

(No Model.)

F. W. KLINE.
MUSIC OR BOOK LEAF TURNER.

No. 510,801.

Patented Dec. 12, 1893.

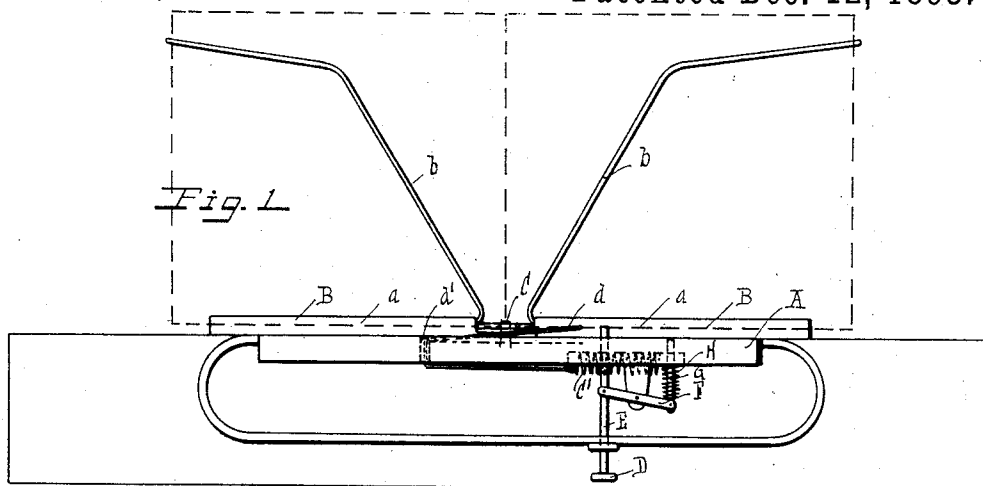


Fig. 2

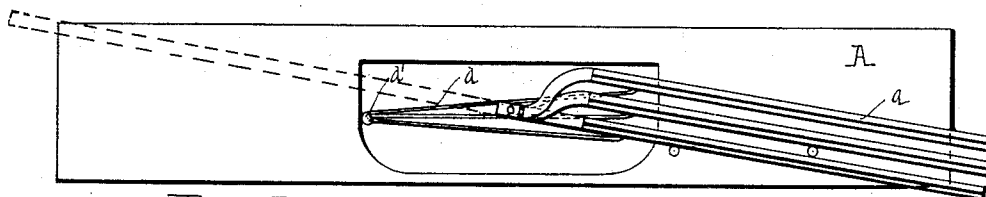


Fig. 3

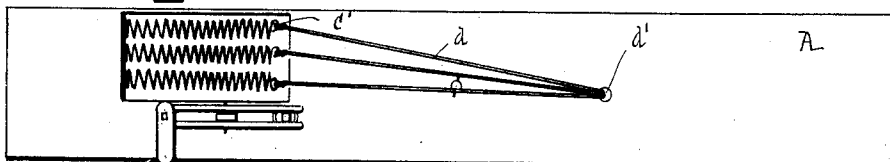


Fig. 4

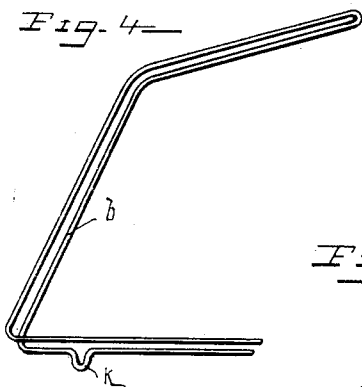
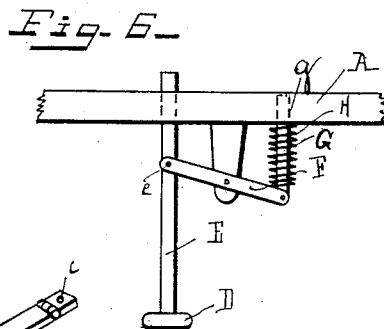
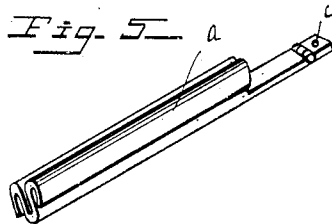


Fig. 5



WITNESSES

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MUSIC OR BOOK-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 510,801, dated December 12, 1893.

