W. & R. MARK.

MUSIC TURNER.

APPLICATION FILED APR. 19, 1909.

939,525.

Patented Nov. 9, 1909.

2 SHEETS—SHEET 1.

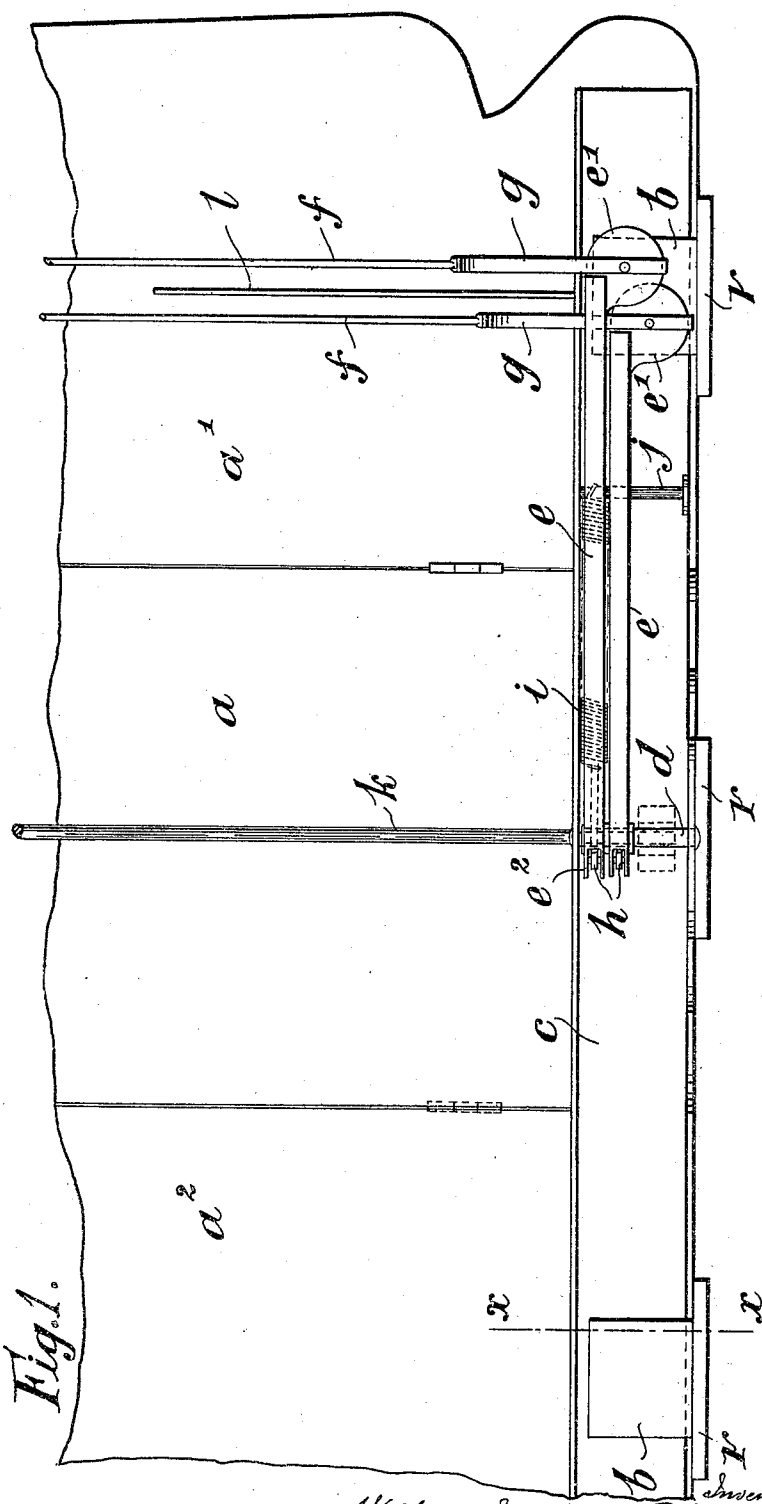

Fig. 1.

Witnesses.
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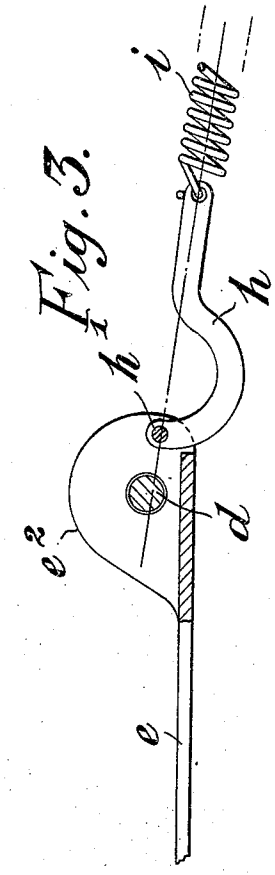

Fig. 3.

