

B. F. SOUTHER.
MUSIC LEAF TURNER.
APPLICATION FILED JAN. 14, 1910.

1,015,092.

Patented Jan. 16, 1912.

3 SHEETS—SHEET 1.

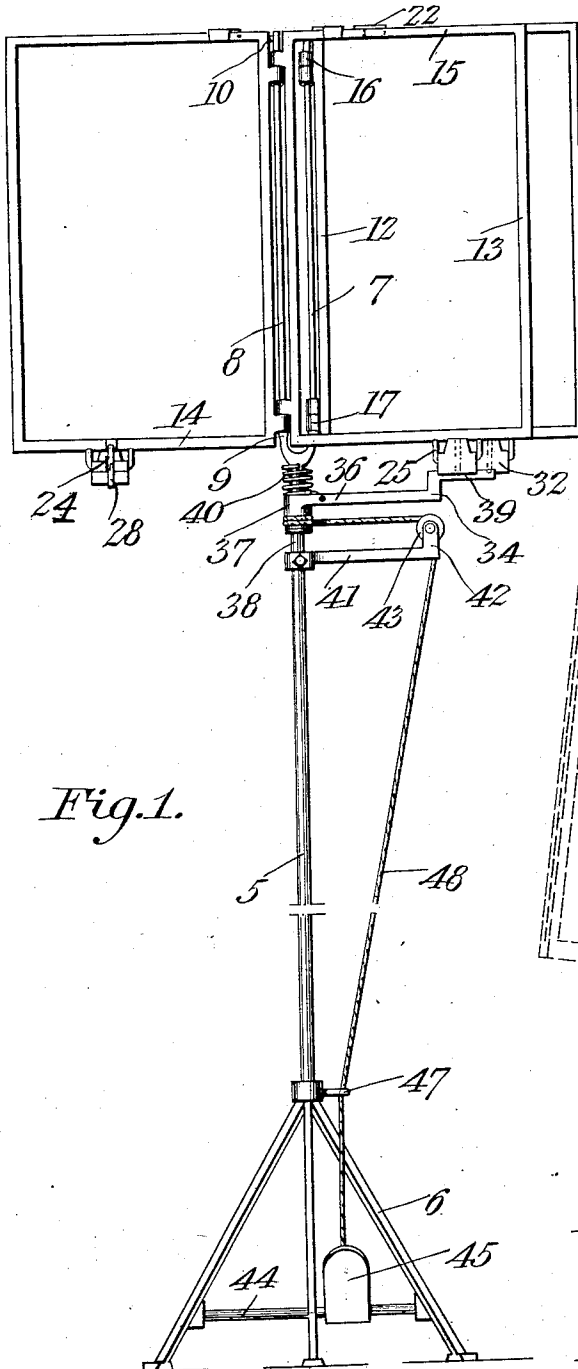


Fig. 1.

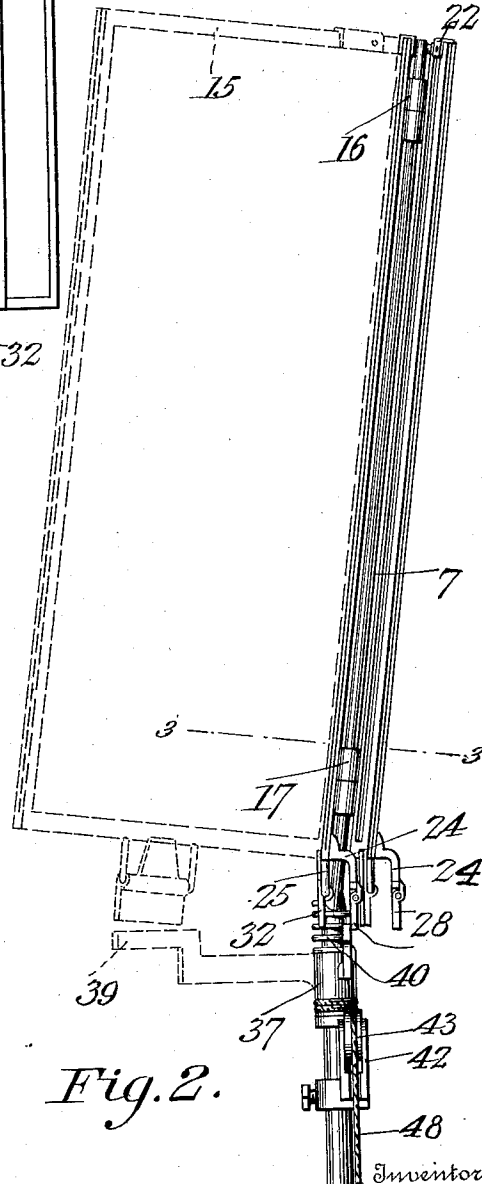


Fig. 2.

