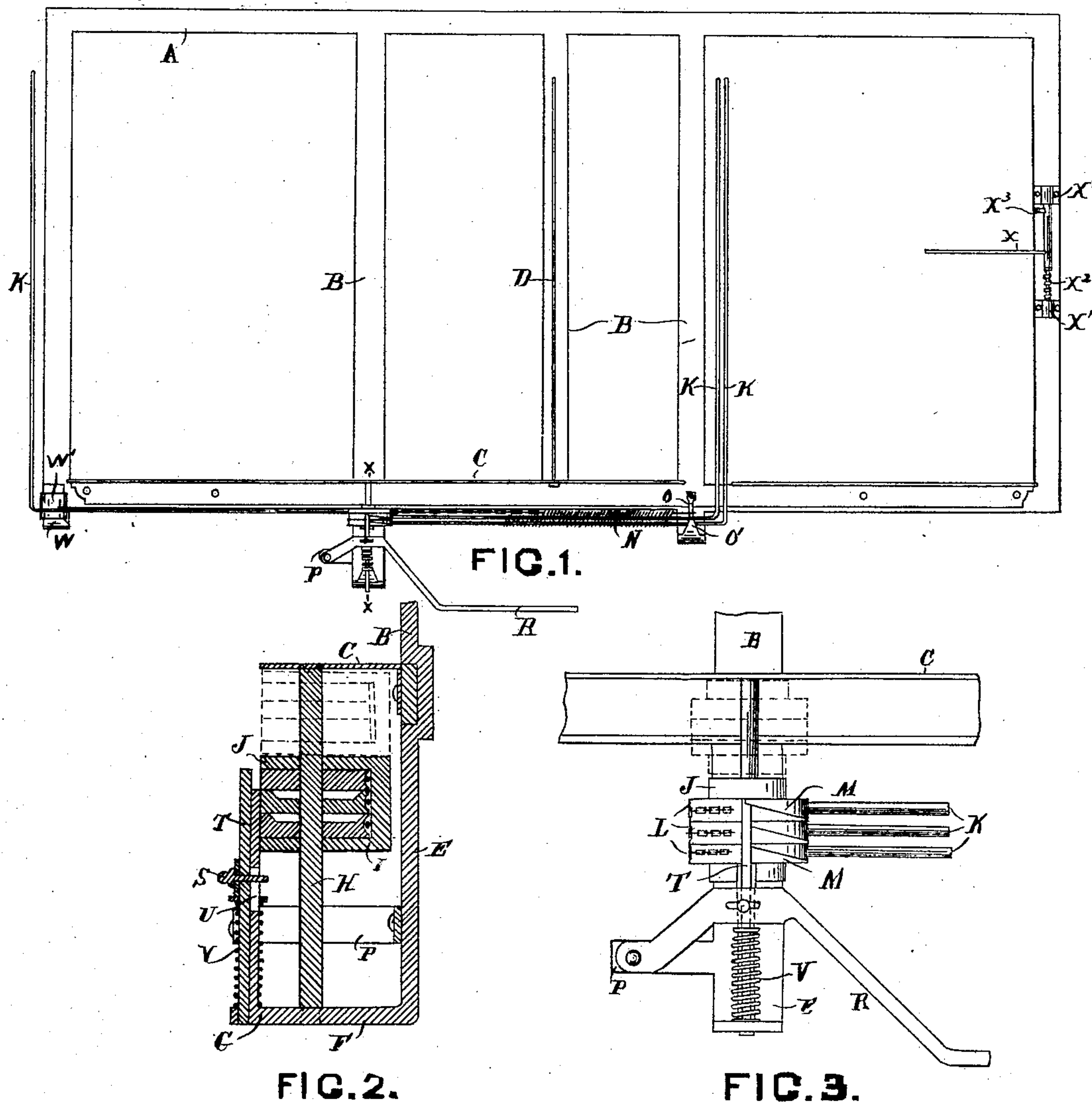


(No Model.)

J. REISINGER.
MUSIC LEAF TURNER.

No. 414,870.

Patented Nov. 12, 1889.



WITNESSES:

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Att'y

UNITED STATES PATENT OFFICE.

