

(No Model.)

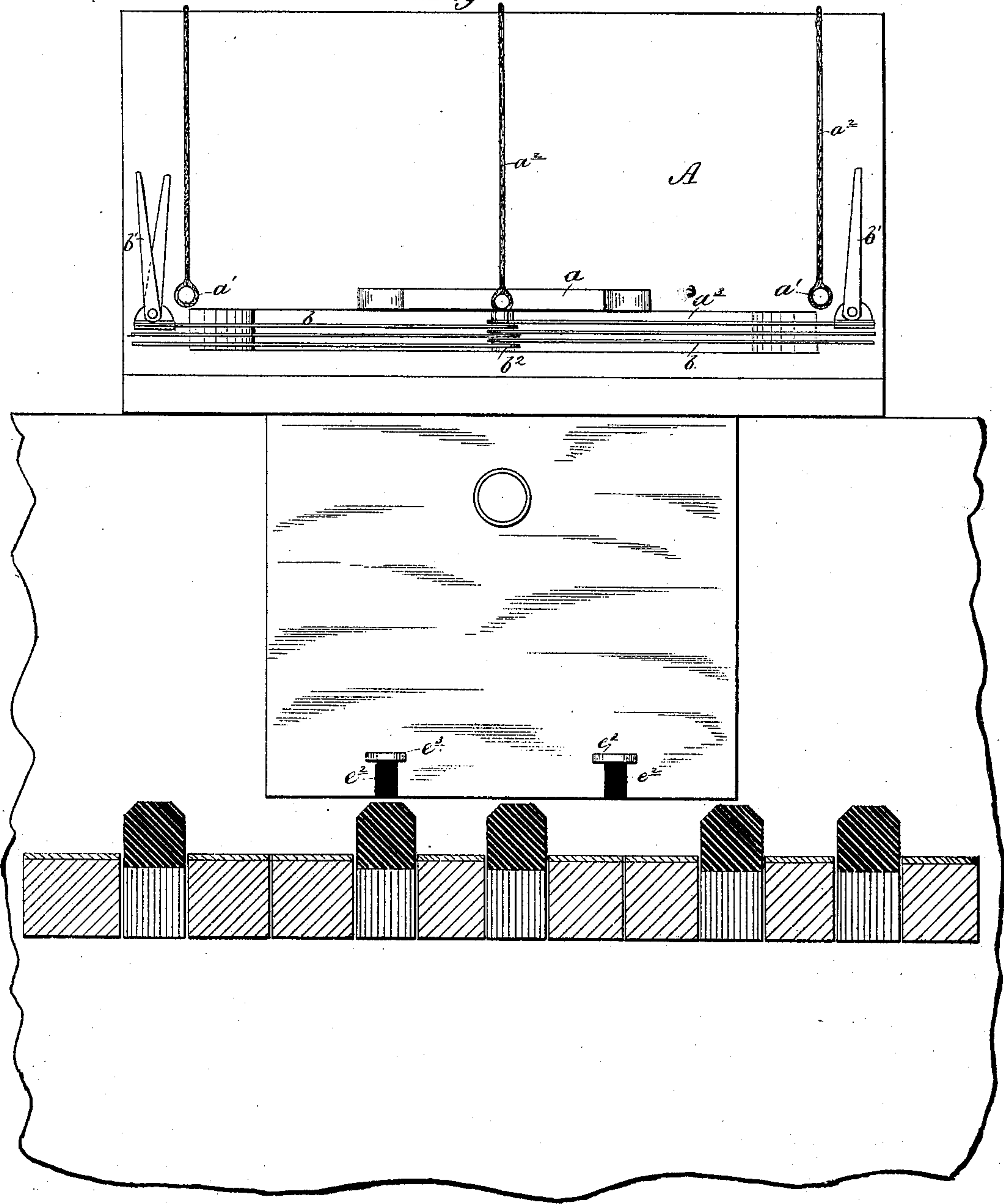
2 Sheets—Sheet 1.

J. R. BURVILLE.  
MUSIC LEAF TURNER.

No. 250,881.

Patented Dec. 13, 1881.

Fig. 1.