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3 SHEETS--SHEET 2.

Fig. 4.

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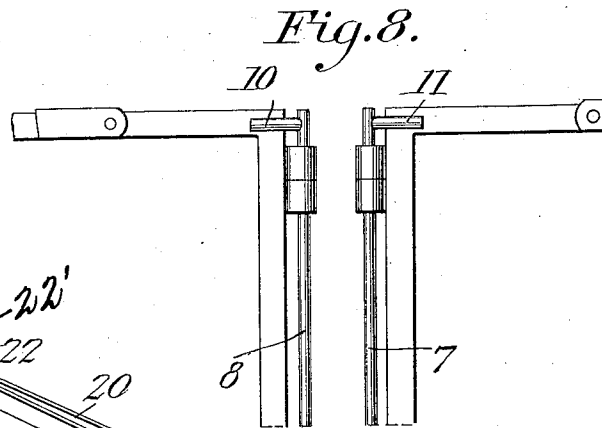
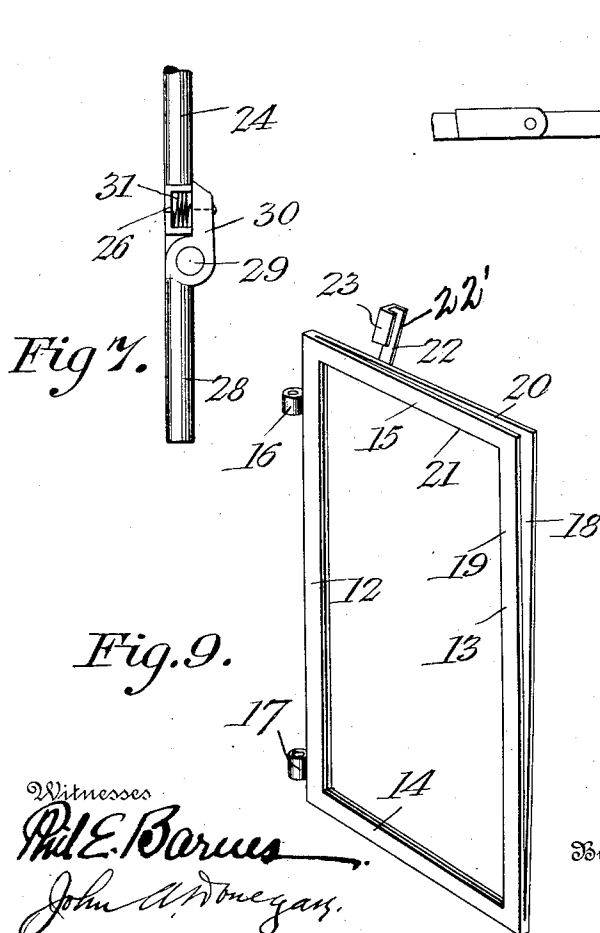
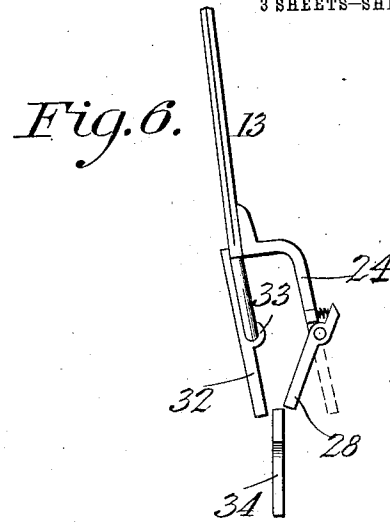
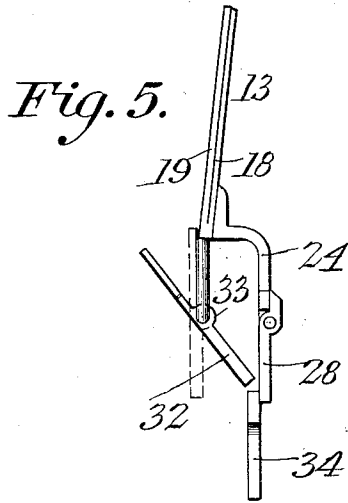
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3 SHEETS-SHEET 3.



