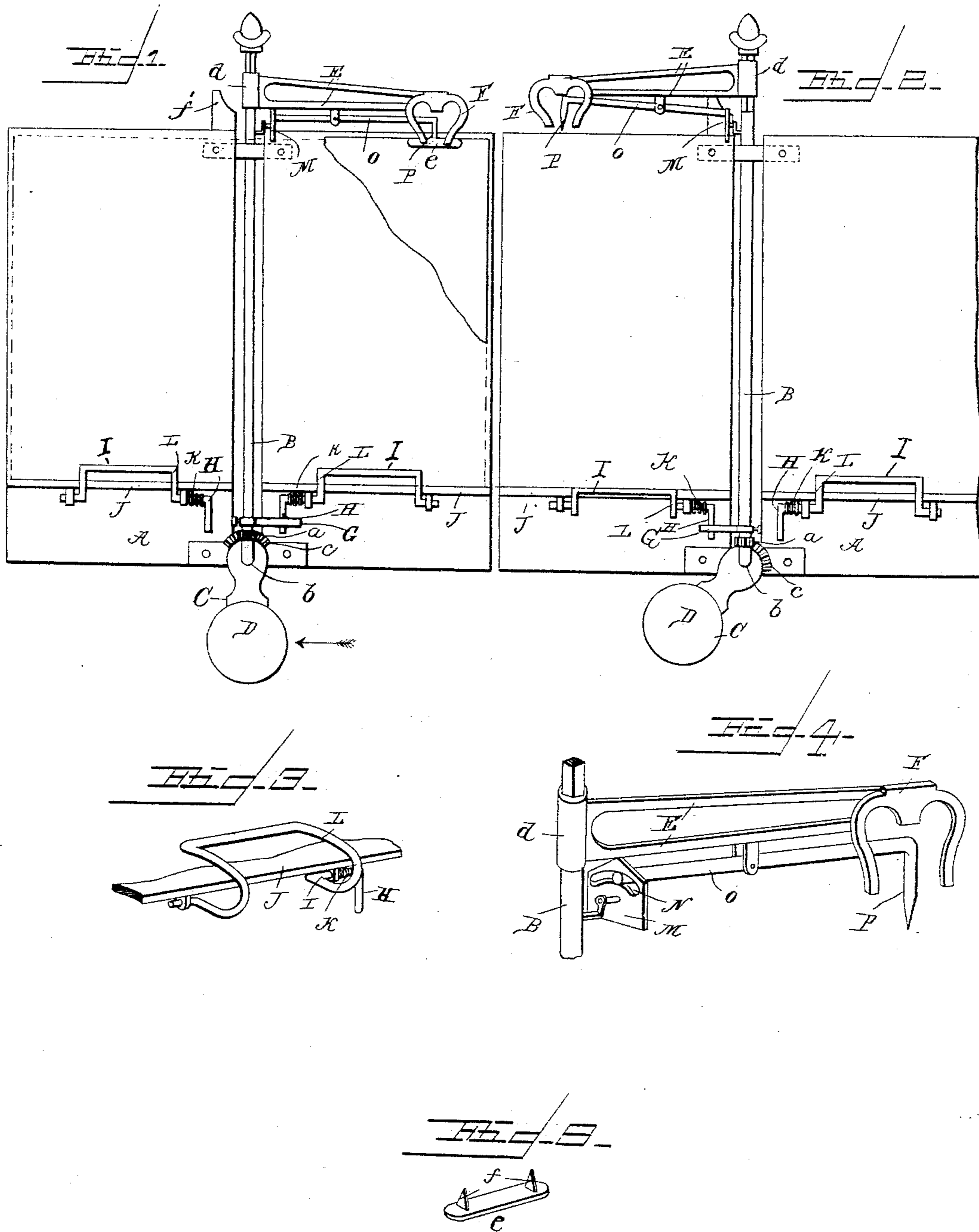


(No Model.)

L. BERNHARD.
MUSIC LEAF TURNER.

No. 387,707.

Patented Aug. 14, 1888.



Witnesses,

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MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 387,707, dated August 14, 1888.

Application filed March 14, 1888. Serial No. 267,152. (No model.)

To all whom it may concern:

Be it known that I, LOUIS BERNHARD, a citizen of the United States, residing at Bloomsburg, in the county of Columbia and State of Pennsylvania, have invented a new and useful Improvement in Devices for Turning Music-Leaves, of which the following is a specification.

My invention has reference to devices for turning music-leaves; and it consists in the improved construction hereinafter described, whereby a simple and efficient arrangement is provided, that will enable the performer to rapidly and readily turn the leaf with but little more exertion or movement than is required to depress one of the keys of the piano.

