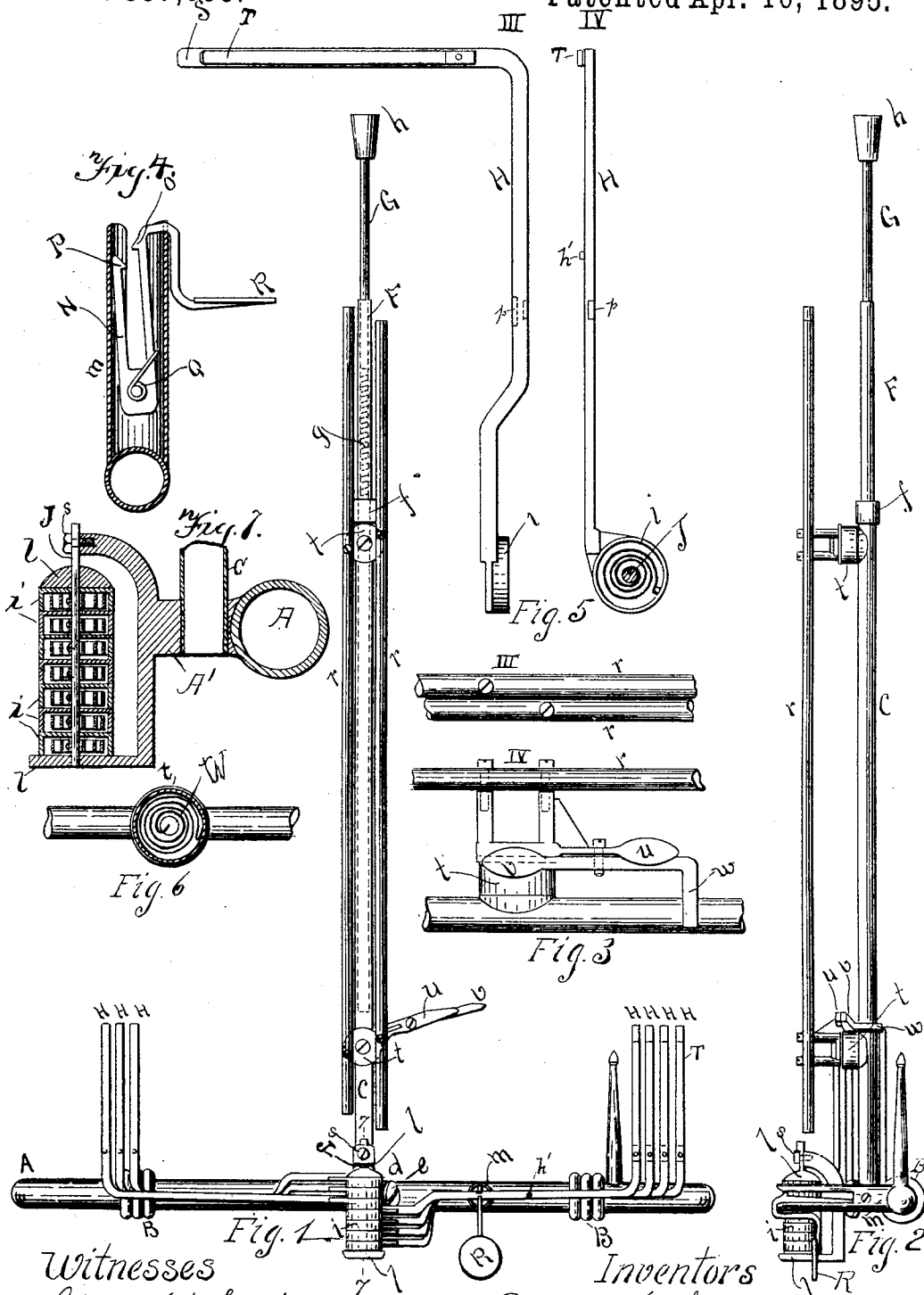


(No Model.)

J. H. SOUTHWELL & A. J. LLOYD.
AUTOMATIC MUSIC LEAF TURNER.

No. 537,653.

Patented Apr. 16, 1895.



Witnesses

Edwin W. Stocker
Geo M. Kerns

Inventors

James H. Southwell
Andrew J. Lloyd
per John J. Shugart
Attorney.

UNITED STATES PATENT OFFICE.

JAMES H. SOUTHWELL AND ANDREW J. LLOYD, OF ROCK ISLAND, ILLINOIS.