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MUSIC-LEAF TURNER.

1,015,092.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, BENJAMIN F. SOUTHER, a citizen of the United States, residing at Berkeley, in the county of Alameda and State of California, have invented new and useful Improvements in Music-Leaf Turners, of which the following is a specification.

This invention relates to improvements in music leaf turners and has for its object the provision of a device of that kind provided with a plurality of leaf holders and a selector arm adapted to turn said leaf holders in opposite directions so that when the music of a sheet held by one of the holders is turned out of view and it becomes necessary to repeat what has already been played the holder may be returned in a rapid and expeditious manner.

Another object is the provision of an improved form of leaf holder so constructed that when the device is used in the open air the danger of the leaf becoming disengaged from the holder by gusts of wind, will be positively prevented.

A further object is the provision of an improved form of holder so constructed that the leaf holding frames when mounted thereon will have their opposite ends in the same plane.

With these and other objects in view, which will more fully hereinafter appear, the present invention consists in certain novel details of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings and more particularly pointed out in the appended claims; it being understood that various changes in the form, proportion, size, and minor details of the device may be made, within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, forming a part of the specification:—Figure 1 is a front elevation of the device. Fig. 2 is a side elevation thereof showing the position of one of the leaf holders in dotted lines and in the act of being turned to one side of the support. Fig. 3 is a sectional plan view on the line 3—3 of Fig. 2. Fig. 4 is an enlarged front elevation of the upper end portion of the device showing the position of the selec-

tor arm when turning the leaf holders in one direction. Fig. 5 is a detail side elevation of the lower portion of one of the leaf holders and showing the construction of the dogs by means of which the leaf holder is turned in opposite directions and also showing the selector arm after having passed one of said dogs. Fig. 6 is a view similar to Fig. 5 but showing the position of the selector arm after it has passed the dog opposite to that shown in Fig. 5 and moving into position to turn the leaf holder in a direction opposite to that which it will turn in Fig. 5. Fig. 7 is an enlarged detail of a portion of the dog arm for turning the frames from left to right. Fig. 8 is a rear elevation of the upper portion of the device and showing the stops which limit the movements of the music holders. Fig. 9 is a detail perspective of one of the leaf holders.

Similar numerals of reference are employed to designate corresponding parts throughout.

The device about to be described is shown applied to a music stand of the tripod type. It must be understood however that I am not to be limited to this specific application, since it will be understood, from what will appear later, how the device might be applied directly to a musical instrument such as a piano and operated, without departing from the spirit of the invention.

As shown in Fig. 1 the support includes a standard designated by the numeral 5 and inclined outwardly from the lower end of the said standard are a plurality of legs 6 which form a support for the standard and prevent the latter from toppling. The upper end of the standard is bifurcated the prongs of said bifurcation being parallel, whereby what will subsequently be termed pintles 7 and 8 are provided and the function of which will appear later. The lower ends of the pintles are somewhat enlarged as shown at 9 and form supports for the leaf holders. Extending laterally from the upper ends of the pintles 7 and 8 are a pair of arms 10 and 11, best shown in Fig. 8, and which serve to limit the outward movement of the leaf holders.

In the present construction four leaf holders are employed two of which are mounted on each of the pintles 7 and 8. With this

construction it is evident that the weight on each pintle will be reduced and the danger of bending practically obviated.

By reference now to Figs. 1, 4 and 9 it will be seen that each of the leaf holders conforms to the shape of a rectangular frame the opposite sides of which are designated by the numerals 12 and 13 and the upper and lower ends of which are designated by the numerals 14 and 15. Adjacent the opposite ends of one of the longitudinal sides pintle lugs 16 and 17 are provided which receive one of the pintles.