WITNESSES:

*W. W. Hollingsworth*  
*A. G. Lyne.*

INVENTOR:

*James R. Burville*  
BY *Wm. T. L.*  
ATTORNEYS.

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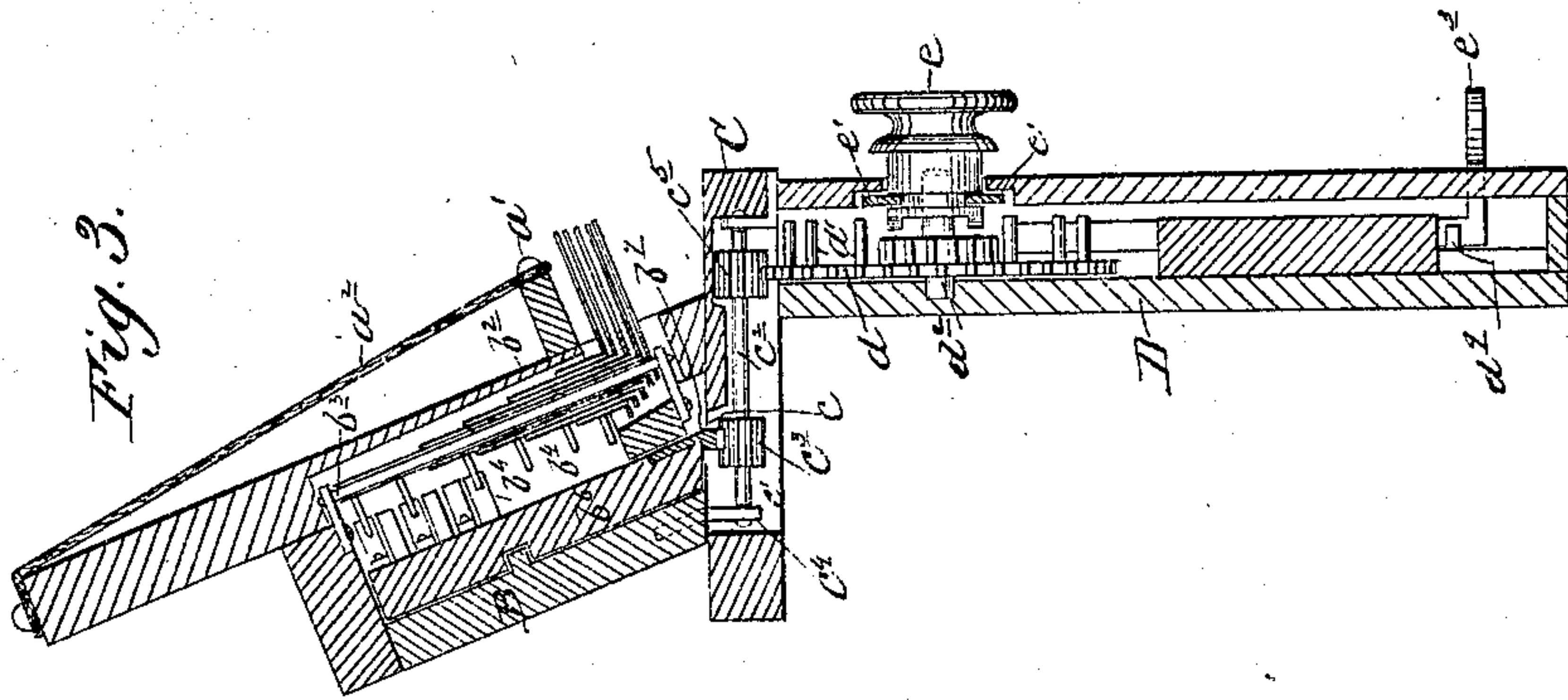
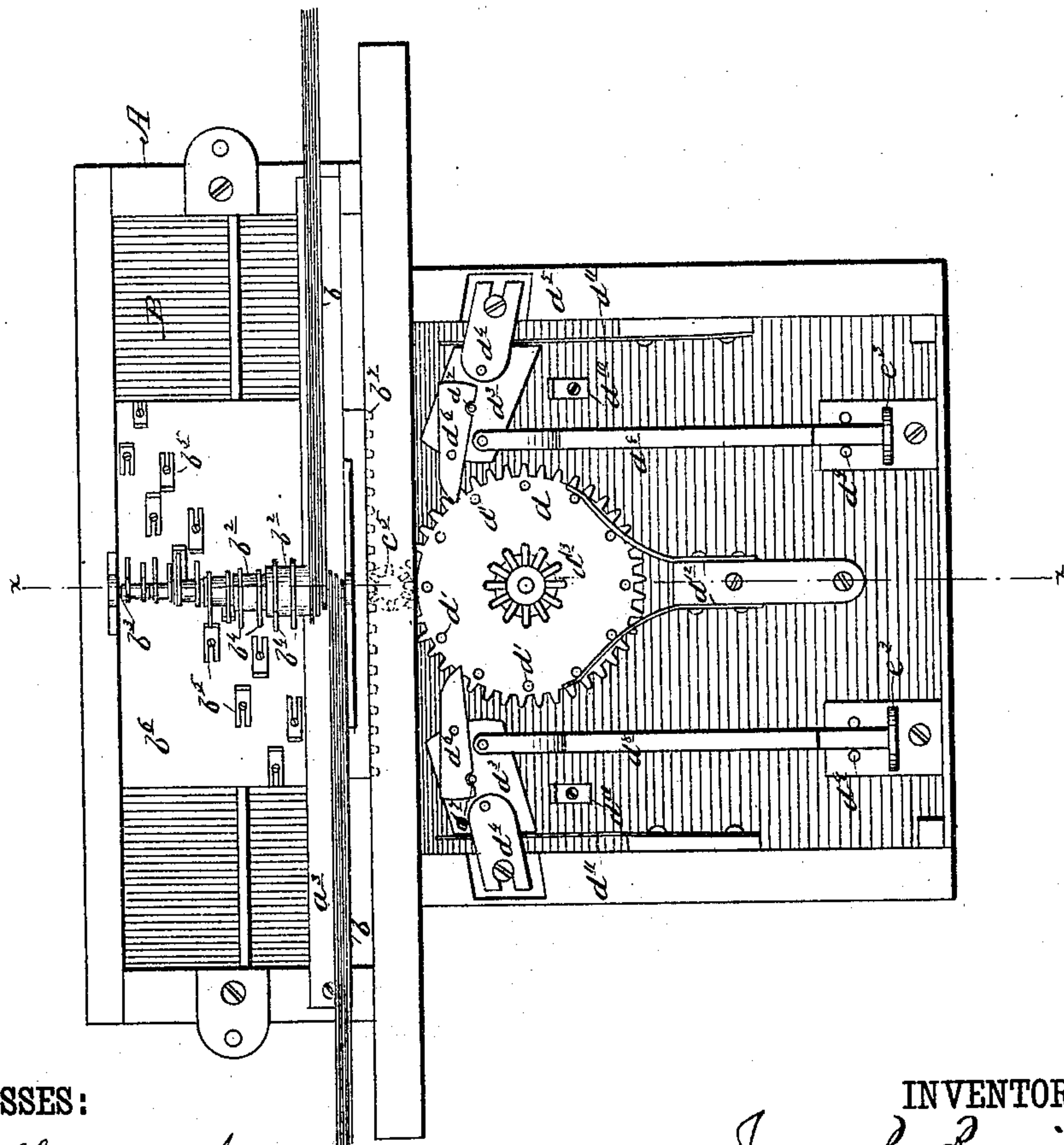