AUTOMATIC MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 537,653, dated April 16, 1895.

Application filed July 5, 1894. Serial No. 516,545. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. SOUTHWELL and ANDREW J. LLOYD, citizens of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented a new and useful Automatic Music-Leaf Turner, of which the following is a specification.

The object of our invention is to afford facilities for the rapid and easy turning of such sheets of music by the musician while playing. We attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical or front view of the entire machine or contrivance. Fig. 2 is a side view of the same. Fig. 3 is a detail side view of that part of the machine showing the operation of the handles *u* and *v* with reference to separating and closing the rods *rr*. Fig. 4 represents a detail view of the tube *m* and showing the restraining catch and escapement *N* and the manner of the operation of the lugs or catches *O* and *P* and the spring *Q*. Fig. 5 III represents a side view, and Fig. 5 IV represents a sectional view, of the leaf carrying arms *H*. Fig. 6 shows the location and manner of fastening the steel spring *W* in the drums *tt*, and Fig. 7 is a sectional view of the lower portion of the turner taken on the line 7—7 of Fig. 1.

Similar letters refer to similar parts throughout the views.

The machine or contrivance is composed first of the base or bar *A* made of sufficient size and length to properly fit and rest on the music rest of a piano or other like instrument and being fitted with rubber bands or rings shown by *B B* for the purpose of hindering it from slipping and also to prevent its marring the woodwork of the instrument. At its center the bar *A*, or base, is provided with a laterally projecting perforated stud or spur *A'* in which the round hollow tube *C* shown in Fig. 1 is placed at right angles to the bar *A* and is held securely in place by means of the thumb screw *e*. This will admit of the tube *C* and its attachments being detached from the base or bar *A* and its attachments for the purposes

of packing and carrying easily. The tube *C* however may be permanently affixed to the base *A* without in any manner affecting the successful operation of the music leaf turner. The tube *C* as stated before is hollow and is penetrated by the tube *F* as indicated by the dotted line in *C* and by means of the adjusting clamp nut fitted upon the upper end of the tube *C* said tube *F* may be adjusted to different lengths as may be required and the occasion for which will hereinafter be explained. The hollow tube *G* fits into the tube *F* as shown in Fig. 1 and rests on and is attached to a strong spiral spring shown by *g* which is located in the tube *F*, the purpose of the tube *G* and the spring *g* being to afford a means whereby when desired the automatic music leaf turner when placed on a piano or similar instrument may be securely held in position by allowing the tube *G* to spring upward and press against the projecting woodwork of the instrument, and *h* is a rubber cap fitted on the tube *G* to prevent marring the woodwork when so pressed against it, and as before stated the tube *F* may by means of the adjusting clamp-nut *f* so regulate the length of this portion of the music leaf turner as to fit the instrument upon which it is used.

H H H H H H H H in Fig. 1 represent the flat leaf carrying arms each terminating in a circular box at its lower inward end as shown by *i* in Fig. 5, and all turning on the central pivot or rod *J* shown in IV of Fig. 5 which rod extends between the plates *l* and *l*. (See Figs. 1 and 2.) Between said rod or pivot *J* and the inner rim of the circular box attached to the end of the leaf carrying arm aforementioned is coiled a steel spring as shown in IV Fig. 5 one end of which spring is made fast to the rod *J* and the other to said inner circular rim of the box in manner shown by IV of Fig. 5, one of such springs being used for each leaf carrying arm required and the spring being so adjusted that the arm is normally held at the left side of the base *A*.

To provide a way for winding up the springs and securing the rod *J* from turning backward after the springs have been wound up sufficiently to throw the arms from one side of the

holder to the other, the lower end of the rod is journaled or stepped in the lower plate *l* and the upper end above the upper plate *l* is flattened and perforated and provided with a squared portion above the perforation so that after the rod has been rotated sufficiently to wind up the springs, a screw *s* is passed through the perforation into the upper portion of the spur or projection *A'* which will thus secure the rod and its accompanying parts in the desired position.