The leaf holders are of peculiar construction and by reference to Fig. 9 it will be seen that the longitudinal side 13 or that opposite to the side 12 carrying the lugs 16 and 17 is bifurcated in the direction of its length, whereby clamping surfaces 18 and 19 are provided so also is the upper end 15 pivoted for the major portion of its length, whereby clamping surfaces 20 and 21 are provided which form continuations of the clamping surfaces 18 and 19. When it is understood that the leaf holders are of resilient metal, it will be evident that these clamping surfaces may be sprung apart as shown in Fig. 9, sufficiently far to permit a music leaf to be inserted therebetween. By referring again to Fig. 9 it will be seen that pivoted to the medial portion of the upper end 15 of each of the leaf holders is a latch 22. This member comprises a shank portion one end portion of which is provided with a right angular extension 23 one side of which is parallel with and spaced from the shank 22' sufficiently far to bear on the clamping surface 21 when the latter bears on the clamping surface 20, whereby through the cooperation of the shank 22' the said clamping surfaces may be held bearing one upon the other so as to secure the sheet interposed therebetween.

By reference now to Figs. 1 to 6 inclusive it will be seen that depending from the medial portion of the lower end of each of the music holders, and located on the opposite faces of said lower end are a pair of brackets 24 and 25. The bracket 25, or that arranged on the outer face of the lower end of the holder when the latter is moved to the right is preferably formed of a single piece of steel wire or the like bent into substantially a U-shape and having portions adjacent the terminals of its opposite limbs bent inwardly and fixedly secured to the said lower end of the holder. The bracket 24 or that arranged on the opposite face of the lower end of the holder is somewhat different in structure than the bracket 25 and comprises an outwardly and downwardly extending arm having adjacent its lower end an inwardly extending chamber 26, best shown in Fig. 7. The lower end portion of the arm 24 is provided with a rabbet 27,

best shown in Fig. 4, said rabbeted portion being provided with a transverse opening. A dog is designated by the numeral 28 and corresponds in thickness to that of the bracket 24 and adjacent to one end is rabbeted and provided with a transverse opening adapted to align with the opening at the lower end of the arm 24, these openings receiving a pivot pin 29 by means of which the lug and arm are pivotally united and that portion of the dog 28 extending upwardly from its pivot is slightly offset and designed to bear on the outer side of the arm 24 and overlies the chamber 26, as shown at 30. Located in the chamber 26 is a helical retractile spring 31, one terminal of which is fixedly secured to the inner end of the chamber and its opposite end to the end portion of the extension 30. By provision of the extension 30 it will be evident that outward movement of the lug beyond the plane of the arm 24 will be prevented, movement however in the opposite direction will be permitted and the spring 31 will return the lug to the plane of the arm 24 when the force which moves it is removed.

Mounted on the bracket 25 is a dog 32. This member is preferably formed of a single piece of sheet metal oblong in contour and provided adjacent to its opposite sides with ears 33 which receive the horizontal portion of the bracket 25. The dog 32 is of such length that when positioned on the bracket 25 its lower end will be in a plane with the lower end of the dog 28 while its upper end will bear on the outer face of the lower end of the leaf holder, when the latter is moved to the right as shown in Fig. 1. With this construction it will be evident that the movement of the dog 32 is limited in one direction but may be moved inwardly or in a direction opposite to the movement of the dog 28.

What will subsequently be termed a selector arm is designated by the numeral 34. This member comprises a shank portion 36 one end of which terminates in a sleeve or hub 37 the axis of which is perpendicular to the horizontal axis of the shank 36 and one end of which extends considerably in advance of one side of the shank. The sleeve 37 receives the upper end portion of the shank 5 and is located a trifle below the juncture of the pintles 7 and 8, as shown in Fig. 1, with the end projecting in advance of one side of the shank 36, extending downwardly. A washer or bushing 38 may be secured to the standard 5 and bear on the lower end of the sleeve, whereby the selector arm will be supported against downward movement. That end of the shank 36 opposite to the end on which the sleeve 37 is formed terminates in an upwardly and outwardly and substantially right angular nose 39, which extends to a point in a plane with

the dogs 28 and 32 when the latter are on either the right or left of the support.

Encircling the standard 5 and located between the juncture of the pintles 7 and 8 and upper end of the sleeve 37 is a helical compression spring 40 one terminal of which is fixedly secured to the standard and the opposite terminal to the inner end portion of the shank 36 of the selector arm. The spring 40 is so positioned that it normally holds the selector arm to the right and the nose in engagement with the lugs on the leaf holders which are arranged to the right of the support.