In the drawings, Figure 1 is a view in elevation of a music-leaf turner embodying my improvements. Fig. 2 is a like view showing the parts in a different position. Fig. 3 is a detail view of one of the shelves to prevent undue turning of the leaves. Fig. 4 is a detail view of the device for preventing the dropping of the leaf. Fig. 5 is a detail view of one of the armatures.

Upon a board or plate, A, are bearings, in which turn a vertical shaft, B, which carries at its lower end a pinion, *a*. A lever, C, is pivoted at *b* upon the plate, and carries at its upper end a gear-segment, *c*, which meshes with the gear *a*. The lower end of the lever C carries a knob or ball, D, which occupies a position in close proximity to the bank of keys.

A horizontally-extending arm, E, is formed by two converging bars, which are provided at their ends with a socket, *d*, through which passes the shaft B. The shaft B is square in cross-section at its portions embraced by the socket, and the openings in the latter are of such configuration that while said sockets turn with the shaft they will also be capable of a limited sliding movement upon the same. A small natural magnet, F, depends from the arm, and when the parts are in the position represented in Fig. 1 is designed to contact with a small piece of metal, *e*, secured to the leaf of music beneath, forming an armature for the magnet.

A convenient method of attaching each metallic section *e* to its leaf is shown in the detail view, Fig. 5, wherein said section is represented as being provided with teeth or spurs

f, which can be readily forced through the paper and bent on the outer side of the leaf.

Just above the pinion *a* the shaft B is provided with a lateral arm, G, which, when the shaft is rotated, contacts with the depending portion H of a rock-shaft, I, journaled in suitable bearings on the plate A below the music rest or shelf J. This shaft is held normally in a vertical position by a coiled spring, K, as shown, and is provided with the upwardly-extending portion L, which is substantially semicircular in edge view, so as to pass around the edge of the shelf J.

Near the upper end of the shaft B, just below the arm E, I secure the plate M, having a cam-slot, N; and to the lower edge of the said arm E, I pivot the rod O, having one end playing in the slot N and its other end carrying a depending pin, P, as shown.

When it is necessary to turn the leaf, the performer with a quick motion of one hand moves the lever C in the direction indicated by the arrow, Fig. 1, thereby operating the gearing to partially rotate the shaft B, which movement of the latter causes the arm E to swing, and, through the medium of the magnet and piece *e*, turns the leaf over with the movement of the arm. A lug or cam, *f'*, on the plate A, adjacent to the lower arm-socket, has an upper inclined face, upon which said socket bears. Now, as the arm is turned, the socket and said arm are lifted until the magnet is caused to become detached from the section *e*, and the leaf drops by gravity into position upon the other side of the book. The weight of the knob on the lever C causes a reverse action of the gearing, and causes the arm to drop back to its first position, where its magnet magnetically engages the armature of the succeeding leaf. When the shaft is rotated, the arm G contacts with the depending portion of the rock-shaft J and passes the same backward, thereby throwing the upper portion of the same forward to permit the passage of the leaf. On the return motion of the shaft B the coiled spring throws the rock-shaft into its normal position. When the magnet is raised by the action of the cam *f'*, the rod O is vibrated by the action of the cam-slot N, to throw the pin P behind the leaf, and thereby prevent its turning backward.

It will be understood that by the employ-

ment of the within-described music-leaf turner each page may be readily and positively turned with but little more (if any) movement on the part of the performer than would be required to depress one of the keys.

I claim—

1. The combination, in a music-leaf turner, of a plate, a shaft journaled thereon, a lever and gearing for turning said shaft in both directions, an arm rotating with and sliding upon said shaft, a lug on said plate to raise said arm, and engaging devices on said arm, and the music-leaves, substantially as described.

2. The combination, in a music-leaf turner, of a plate, a shaft journaled thereon, a weighted lever and gearing for turning said shaft, an arm rotating with and sliding upon said shaft, a lug on said plate for raising said arm, and engaging means on said arm and leaf, substantially as described.

3. The combination, in a music-leaf turner, of a shaft and operating means, an arm on said shaft rotating therewith and sliding thereon, a lug on said plate for raising said arm, a magnet on the arm, and an armature on the music-leaf, substantially as described.

4. The combination, in a music-leaf turner, of a shaft and operating means, a movable and sliding arm on said shaft, a lug on the plate, and armatures provided with spurs to adapt them for attachment to music-leaves, substantially as described.

5. The combination of the rotating shaft and gearing therefor, the rock-shaft, and the arm on the rotating shaft to actuate the rock-shaft, as set forth.

6. The combination of the rotating shaft, the arm E, the plate M, and the rod O, pivoted on the arm E and actuated by the plate M, as set forth.

7. The combination of the plate A, the shaft B, the rock-shaft curving around the edge of the shelf, and the arm on the shaft B, to actuate the rock-shaft, as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

LOUIS BERNHARD.

Witnesses:

N. E. HAMLIN,
G. M. QUICK.