(No Model.) 2 Sheets—Sheet 1.

W. O. CAMPBELL.

LEAF TURNING DEVICE.

No. 574,659. Patented Jan. 5, 1897.

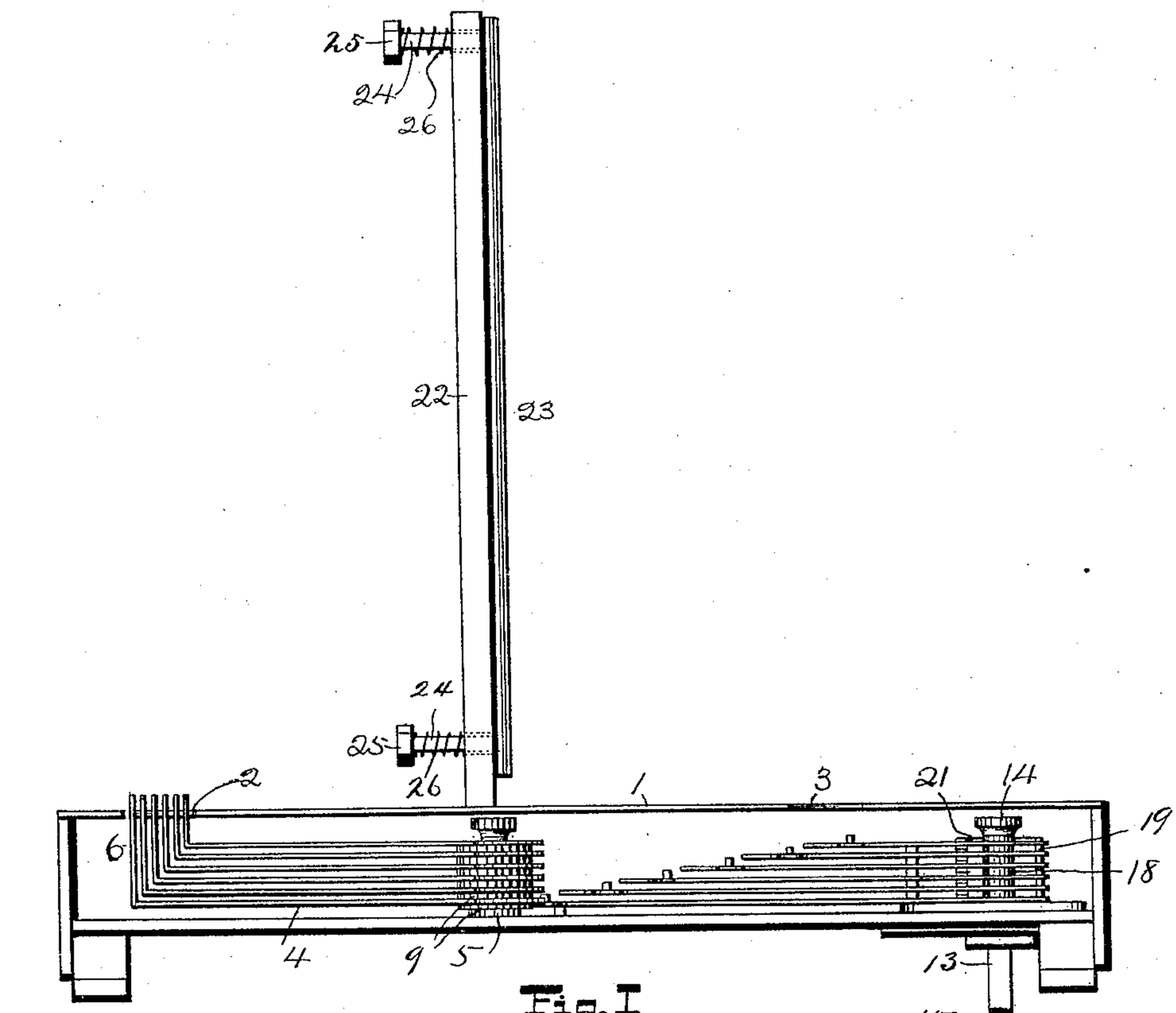

Fig. I

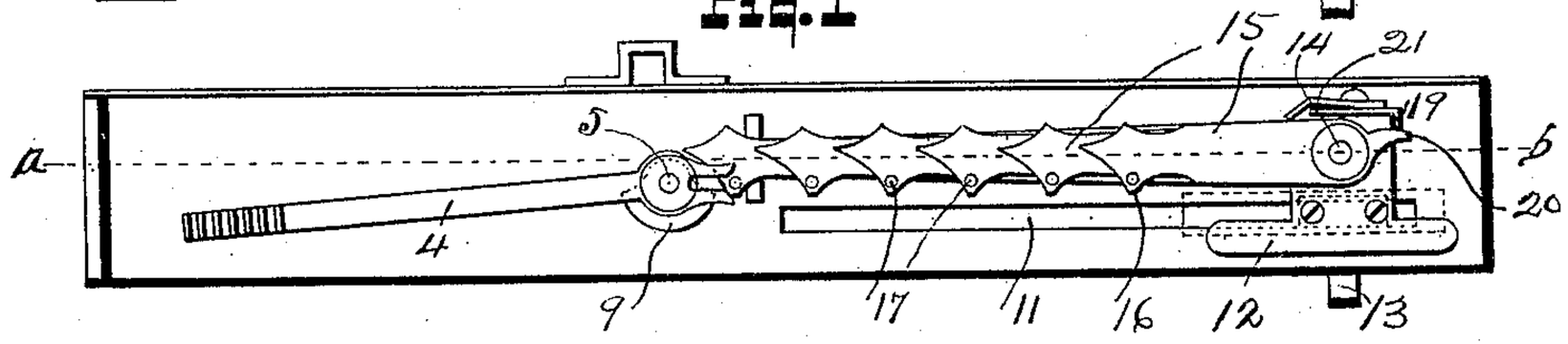

Fig. II

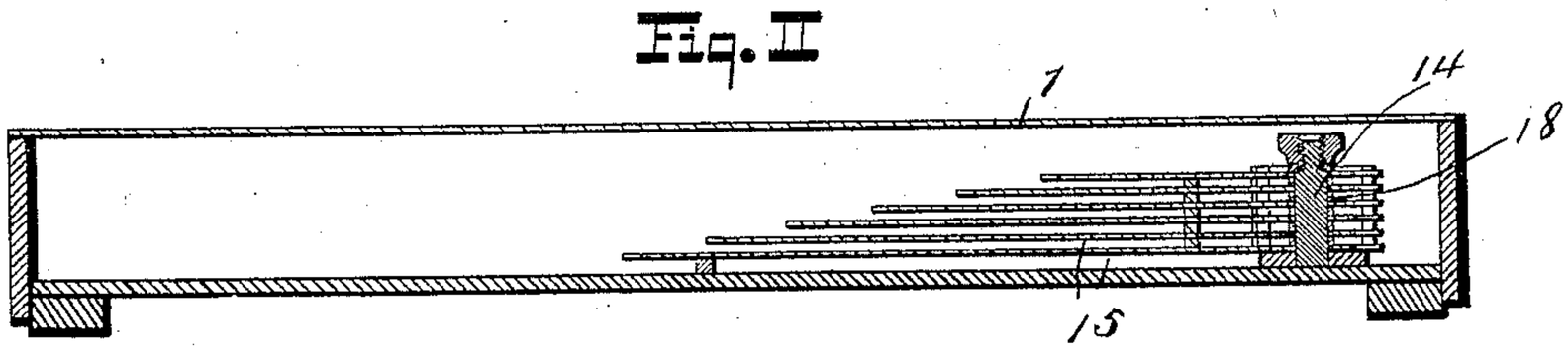

Fig. III

WITNESSES:

K. M. Imboden

Jno. McPherson

W. O. Campbell, INVENTOR,

BY

House and Hadley

HIS ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

W. O. CAMPBELL.

LEAF TURNING DEVICE.

No. 574,659. Patented Jan. 5, 1897.

