A. W. Bush
M. McComb

Music Leaf Turner.

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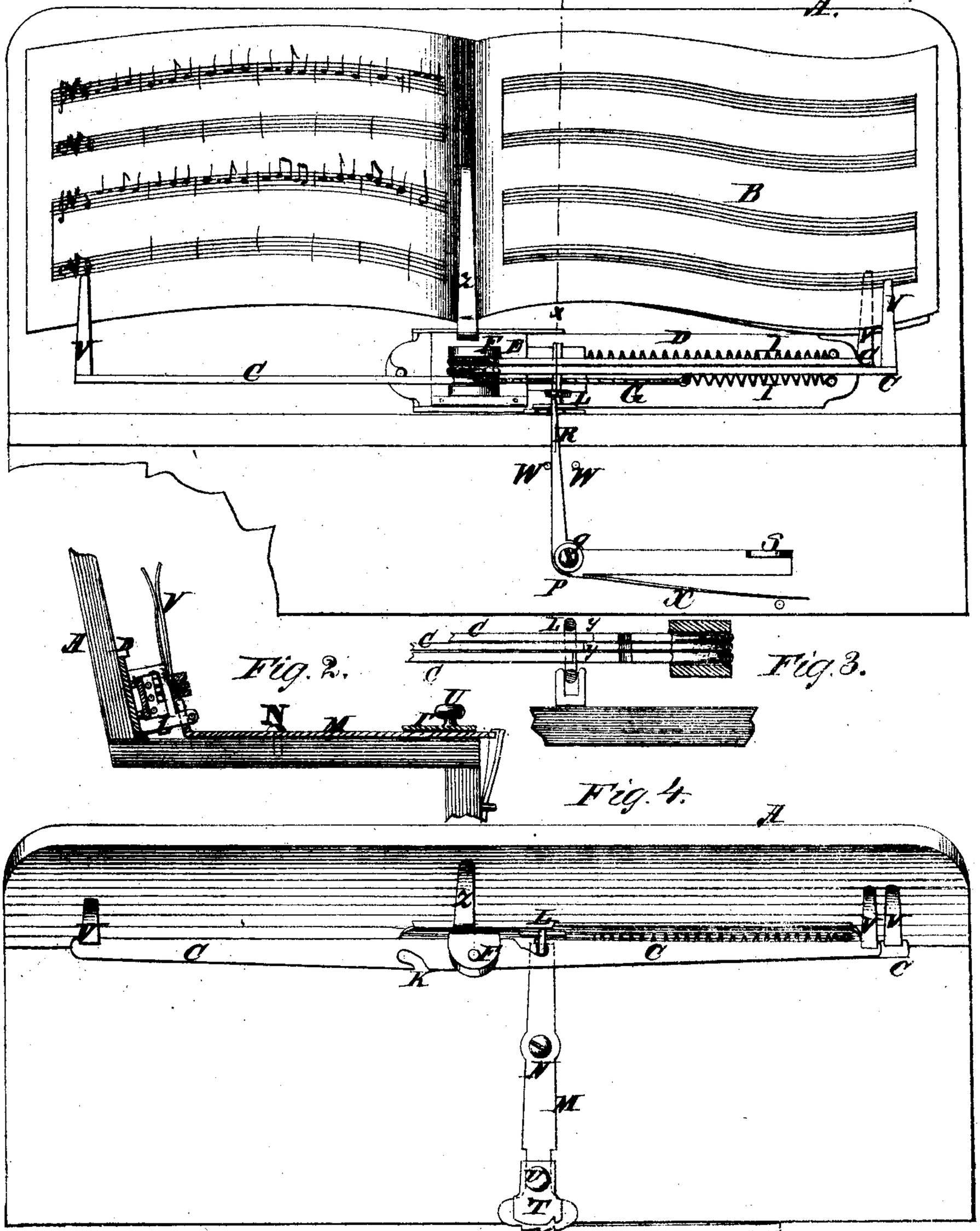
PATENTED AUG 1 1871

Fig. 1



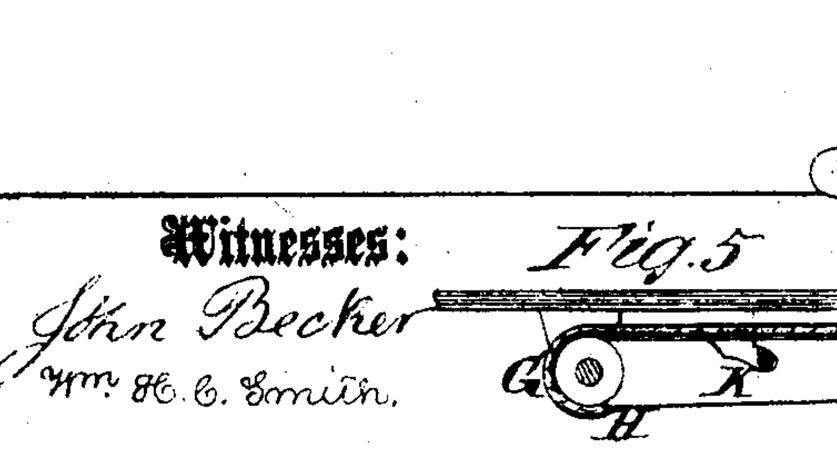
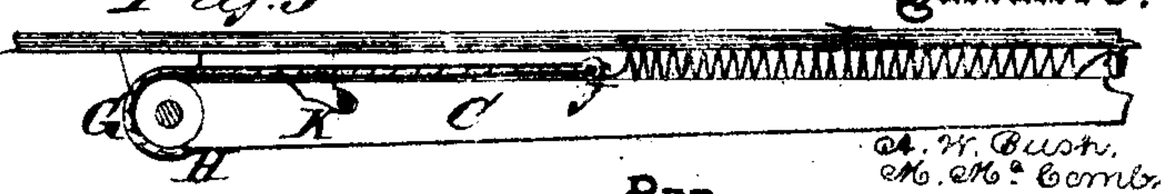


Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5



Witnesses:
John Becker
Wm. H. C. Smith.

