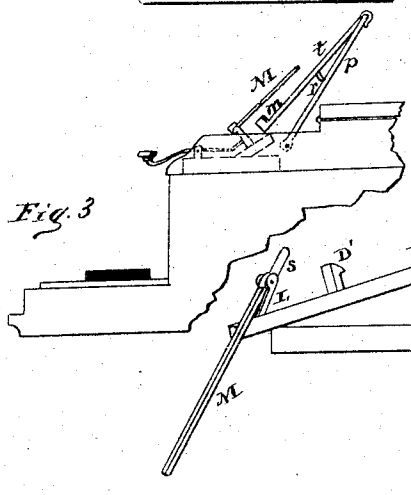

Fig. 3

Fig. 5.

WITNESSES.

James Donoghue

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WILLIAM ELLIS, OF COLUMBIA, PENNSYLVANIA.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. **153,162**, dated July 21, 1874; application filed June 16, 1874.

To all whom it may concern:

Be it known that I, WILLIAM ELLIS, of Columbia, in the county of Lancaster and State of Pennsylvania, have invented a new and Improved Music-Leaf Turner, of which the following is a specification, reference being had to the accompanying drawing forming a part of the same.

This invention relates to a class of devices for turning sheets or leaves of music on pianos, or the like, being provided with long and spring-jointed fingers, so as to retain a better hold on the sheet or leaf in turning, and yet to permit the fingers to fall off when turned, so as not to obstruct the music. The whole is mounted on a detachable base, in combination with a fixed key-board, to allow the instrument to be shut down, and made applicable for attachment without cutting or impairing the instrument.

In the accompanying drawings, Figure 1 is a perspective view of the apparatus, showing one arm with its finger as when under the sheet or leaf, the other three arms disengaged, and the fingers thrown off the sheet. Fig. 2 is a side elevation of a modified key and appliances. Fig. 3 shows an extra rack and mode of application to a piano. Fig. 4 shows a part of an arm and the finger, the tension of the spring-action being made adjustable. Fig. 5 illustrates one of the arms, coiled spring, and position of the fingers when ready to turn, and another after having turned the sheet or leaf of music.

Similar letters indicate corresponding parts.

The key-board or plate B is made to fit in between the raised ledge and ordinary rack attached to pianos. This plate has a portion cut out for the reception of a plate, A, which has pivot-bearings on the outer lower edges, so that when the one is inserted into a perforation made for its reception the outer pivot falls into a notched bearing covered with a turn-plate, *b*, to confine it. An ordinary prop is, or may be, used on the inner edge (not shown) to support the plate A in an inclined position, as shown in Fig. 1. The key-plate B has bearings G for the keys H. The arm or lever F may be widened at their terminus, as shown, or notched to receive the end of the lever E, so as to be in contact. This lever E is held on a pivot in a slotted post, C. It has a hook, D, at right angles with its stem, supported on the inclined plate A, which again supports the posts O, with their pivot-rod passing through the ends of the arms K. There is a slotted guide-support, N, to hold or prevent lateral motion in the arms. There is also, further, a coiled spring, *n*, so attached to the end of the arms K as to throw them back as soon as disengaged from the hook-connection when turned forward to bring the sheet upon the finger. Each arm K is provided with a hook, D′, and a jointed finger, L M, with a spring, S, bearing on one side of said finger.

The operation is very simple, as is the whole apparatus when properly made and understood.

It may be proper to use a rack, *t*, made adjustable at *r*, to incline it more or less, provided with a ledge, *m*, to support the music, as in Fig. 3. A portion of this ledge may be wider, to aid in arresting the finger, and cause it to turn over. Whether one, two, four, or more such arms and fingers are used is not material. These fingers, it will be seen, have the spring S bearing on the upper side when the hooks D′ D are united, so as to hold the arms and fingers down under the leaves at their proper places.

To turn the leaf it is only necessary to press upon the button H. This raises the elbow-lever, which is in contact with the key-lever, disengages the hook, when the coiled spring *n*, acting on or over the heel of the arm K, carries it half round, bringing the finger on top of the leaf turned over; but as that is the side on which the music is continued, it would obstruct a portion of it, and, to prevent this, the open joint being now on top, the least check will throw it off, as shown. Thus leaf after leaf may be turned in succession.

I am aware that in the patent No. 117,511, August 1, 1871, arms are used with short rigid fingers, cord, spring, frame, bell-crank, as well as a side plate, slots, or detachable plate, as shown and claimed; but such an arrangement I do not claim. My arrangement differs substantially from this and others heretofore known or used. Therefore

What I claim as my invention, and desire to secure, is—

1. The combination of the key-board or plate

B with its bearings G, knob or key H F, the detachable supporting-plate A, provided with elbowed lever and hook E D, slotted posts C, guides N, posts O O, lever-arms K, with their hooks D′ and springs *n*, jointed spring-fingers L S M, all combined and arranged to operate substantially in the manner and for the purpose set forth.

2. In combination with said arm or arms K, the hook D′, and spring *n*, the open-jointed piece L, finger M, and spring S, substantially as and for the purpose mentioned.

WILLIAM ELLIS.

Witnesses:

SAML. EVANS,

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