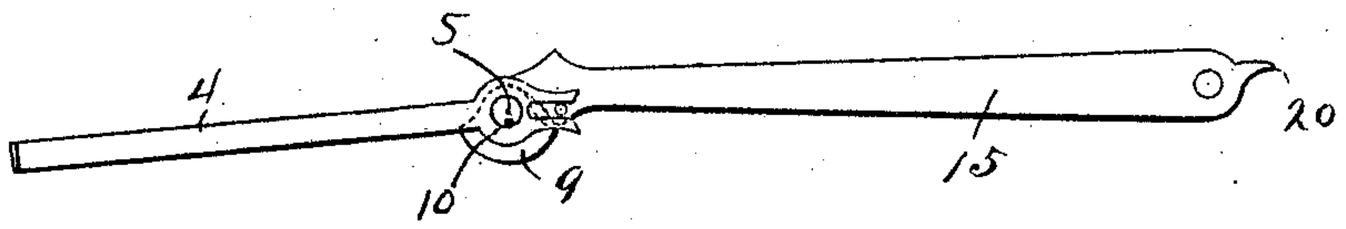

Fig IV

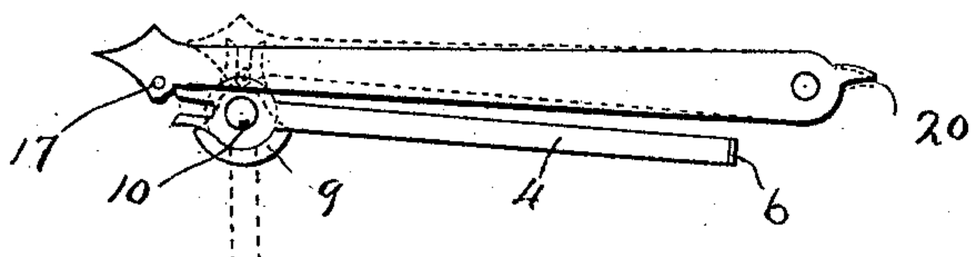

Fig V

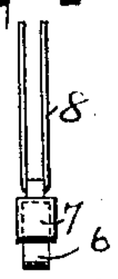

Fig VI

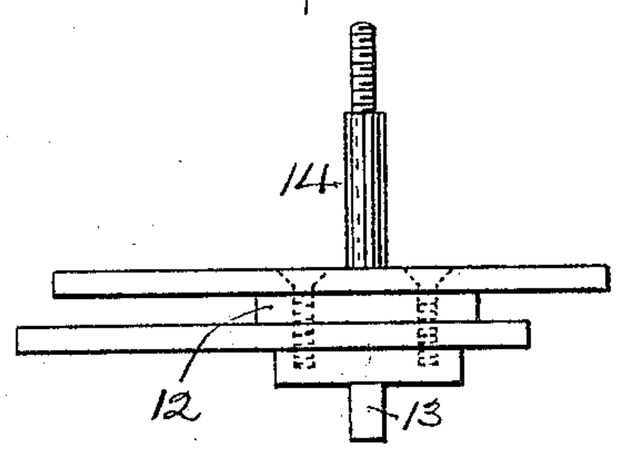

Fig VII

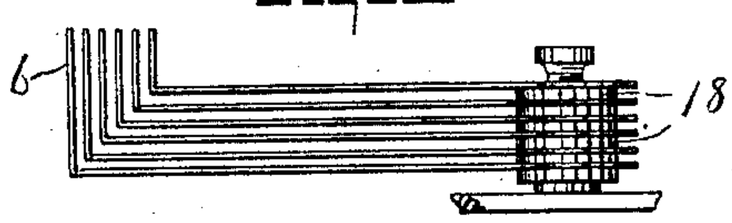

Fig VIII

Witnesses
K. M. Imboden
Jno. McPherson

Inventor,
W. O. Campbell, By
House and Hadleys,
His Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WINDSOR O. CAMPBELL, OF KANSAS CITY, MISSOURI.

LEAF-TURNING DEVICE.

SPECIFICATION forming part of Letters Patent No. 574,659, dated January 5, 1897.

Application filed April 20, 1896. Serial No. 588,409. (No model.)

To all whom it may concern:

Be it known that I, WINDSOR O. CAMPBELL, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Leaf-Turning Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in leaf-turning devices.

The object of my invention is to provide a device for turning the leaves of sheet-music.

My invention is adapted to be used in connection with a piano or other similar instrument.

My invention consists in certain novel features of construction hereinafter fully set forth, and described in the accompanying drawings illustrative of my invention.

Figure 1 represents a front elevation view. Fig. 2 represents a top view with the cover of the box removed. Fig. 3 represents a longitudinal vertical sectional view taken on the dotted lines *a b* of Fig. 2. Fig. 4 represents a plan view of one of the pivoted leaf-arms in an open position, together with its operating cam-arm. Fig. 5 represents a plan view of the same in the closed position. The position of the parts when the leaf-turning arm is partially revolved is shown in dotted lines in this figure. Fig. 6 represents an elevation view of the leaf-attaching device with which each leaf-arm is provided. Fig. 7 represents a front view of the sliding block with the cam-arms removed therefrom. Fig. 8 represents a front elevation view of the leaf-turning arms, cams, and central pivot-post.

Similar numerals of reference indicate similar parts.