Fig. 2.



WITNESSES:

*W. W. Hollingsworth*  
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# UNITED STATES PATENT OFFICE.

JAMES R. BURVILLE, OF BAINBRIDGE, OHIO, ASSIGNOR TO HIMSELF AND  
WILLIAM F. HUGHEY, AND JAMES V. McMANN, BOTH SAME PLACE.

## MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 250,881, dated December 13, 1881.

Application filed July 2, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES REYNOLDS BURVILLE, of Bainbridge, in the county of Ross and State of Ohio, have invented a new and  
5 useful Improvement in Music-Leaf Turners, of which the following is a full, clear, and exact description, reference being had to the drawings hereto annexed.

In the accompanying drawings, Figure 1 represents a front view of my invention as applied  
10 to the the key-board of a piano. Fig. 2 is a front elevation of the device with the internal construction exposed to view, and Fig. 3 is a central vertical cross-section.

15 The frame-work of my invention consists of three parts, the upper portion of which is inclined slightly from a perpendicular for supporting a book of music in a convenient manner, the central or horizontal portion, and the lower  
20 or perpendicular portion, which supports the keys near the key-board of a musical instrument. The upper portion consists of a board, A, which is designed to be of suitable size for holding sheet-music, and is provided with a  
25 central rest,  $a$ , near its lower edge, and pins  $a'$  at the sides for supporting the same. Gum cords  $a^2$  are also provided for securing the leaves or cover of a book in position.

Immediately below the rest  $a$  is a horizontal  
30 slot,  $a^3$ , extending nearly across the board A, through which project a number of arms,  $b$ , which are adapted to be oscillated from one side of the board to the other to turn the leaves of the book. These arms are supported in a  
35 box, B, which is secured to the rear side of board A, and consist in thin bars or strips of metal having upright fingers  $b'$  on their free ends, and being rigidly secured at their opposite ends upon a number of sleeves,  $b^2$ , re-  
40 spectively, which are telescoped and mounted upon a rod,  $b^3$ , which is provided with suitable bearings in the upper and lower sides of the box.

The fingers  $b'$  consist in a flanged loop, which  
45 is adapted to be moved along the arm, and which is provided with two upright tines pivoted to opposite sides of the flange, and adapted to clamp a leaf between them.

Each of the sleeves  $b^2$  is provided with two

spurs or levers,  $b^4$ , which are arranged on the  
50 opposite side of the sleeve from the arm and inclined from each other, so that they shall be operated in turn by two adjustable lugs,  $b^5$ , which are secured to the front side of a slide,  $b^6$ , which is one-half the length of the box B,  
55 and adapted to be moved from one end thereof to the other. As stated, a pair of lugs is provided for each sleeve, and these are arranged diagonally across the slide, so that the sleeves,  
60 and through them the arms, shall be oscillated in regular succession, being turned to the right by moving the slide to the left, and vice versa.

For operating the slide  $b^6$  its lower edge is provided with a rack-bar,  $b^7$ , which projects  
65 through a slot in the lower side of box B into a suitable groove,  $c$ , in the upper surface of the board C, which constitutes the central or horizontal portion of the device, as before stated. The under surface of board C is provided with  
70 a central transverse recess,  $c'$ , which is cut through to groove  $c$  at the point of intersection. In this recess is secured a shaft,  $c^2$ , carrying a pinion,  $c^3$ , which is arranged to mesh with the rack-bar  $b^7$ , through the opening in  
75 the board.

The rear end of shaft  $c^2$  is supported in a per-  
forated tongue,  $c^4$ , which is rigidly secured to  
the lower edge of box B and projects through  
a suitable opening in board C into the recess  
80  $c'$ , thereby assisting to hold the said box and board together. Near the opposite end of shaft  $c^2$ , which is supported in a removable plate, is  
a second pinion,  $c^5$ , which meshes with a cog-  
wheel,  $d$ , which is supported in a box, D, form-  
85 ing a part of the lower or perpendicular portion of my invention. This box D is suitably secured to the lower surface of board C, near  
its front edge, and is adapted for supporting the mechanism by which the above-described  
90 elements of the device are operated. The said cog-wheel  $d$  is provided with a suitable number of pins,  $d'$ , on its front surface, arranged near  
its periphery, and it is loosely mounted upon  
a pintle,  $d^2$ , which is secured in a vertically-  
adjustable manner to the rear inner surface of  
95 the box D.

On each side of the wheel  $d$  is a lever,  $d^3$ , which is pivoted at its outer end between the



rear inner surface of the box and a slotted adjustable bracket,  $d^4$ , which is secured in a recess in ledge  $d^5$  of the box. At the inner end of lever  $d^3$  is pivoted a second lever,  $d^6$ , whose inner end projects sufficiently toward the wheel to rest upon one of the pins  $d'$  when the latter is in position therefor. The outer end of lever  $d^6$  is limited in its oscillation by pins  $d^7$  on lever  $d^3$ .