Application filed April 24, 1893. Serial No. 471,689. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. KLINE, a citizen of the United States, and a resident of North Germantown, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Music or Book-Leaf Turners; and I do declare the following to be a full, clear, and exact description of the invention, such as 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a front elevation of the invention. Fig. 2 is a top plan view. Fig. 3 is a bottom plan view. Figs. 4 and 5 are detail views of the turners; and Fig. 6 is a detail view of the operating key and part base A.

This invention has relation to music turners, adapted to be applied to pianos and organs, &c., and designed to be operated by a key situated at the back of the key board of the instrument, or in other convenient relation thereto; and the invention consists in the novel construction and combination of parts, all as hereinafter described and pointed out in the claims.

Referring to the accompanying drawings, the letter A designates the base of the device upon the upper surface of which is arranged a series of leaf turners and holders B (shown as three in number). Said turners consist each of a grooved horizontal base portion *a*, and a bent wire portion *b* attached to the inner end part of said base portion, and which serves to hold the leaves in an upright position. At their inner ends said base portions *a* have a bearing *c*, which loosely engages a common pin or bolt C, projecting from the upper surface of the base. Attached to each of said leaf turners at its intermediate portion is a cord or other flexible connection *d*, which is passed up through an aperture *d'* in the base, and is connected at its other end to a coil spring C', seated in a cut-away portion of the base, and made fast at one end to said base. Each leaf turner has a separate spring and flexible connection therewith.

D designates the operating key, which is carried by a vertical stem E, which extends

downwardly some distance below the lower face of the base, its upper end portion being arranged to normally project a short distance above the upper portion of said base, through an aperture therein in which said stem is capable of an endwise movement.

F designates a horizontally rocking arm, fulcrumed upon a lug or standard depending from the lower face of the base A. Said arm F is bifurcated or slotted at its end portions, embracing at one of such end portions the stem E, to which it is connected by a pivot pin *e*. At its other end portion said arm is similarly connected to a pin or rod G, the upper end of which works loosely in an aperture *g* through the base. Coiled around said pin or rod G, is a helical spring H, one end portion of which bears against the base, and the other end portion against the arm F. The length of the pin or rod G and the tension of the spring H are such that the upper end of the said pin or rod is normally held just below the upper surface of the base.

In operation, the leaf turners B are turned around on their bolt or pin to the right of the upper projecting end portion of the key stem E, and are held against the tension of their springs in such position, by the projecting upper end of the said key stem. The leaves to be turned are placed in the turners, their lower edges resting in the grooves in the portions *a*. The device is supported on the piano or other instrument in such position that the key D will be situated at the back of the keyboard, or in other convenient relation thereto. Upon the depression of the said key, the upper portion of the key stem is withdrawn flush with, or below, the upper surface of the base A, which releases the foremost turner B, its spring quickly throwing it around to the left through an arc of one hundred and eighty degrees, carrying with it the leaf. The second and subsequent turners are prevented from turning also by means of the pin or rod G, which as the key is depressed, and the upper portion of its stem withdrawn, is projected above the upper surface of the base, and forms a stop, until the key is released. It will be apparent therefore that it will not be possible for more than one turner to be released by a single operation of the key.

The base portions *a* of the turners and holder

B, may be made from sheet metal bent to form the groove for the leaf, the upper edge portions thereof being bent over and downward to form seats to receive the end portions of the wire *b*, as shown in Fig. 5. The wire may be bent to form an eye *k* for the attachment of the flexible connection *d*. The inner end portions of the turners and holders B should preferably be of flexible material or be provided with a hinge joint, so as to permit the turners and holders to be passed over the projecting end of the key stem in turning them to their holding positions at the right.

15 The device above described is also applicable as a book leaf turner.

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

20 1. In a music and book leaf turner, the combination with the base, the series of pivoted leaf turners and holders, and the actuating devices therefor, of the vertically recip-

rocating key stem working through said base, a pivoted, rocking arm F having a connection 25 at one side of its pivot with the said key stem, the vertical pin having a similar connection with the opposite end portion of said arm, and arranged to reciprocate through said base, and a spring coiled around said pin and acting to withdraw said pin below the upper surface of the base, and to project the said stem above the base, and a key on said stem, substantially as specified. 30

2. In a music and book leaf turner, the 35 leaf holders and turners B, comprising the grooved, pivoted, and spring actuated base portions *a*, and the bent wire portions *b*, connected to said base portions, substantially as specified. 40

In testimony whereof I affix my signature in presence of two witnesses.

FRANK W. KLINE.

Witnesses:

S. W. LASHER,
W. H. WINANS.