As many leaf carrying arms may be used as can be accommodated on the rod or central pivot *J* between the plates *l* and *l*.

m in Figs. 1, 2 and 4 represents a hollow tube fitted upon and made fast to the right side of the base *A* and projecting from it in a position at right angles to the ascending tube *C* and in such a position as to stand immediately in the line of the leaf carrying arms *H H H H H H H* when drawn from left to right. The tube *m* is intersliced down each side in the manner shown by Fig. 2 of sufficient width and depth to admit of the leaf carrying arms passing down and through the same where they are securely held and restrained from returning to their normal position on the left side of the base *A* by means of the restraining catch and escapement *N* in connection with the steel spring *Q* and the lug or catch *O* which engages the arm until slight pressure is made on the lever *R* (see Figs. 1 and 4) which will cause the restraining catch and escapement *N* to move forward sufficient to release one leaf carrying arm no longer restrained by the lug *O* while the same movement will cause the lug *P* to restrain and hold the next succeeding leaf carrying arm until pressure is removed from the lever *R* causing the restraining catch and escapement *N* by reason of the spring *Q* to resume the position it previously held as shown in Fig. 4 when the remaining leaf carrying arms will be at once released by the lug *P* only to be engaged and held by the lug *O* until pressure is again made on the lever *R* and in this manner the leaf carrying arms may be released only one at a time when by reason of the spring attachment between the rod *J* and the circular box at the lower end of the leaf carrying arms aforementioned the arm will make a semi-revolution from right to left.

To assist the lug *P* to enter between the arms *H* the arms may be notched at that point, as shown at *p*, and short knobs or projections *h'* may be secured to the different arms so that they will each engage with the adjacent rod and prevent them from coming close together and thereby give additional room for the lug *P* to enter between the arms.

The rods designated by *r r* in Fig. 1 which are attached to the bases or drums *tt* furnish a means whereby the inner side of sheet music or of bound music may be held and secured while the lower end of each sheet is attached and held to the leaf carrying arm

by being placed between the side of the arm proper at *S* and the steel strip *T* attached to the arm so as to form a clasp securely holding the sheet in position for turning.

Fig. 1 shows the rods *r r* parted and ready to receive the sheets or bound music while Fig. 3 (III) shows the position they are in when closed which is the normal position and in which position they are held by means of two strong steel springs coiled in the drums *tt* as shown in Fig. 6. These drums turn in such a manner as to admit of the rods being closed as in Fig. 3 (III) or parted as shown in Fig. 1. In order to part the rods to receive the sheets or bound music it is necessary to catch the handles *u v* shown in Fig. 3 (IV) and press them together until they reach the position shown by *u v* in Fig. 1 whereby by reason of the projecting arm *w* (see IV Fig. 3) from the handle *v* assuming a position at right angles to and pressing against the tube *C* as shown by *w* in Fig. 2 the rods will be held apart for the reception of the sheet or sheets of music until released when the handles *u v* and the rods *r r* will resume the position shown in Fig. 3 by reason of the action of the springs in the drums *tt* aforementioned.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. In a music-leaf turner, the combination, with a base provided with a lateral projection, of a tube secured thereto, a series of spring-actuated arms pivotally secured at the outer end of the projection, an escapement for releasing the arms, one at a time, a tube within the tube that is secured to the base, and adapted to project above the upper end thereof, a clamping nut upon the upper end of the first mentioned tube for adjusting the amount of the tube to project, a spring-actuated rod within the inner tube, the upper end of which projects beyond the same, means upon the upper end thereof and upon the base of the device, for preventing injury to the instrument, substantially as set forth.

2. In a music leaf turner the combination, with a base, with a laterally projecting spur near its center, the outer end of which is forked, of a rod seated in the lower fork and provided with a flat perforated upper end, the portion above the perforation being provided with means for rotating the rod, a screw through the perforation and into the upper fork, a series of spring-actuated arms pivotally secured to the rod, whereby when the rod is rotated and secured in position the tension of the springs is sufficient to swing the arms from one side of the turner to the other, an escapement for holding the arms at one side of the turner and releasing them one at a time, and a spring actuated rod projecting upwardly from the base and provided with means for holding the turner and automatically securing it to the instrument, substantially as set forth.

3. In a music-leaf turner, the combination,

with a base provided with means for holding it to an instrument, of a series of arms pivotally secured thereto, each of which is notched and provided with a projecting lug, an escapement for holding the arms and releasing them one at a time, said escapement being provided with two lugs, one of which engages with the outer arm, and the other one is adapted to pass between the arms at the notched portion thereof, substantially as set forth.

JAMES H. SOUTHWELL.
ANDREW J. LLOYD.

Witnesses:

JOHN BENGSTON,
H. E. LUDOLPH.