To the lower portion of the inner end of lever  $d^3$  is pivoted the upper end of the key-stem  $d^8$ , which extends to the bottom of the box, and is held in position by the guide  $d^9$  at its lower end. As the key-stem is drawn downward the point of lever  $d^6$  engages with one of the pins on the wheel  $d$ , and causes the latter to turn until the downward movement of lever  $d^3$  is arrested by a stop,  $d^{10}$ , secured to the rear inner surface of the box. To cause the said levers and key-stem to return to their normal or elevated position, a steel spring,  $d^{11}$ , is secured to the ledge  $d^5$  of box D in such manner that its plane surface will lie against the diagonal outer end of lever  $d^3$ , and thus tend to hold the said lever in a given position. The key-stem with its levers on one side of the wheel causes the latter to turn in one direction, and that upon the other side in the opposite direction; and each depression of a key-stem causes the wheel to turn far enough to bring the next pin in position to be reached by the lever  $d^6$ , and each successive movement of the wheel  $d$ , by means of the pinions  $c^3$  and  $c^5$ , operates the rack-bar  $b^7$  and slide  $b^6$  to a degree sufficient for oscillating one of the arms from one side to the other of the board A.

Immediately below the wheel  $d$  is a pair of steel springs,  $d^{12}$ , having their lower ends secured to opposite sides of a suitable bracket, so that their upper ends, which diverge from each other, shall lie against the pins of the said wheel to retain the latter in position when not being acted on by the levers, and to prevent it from turning farther than is required.

The cog-wheel  $d$  is provided with a pinion,  $d^{13}$ , on its front surface, with which a spring-operated thumb-nut or clutch,  $e$ , is made to engage in order to correct any error in the device, or to turn the arms rapidly from one side to the other. This thumb-nut is held out of gear with pinion  $d^{13}$  by a spring,  $e'$ , which is secured to the inner surface of board E, which

covers the box D. The thumb-nut  $e$ , which is arranged on the outside of board E, needs to be pressed inward, therefore, in order that it may engage with the pinion  $d^{13}$  to operate the device.

At the lower edge of board E are slots  $e^2$ , through which the keys  $e^3$  project and have vertical movement when touched or depressed by the fingers of the performer; and as these keys are supported near the key-board of a piano or organ, they may be easily operated without necessitating the removal of the hand from the said key-board.

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

1. In a music-leaf turner, the combination of slotted board A, having rest  $a$  and pins  $a'$ , and box B, having arms  $b$ , provided with adjustable clamping-fingers  $b'$ , substantially as shown and described.

2. In a music-leaf turner, the combination, with box B, of oscillating arms  $b$ , telescoped sleeves  $b^2$ , having spurs  $b^4$ , shaft  $b^3$ , and slide  $b^6$ , having adjustable lugs  $b^5$ , which are arranged in pairs diagonally across the same, and rack-bar  $b^7$ , substantially as shown and described.

3. In a music-leaf turner, the combination of slotted box B, having slide  $b^6$  and rack-bar  $b^7$ , with the horizontal board C, having groove  $c$  in its upper surface, and central transverse recess  $c'$  in its under surface, perforated tongue  $c^4$ , shaft  $c^2$ , and pinion  $c^3$ , substantially as shown and described.

4. In a music-leaf turner, the combination of horizontal board C, having shaft  $c^2$  and pinion  $c^5$ , of the perpendicular box D, having cog-wheel  $d$ , substantially as shown and described.

5. In a music-leaf turner, the combination, with box D, of cog-wheel  $d$ , having pins  $d'$ , levers  $d^3$  and  $d^6$ , adjustable brackets  $d^4$ , springs  $d^{11}$ , stops  $d^{10}$ , key-stems  $d^8$ , guides  $d^9$ , and springs  $d^{12}$ , substantially as shown and described.

6. In a music-leaf turner, the combination of box D, having cog-wheel  $d$ , pinion  $d^{13}$ , and lever-operating keys  $e^3$ , and board E, having thumb-nut  $e$ , spring  $e'$ , and slots  $e^2$ , substantially as shown and described.

JAMES R. BURVILLE.

Witnesses:

JAMES WOLFE,  
RUVELLO HUGHEY.