In order that the selector arm may be oscillated manually, the following construction is employed:—By reference now to Fig. 4 it will be seen that a bracket arm is provided, which includes a shank portion 41 one end of which terminates in a sleeve the axes of which are at right angles to the shank 41 and which receives the standard 5 and is located directly below the lower end of the sleeve 37 of the selector arm. The outer end of the shank 41 terminates in an upward extension 42 extending to a point in a horizontal plane with the sleeve 37, and provided with a grooved sheave 43. Journaled in boxings carried by the opposite inner faces of two of the legs 6 of the tripod is a shaft 44 and fixedly secured to one end portion of this shaft is a treadle 45. Extending laterally from the standard 5 and located directly above the legs 6 is a guide 47 in the form of an eye bolt, and trained over the sheave 43 and through the guide 47 with its lower terminal fixedly secured to the treadle 45 and its upper end portion coiled around the sleeve 37 is a cord or cable 48 which when the treadle is depressed will operate to turn the selector arm from right to left.

Having now described the construction of the device its operation will be given: Assuming that the leaves are so positioned that all will lie to the right of the device as shown in Fig. 1, it will be seen now that when the treadle 45 is released as shown in Fig. 1 the selector arm will, by virtue of its spring tilt the dog 32 as shown in Fig. 5 and move to a position between the said dog 32 and dog 28 whereupon it will be prevented from moving farther by virtue of the dog 28, as before described. When the parts are in these positions and it becomes necessary to shift the outermost holder the treadle 45 is depressed whereupon the selector arm will move outwardly in the arc of a circle and abut against the dog 32. Since it is impossible for the lower end of this dog to move outwardly on its pivot the result will be that the holder will move outwardly as shown by dotted lines in Fig. 2 and after it has past the center of the pintle 8 to which it is connected will gravitate and fall to the position shown in Fig. 1. Upon release of

the treadle 45 the selector arm will again move past the outermost dog 32 of the next holder and into the position just described so that when the treadle is depressed the second holder will be turned to the right, and so on until the entire number of holders are shifted from the right to the left. When one or more of the holders have been shifted to the right and it becomes necessary to repeat a portion of the music on one of the shifted pages the treadle 45 is depressed to its extremity whereupon the nose 39 of the selector arm will move into engagement with the dog 28 which is now presented outwardly on the holders arranged on the right of the support, and by virtue of the mounting of the said dog 28 will tilt the same and move to a position best shown in Fig. 6. After the nose of the selector arm has cleared the arm 28 the latter by virtue of its spring 31 will assume the position shown by dotted lines in Fig. 6. During this operation it will be remembered that the spring 40 will be tensioned so that when the treadle is released the said spring will operate to automatically turn the selector and the latter will again move outwardly this bearing on the dog 28 and since outward movement of the latter is prevented by virtue of the extension 30 it is evident that the holder will be moved from the right to the left. It will be evident, owing to the rearward inclination of the pintles 7 and 8 that the holders will move in an arc oblique to the plane of the arc in which the selector arm moves so that when the selector arm moves the holders outwardly and the same approach their centers the dogs 28 and 32 will move out of the path of the nose 39 as clearly shown by dotted lines in Fig. 2.

From the foregoing, it is evident that I have provided a device which is comparatively simple in structure and inexpensive in manufacture, embodying few parts and these so arranged that the danger of derangement will be reduced to a minimum.

I claim:—

1. A music leaf turner comprising a vertical support, a leaf holder hingedly mounted on the upper end portion of said support, a pair of spaced dogs pivotally mounted on said holder, said dogs being adapted for movement in opposite directions, and a selector arm having one end journaled on the upper end portion of the support and below the leaf holder, said selector arm being movable in a plane oblique to the plane of the movement of the leaf holder and adapted to engage said dogs independently, whereby said leaf holder may be moved in opposite directions.

2. A music leaf turner comprising a vertical support, a leaf holder hingedly mounted on the upper end portion of said support, a pair of spaced dogs pivotally mounted on

said holder, said dogs being adapted for movement in opposite directions, a manually operated selector arm having one end journaled on said support and adjacent to said
5 leaf holder, said selector arm being movable in a plane oblique to the plane of movement of the leaf holder and adapted to engage with one of said dogs whereby said leaf holder is operated in one direction, and

means for operating the selector arm in the 10 opposite direction when said selector arm engages with the other of said dogs.

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

BENJAMIN F. SOUTHER.

Witnesses:

J. A. BONHAM,

C. A. PARK.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."