Inventors:
A. W. Bush.
M. McComb.
Per
Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE.

ARTHUR W. BUSH AND MARSHALL McCOMB, OF ST. CLOUD, MINNESOTA.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. 117,511, dated August 1, 1871.

To all whom it may concern:

Be it known that we, ARTHUR W. BUSH and MARSHALL MCCOMB, of St. Cloud, in the county of Stearns and State of Minnesota, have invented a new and Improved Music-Leaf Turner; and we 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 drawing forming part of this specification.

This invention relates to a new and useful improvement in apparatus for turning sheets or leaves of music on pianos or other instruments, and on performers' stands; and consists in the construction and arrangement of parts hereinafter described.

In the accompanying drawing, Figure 1 represents a front view, showing the device applied. Fig. 2 is a cross-section of Fig. 1 taken on the line *x x*. Fig. 3 is a detail to be referred to hereafter. Fig. 4 is a top view. Fig. 5 is a detail, showing the spring and cord and the manner of attaching them together and to the arm.

Similar letters of reference indicate corresponding parts.

A represents the music-rack; B, the sheet-music. C C C are arms connected by a common pivot with the plate D. The plate D is provided with a slide, E, to which the pivot-ears F are attached. The pivoted ends of the arms C are circular, with a groove in the periphery to receive each a cord, G. This cord is attached to the arm, as seen in Fig. 5, at the point H. I represents a spiral spring for each arm, placed side by side on the plate D. The cords G are attached to these springs, as seen at J. K is an oblique slot in each of the arms. When the arms are turned back onto the springs, as seen in Fig. 5, it will be seen that the cords will draw upon the springs and have a lever-purchase upon the arms, the fulcrum being the pivot which passes through each arm, and through the ears at F. It is this short purchase which the cords have upon the arms which throws the arms (and the leaf of music) from right to left when the arms (one after the other) are released. The arms are held in position when they are turned back by means of a little swing-frame, L, connected with the plate D, which frame engages with the slots K in the arms. The frame L is held in position so that it will be received by the slots by the horizontal lever-plate M, the end of which lever takes hold of the frame by a fork, as seen in Fig. 2. N is the fulcrum of the lever M. The outer end of the lever M has a ratchet-tooth for each of the arms C. P is a bell-crank which works on the pivot *q*, the upper arm B of which engages with the ratchet-teeth in the end of the lever M. This end of the lever projects over the corner of the piano so that the arm of the bell-crank P stands vertical. On the horizontal arm is the key S, which is but slightly raised above the keys of the instrument, so that the performer can touch it without inconvenience and thereby turn the leaves. T is a plate which slides on the lever M, and U is a little knob attached to the plate. When the plate is pulled outward it comes in contact with the end of the arm R of the bell-crank, and disengages it or pushes it from the ratchet-teeth. On the end of each of the arms C are fingers which receive the leaves of music, or between which the leaves of music are placed, as seen in Fig. 1. It will be remembered that when the arms C are thus turned back, and each engaged with or holding a leaf, the springs are strained and the cords are drawing upon them, ready to throw them from right to left when they are released from the frame L. The oblique slots or notches K are placed so that the arms are released, one at a time, and so as to correspond with the ratchet-teeth on the end of the lever M. The position of the slots is indicated by the lines Y in Fig. 3. W represents stop-pins to limit the motion of the bell-crank arm R. Now, when the arms C have all been turned to the right, as seen in the drawing, and the plate T has been pushed back, as seen in Fig. 4, to allow the arm B to engage with the ratchet-teeth, it will be seen that, by pressing down on the key S, the lever M will be moved one tooth, and the frame L will be moved sufficiently to release one of the arms C. *x* is a spring by which the bell-crank is thrown back after the key has been pressed down so that the arm R will engage with the next tooth, and so on, for each of the arms C. Z is a spring attached to the plate D for holding the sheet-music in place on the rack.

In this example of our invention we show three arms, C, arranged to turn three leaves; but we do not confine ourselves to any particular number, nor to any particular instrument for the application of our improvement, nor to any partic-

ular mode of operating it, as it is apparent that it may be arranged so as to be operated with the foot instead of the finger.

This apparatus may be readily detached from the piano or other instrument, and as readily attached when required for use.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The arms C, cord G, springs I, frame L, lever M, and bell-crank P, arranged to operate substantially as and for the purposes described.

2. The slide-plate T, substantially as and for the purposes described.

3. The slots *y*, in combination with the frame L, substantially as described.

4. The detachable plate D and slide E, substantially as and for the purposes described.

ARTHUR W. BUSH.
MARSHALL McCOMB.

Witnesses:
NATHAN F. BARNES,
WM. RUST.