UNITED STATES PATENT OFFICE.

JOHN B. STURZL, OF HILES, WISCONSIN.

LEAF-TURNING DEVICE.

1,213,297.


To all whom it may concern:

Be it known that I, JOHN B. STURZL, a citizen of the United States, and resident of Hiles, in the county of Forest and State of Wisconsin, have invented certain new and useful Improvements in Leaf-Turning Devices; and I do hereby declare that the following is a full, clear, and exact description thereof.

The present invention relates to new and useful improvements in music leaf turners, more particularly of that simpler type including a single turning frame.

The present invention resides in the general improvement of devices of this character and a more specific object is to provide a leaf turning device which is of an exceedingly simple structure to provide for economy in manufacture and for an exceeding compactness and durability of the finished device.

A further object resides in the provision of a leaf turning device which may be operated electrically.

With the above and other objects and advantages in view, the invention resides more particularly in the novel combination, arrangement and formation of parts more particularly hereinafter described and particularly pointed out in the appended claims.

In the drawings: Figure 1 is a front elevational view of the improved leaf turning device. Fig. 2 is a horizontal sectional view through the lower portion thereof on the line 2-2 of Fig. 1.

Referring now more particularly to the accompanying drawings, 5 designates the body plate of the device which may be either adapted to be set on the music rack of a piano or like instrument, or which may comprise the upper portion of a music stand, and this plate is cut away to provide a relatively light skeleton structure and has horizontal lips 6 struck upwardly from its lower side portions to form sheet seating ledges. The lower edge portion of the plate is rearwardly offset at 7 to provide space for the operating means of the turning shaft 8, which carries the turning frame 9 and this turning shaft 8 extends transversely of the plate, and is journaled at its ends in bearing brackets 10 carried by the top and bottom edge portions of the plate. The plate is also provided with a transverse groove 11 struck thereinto which serves to partially house the shaft, to procure a compactness of structure and to assist in retaining leaves on the plate. This groove 11 together with the offset lower edge portion 7 of the plate also serves as a substantial brace means therefor.

The present device is shown as equipped with a manual shaft operating means A at the left hand side thereof and an electrical operating means B at the right hand side thereof, although these two types of operating means may be selectively employed in preferred embodiments of the invention. Each operating means includes a shaft 12 having its intermediate portion slidably journaled in a bracket sleeve 13 secured to and projecting outwardly from the lower portion 7 of the plate and holding the shaft for movement transversely at the outer side of the lower end of the turning shaft 8. The lower end of the turning shaft is provided with a pair of pins 14 which project therefrom at right angles to each other, and both pins are so disposed as to extend at an angle of 45 degrees to the plane of the plate when the turning shaft is in either limit of movement, one of the pins thus projecting outwardly in either limit of movement, these pins being disposed to move in different horizontal planes each including the axis of one of the shafts 12 with which the respective pins are adapted to engage. Each shaft 12 is provided at its inner end with a bifurcated head portion adapted to engage the respective pin, and thus to move the turning frame from one side of the plate to the other, the shaft corresponding with the respective outwardly projecting pin 14 is moved inwardly and engages the pin with a cam action to turn the frame through a major portion of its movement, the remaining movement of the frame being procured by means of gravity and the momentum imparted thereto.

Each of the shafts 12 is held against turning movements in its respective sleeve 13 by any suitable means such as the pin and slot connection 15, and the shafts are urged outwardly to initial position by expansile springs 16 coiled thereon between the sleeve 105 and an outer head member, the head member in the mechanism A comprising a finger piece 17 and the head member in the mechanism B comprising a solenoid bar 18 operating in conjunction with a coil 19 which receives the spring in its bore when the shaft is retracted, and which forms part of an
electric circuit including a suitable source of energy 21, and a switch 22 whereby the mechanism may be operated by simply pressing a convenient button.

In connection with the manually operated mechanism A, it is noted that for the finger piece 17, a suitable lever structure may be substituted for operating the mechanism A, the application of such lever structure being entirely obvious and conventional and consequently not shown. The turning frame carries a sheet engaging clip 28 and either of these clips may be carried by the turning member and by the frame if desired to assist in holding the sheets thereon.

I claim:

1. A leaf turning device comprising a body frame, a turning frame including a transversely journaled shaft on a body frame, a pair of pins projecting laterally from longitudinally spaced portions of the shaft, operating shafts movable transversely past the first shaft and engageable with the respective pins, and each pin being disposed on the shaft at an angle to its respective operating shaft when in operating position.

2. A leaf turning device comprising a body frame, a turning frame including a shaft journaled transversely thereon, a pin projecting laterally from said shaft, an operating shaft mounted for slidable movement transversely of the first shaft to engage said pin, a solenoid coil surrounding said operating shaft, and a solenoid armature formed at the adjacent end of said operating shaft.

In testimony that I claim the foregoing I have hereunto set my hand at Hiles, in the county of Forest and State of Wisconsin, in the presence of two witnesses.

JOHN B. STURZL.

Witnesses:

Fred Tucker,

Alfred Hanson.