JACOB REISINGER, OF TOLEDO, OHIO, ASSIGNOR OF ONE-HALF TO ORRIN E. COLLINS, OF SAME PLACE.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 414,870, dated November 12, 1889.

Application filed September 7, 1888. Serial No. 284,822. (No model.)

To all whom it may concern:

Be it known that I, JACOB REISINGER, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Music-Leaf Turners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to appliances for turning the leaves of printed or written music-scores; and the object of my invention is to provide a simple and inexpensive music-leaf turner, which shall be reliable in action, and which may be operated by a quick and easy movement of the player's hand, so that no interruption shall occur in the time in which the composition is to be played.

To the above purposes my invention consists in certain peculiar and novel features of construction and in certain combinations of parts, as hereinafter described, and pointed out in the claims.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of a music-leaf turner constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the devices for operating the leaf-turning arms on line *x x* of Fig. 1. Fig. 3 is a front view of the same.

In the said drawings, A designates the frame or backing of the device, said frame being of oblong rectangular shape and provided with suitable cross-pieces B, which serve to strengthen the frame, and also as the means for receiving suitable connections for attaching the device to the music-rack of a piano, organ, music-stand, or other similar structure. The lower side of the frame A is provided with a shelf C, which supports the music-score in proper position upon the frame of the device, and D designates a rod or bar the lower end of which is riveted or otherwise

secured to the middle of shelf B, and which extends vertically upward therefrom. This rod is designed to lie upon the crease or fold of the score, and thus retain it in proper position while the leaves are being turned, as hereinafter described. The left-hand cross-piece B is extended downward below the shelf C, and forms a bracket E, the lower end of which is turned outward at right angles to the main portion, as shown at F. The outer end of this arm F is bent upward at right angles, as shown at G, and the outer portion of the part G is grooved longitudinally for a purpose to be presently explained.

H designates a shaft, the lower end of which is connected to the arm F of bracket E about midway of the length of said arm, and the upper end of which is riveted or otherwise suitably secured to the adjacent portion of shelf C. Upon the upper part of shaft H is secured a U-shaped frame I, the outer ends of the arms of which are formed with heads J J, through which the shaft H passes loosely.

K designates the arms or fingers by means of which the leaves of the score are turned. Each of these arms is of L shape, one portion extending horizontally beneath ledge C and the other portion extending vertically, so as to lie between the leaves of the score. Each of these arms is connected at the extremity of its horizontal portion with a hub L, which is loosely centered upon the shaft H, before referred to. The periphery of each of these hubs L is grooved for a portion of its extent, and from thence is formed with a V-shaped cam M. These hubs, of which there may be any desired number (three being shown) to correspond with the number of arms or fingers K, are confined between the heads J of frame I, before referred to.

N designates three spiral springs, each of which is attached at one end to the periphery of one of the hubs L just beyond the point of the cam M, and the opposite ends of which are attached to the extended end O of the right-hand cross-piece B, as shown, the peculiar form and purpose of said extension O being hereinafter more fully explained.

P designates an arm which extends horizontally outward from the lower part of bracket-arm E, and upon the outer end of

this arm P is pivoted an operating-lever R, which extends laterally downward, so as to lie conveniently near to the key-board of the instrument, as indicated in Fig. 1. Midway of the length of that part of lever R which lies across the bracket E is placed a pin S, which passes through a bolt or catch T, the latter lying in the concave groove of arm G, before referred to, and said pin S also works through a slot U in the upturned arm G, as shown in Fig. 2. A spiral spring V surrounds the bolt T and arm G and serves to hold the bolt normally thrown upward, so as to engage with the ends of the cams M on hubs L. The sides of the hubs L are preferably hollowed out, as shown in Fig. 2, so as to reduce the friction of the parts of said hubs which lie in contact with each other.

At the lower left-hand corner of the frame A is formed a hooked-shaped extension W, which carries a rubber or other elastic cushion or buffer W', as shown. At the lower end of the right-hand cross-pieces B is formed the extension O, before referred to. The lower end of this extension is bent outward and upward upon itself, so as to form a hook O', said parts being for purposes to be hereinafter explained.