1 indicates the inclosing casing provided with a longitudinal opening in its front and two openings 2 and 3 in the front edge of the cover, which permit the pivoted leaf-arms 4 to pass from their open to their closed positions. Secured to the upper side of the bottom plate of the box or casing 1, near its center, is a vertical post 5. Upon this post are pivoted the leaf-arms 4. These leaf-arms are horizontally disposed and are provided each with a vertical opening near its inner end revolubly fitted to the post 5. The outer end of each leaf-arm is provided with a vertical projection 6, to which is removably fitted a thimble 7, to the upper end of which are secured two vertical arms 8, between which is placed one of the leaves to be turned. The inner end of each of the arms 4 is bifurcated. The lowest leaf-arm is the longest, and each arm is shorter than the one directly below it, so that the arms may fold together without interference one with the other. Between each two of the leaf-arms and below the lowest leaf-arm upon the post 5 is a cam-disk 19, each of which is provided with a central opening fitted to the post 5, and a tongue 10, fitted within a longitudinal groove in the outer periphery of the post 5. This tongue and grooved connection of the cams 9 and the post 5 is to prevent circumferential movement of the cam. The rear edge of each of the cams 9 is forwardly beveled upon each side of the post 5. Movably fitted within a longitudinal slot 11 in the base-plate of the casing 1 and to the right of the post 5 is a slide-block 12, the front and rear sides of which are provided with longitudinal grooves, within which are located the edges of the base-plate next to the slot 11. From the under side of the base-plate forwardly extends an arm 13, by which the hand moves the slide-block to the right or left of the slot 11. Secured to the upper side of the slide-block is a vertical post 14, upon which is pivoted, near their right ends, a series of cam-arms 15, located one above the other and adapted to operate between the leaf-arms 4. The front side of each of the cam-arms 15 is provided with a forwardly-projecting convex curved portion 16, which is in line with and adapted to follow along the rear edge of one of the cam-collars 9. Near the front of the said curved portion 16 and secured to the upper side of the cam-arm is a pin 17, adapted to enter the slot in the bifurcated end of the leaf-arm 4.

Between each two of the cam-arms 15 upon the post 14 is a collar 18, corresponding in thickness to the cam-arms 15. Secured to the upper side of the slide block and to the right and rear of the post 14 is a vertical post 19. Each of the cam-arms at its right end is provided with a projection 20, adapted to strike against the front face of the post 19, for the purpose of preventing too far a for-

ward movement of the left end of the cam-arm. Secured at its right end to the post 19 is a vertical comb-shaped spring 21, each tooth of which presses against the rear edge of the cam-arm which is in front of it.

The cam-arms 15 are all of different length. The distance between the posts 17 of adjacent cam-arms is sufficient to allow one of the cam-arms to turn its leaf-arm a half-revolution before the projection 17 on the adjacent cam-arm operates to turn the adjacent leaf-arm. Secured to the top of the casing and to the rear of the post 5 is a vertical post 22. Parallel therewith is a vertical post 23, the upper and lower ends of which are provided with two horizontal arms 24, each of which passes through a transverse opening in the post 22. The outer end of each of the arms 24 is screw-threaded and is provided with a nut 25. Encircling each of the arms 24, between the nut 25 and the post 22, is a coiled spring 26.

My invention is operated as follows: The leaves that are to be turned are inserted at their rear edges between the clamping-rods 22 and 23, and a leaf is inserted one between the fingers of each of the arms 8. The length of the arms 4 is such as to engage each leaf near the middle. Before inserting the leaves the slide-block is moved to the left of the slot, thus turning all of the leaf-arms to the right-hand position. Then by seizing the projection 13 with the hand the slide-block is drawn to the right. The shortest cam-arm has its projection 17 engage with the slot in the bifurcated end of the upper leaf-arm. By continuing to draw the slide-block to the right the convex face of the cam-arm follows around the cam-face upon the rear of the cam-collar 9, forcing the left end of the cam-arm to the rear until the center of the post 5 has been passed, after which the tooth on the spring 21 forces the outer end of the cam-arm forward until the projection 20 has come in contact with the front of the post 19. By this time the leaf-arm has been revolved half-way around, thus turning the leaf of music so that the next page may be read. The remaining leaves are turned in the same manner, that is, by continuing to force the slide-block to the right. In case it is desired to turn a leaf backward for the purpose of repeating the reading of the music upon the former page the slide-block is moved to the left.

Various modifications of my invention may be made without departing from its spirit.

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

In a leaf-turner, the combination with a suitable frame, of a post secured thereto, a leaf-turning arm provided at one end with a leaf-engaging device and at the other end with a slot, a cam mounted upon the said post, an operating-arm secured at one end to a support longitudinally movable upon the frame, the other end of the operating-arm being transversely movable and provided with a projection adapted to engage the slot in the leaf-turning arm, the transversely-movable end of the operating-arm being adapted to engage the cam at the same time the leaf-turning arm is engaged by the operating-arm, substantially as described.

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

WINDSOR O. CAMPBELL.

Witnesses:
L. CARRICK,
U. G. CRANE.