Upon the right-hand end of frame A is placed a T-shaped bar X. The ends of the cross-piece are journaled in bearings X'. For a portion of its length one arm of the cross-piece is surrounded by a coiled spring X², which tends to hold the arm of the bar down in the position shown in Fig. 1. A pin X³ is formed upon the opposite end of the cross-piece of bar X in position to engage with the shoulder on the upper bearing when the bar is raised, and thus hold said bar in its raised position when desired.

The operation of the described mechanism is as follows: The music sheet or score is placed with its crease beneath the bar D, and the vertical ends of the arms or fingers K are inserted beneath the leaves, said arms or fingers lying over to the right, and the outer end of the bolt or catch T lying across the ends of cams M. This engagement of cams M and catch T is effected by sliding the frame I downward upon the shaft H, and such movement of the frame causes the upper end of arm G to engage with the ends of cams M of the two lower hubs L, thus partially relieving catch T of the strain produced by the tension of springs N. The catch T is further relieved of such strains by means of the hook O' at the lower end of the right-hand cross-piece B, said hook catching over the two lower arms of finger K. Now when the performer desires to turn a leaf he simply delivers a quick stroke upon the lower end of lever R, which depresses bolt or catch T sufficiently to release the cam of the upper hub L. The tension of the corresponding spring N rotates the hub L toward the left, causing the corresponding arm or finger to fly quickly to the left, carrying the leaf with it. At the same

time the lower face of the cam M rides upon the upper end of arm G and carries frame I upward a sufficient distance to bring the next lower hub into position to be tripped by a subsequent depression of the lever R. As the arms fly over to the left they strike the buffer W', which gently arrests their movement and renders their action noiseless. It is to be observed that in case of a "repeat" in the score the leaf may be readily turned back by hand to the point of beginning of the repeat, owing to the fact that the operative devices are set eccentric to the crease of the score, thus allowing the arms K to leave the sheet when they reach the limit of their movement to the left. Thus it will be seen that I have produced a music-leaf turner which is simple and inexpensive in construction, and which is quick and reliable in operation, and also by means of which the leaves may be readily turned by the performer without producing any interruption of the time in which the composition is to be performed.

It is evident that various modifications in mere details of construction may be adopted without departing from the spirit of my invention, and hence I refer to the ensuing claims as specifying the nature of the same.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. In a music-leaf turner, one or more spring-actuated hubs having cam-surfaces upon their peripheries and carrying the leaf-turning finger, in combination with a spring-pressed catch or bolt for holding and releasing said hubs and serving to guide the latter successively into operative position, and a lever for throwing said bolt to release the hubs, said lever extending into convenient position to be depressed by the performer, substantially as described.

2. In a music-leaf turner, a bracket located at the lower part of the frame and provided with an axle and with an arm at its outer part, in combination with one or more hubs carrying the leaf-turning arms and provided with cams upon their peripheries, a spring-pressed bolt or catch working upon the bracket-arm, a lever fulcrumed upon the bracket-frame and operatively connected to the catch, so as to retract the same into position to successively release the hubs and carry them into operative position, substantially as set forth.

3. The combination of a series of spring-actuated hubs for carrying the leaf-turning arms mounted in a bracket-frame secured to the main frame, and an arm arranged to engage and hold the lower hub in readiness to be moved into operative position, substantially as described.

4. The combination, with a series of spring-actuated leaf-turning arms pivotally connected to the main frame, of a hook-shaped projection from the main frame extending in parallel relation with the axis of the spring-

actuated hubs arranged to hold one of said arms in readiness to be moved into operative position, substantially as described.

5 5. In a music-leaf turner, an arm or projection secured to the main frame and provided with a buffer or cushion to limit the movements of the leaf-turning arms when thrown to turn a leaf, substantially as described.

10 6. In a music-leaf turner, a T-shaped spring-pressed holding-bar mounted in bearings upon one side of the main frame, in combination

with a pin upon the bar adapted to engage with the shoulder to hold the free end of the bar in raised position, substantially as specified.

15 In testimony that I claim the foregoing as my own I hereby affix my signature in presence of two witnesses.

JACOB REISINGER.

Witnesses:

CARROLL J. WEBSTER,
WILLIAM WEBSTER.