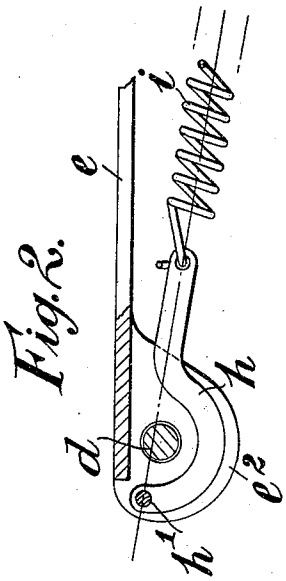

Fig. 2.

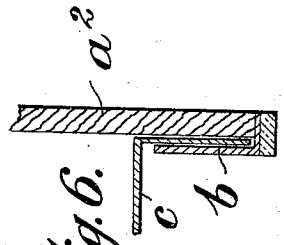

Fig. 6.

Fig. 5.

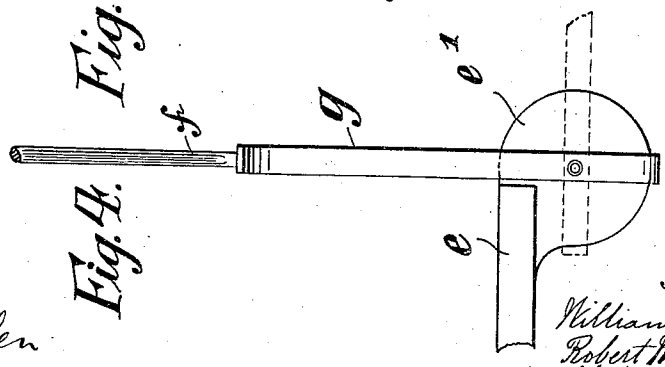

Fig. 4.

Witnesses.

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UNITED STATES PATENT OFFICE.

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MUSIC-TURNER.

939,525. Specification of Letters Patent. Patented Nov. 9, 1909.

Application filed April 19, 1909. Serial No. 490,664.

To all whom it may concern:

Be it known that we, WILLIAM MARK and ROBERT MARK, builders, residing at Durdar, Carlisle, England, have invented certain new and useful Improvements in Music-Turners; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a new or improved automatic music turner of the kind wherein spring controlled arms, provided with suitable means for engaging the sheets or pages are employed for turning the latter, the object of the present invention being to provide and arrange the springs in connection with the arms in such a manner as hereinafter set forth, that each arm, by means of one and the same spring, is retained in the forward and returned positions, the initial start to the turning movement being given by hand.

In carrying this invention into practical effect, the requisite number of arms are pivoted one above the other and provided with means comprising rods and clips whereby they may engage the sheets or pages. Each arm is under the control of a spring or suitable elastic medium such as a stretched rubber band while it is connected with the aforesaid arm by means of a link, in such a manner that when in either the forward or the returned positions, the pull of the spring or the like is respectively in advance of or behind the pivotal center of the arm so that when in the forward position, some initial start is necessary before the arm will swing over under the influence of the spring or the like. To this end, the outer extremities of the arms may be formed with enlarged portions capable of being quickly and easily engaged by hand so as to give the initial start the said arms then turning under the influence of springs or the like connected therewith by links as and in the manner hereinbefore described.

The device is detachably connected to the bottom of a back or base board, preferably formed in three parts hinged together so that the side parts or flaps may fold one over and one under the center portion for portability while to this end, the rods and clips are pivoted to the enlarged extremities of the spring controlled arms so as to be capable of turning into a horizontal position.

In order that this invention may be fully understood, it will now be described with reference to the accompanying drawings, in which:—

Figure 1 is a front elevation of the device with a part of the back or base board broken away, and showing two arms only, and the spring connected to one arm only for clearness. Fig. 2 is a detailed underside view of the extremity of one arm showing the connection of the spring thereto and the arm in the set position. Fig. 3 is a similar view to Fig. 2 after the arm has been swung over under the influence of the spring. Figs. 4 and 5 are enlarged details in front and end elevation respectively of the extremity of one of the arms and the rod and clip, for engaging sheets secured thereto. Fig. 6 is a section on line x x (Fig. 1) showing the method of connecting the frame or bracket to the back or base board.

As shown in the drawings, the device comprises the back or base board formed in three parts a, a^1, a^2, the part a^1 folding over and the part a^2 under the center part a. To the back board are secured clips b which are engaged by the vertical members of the frame or bracket c (Figs. 1 and 6) and this frame or bracket, in addition to carrying the mechanism, braces or stiffens the back board.

A vertical spindle d mounted in the frame or bracket c carries the requisite number of turning or swinging arms e each formed with an enlarged outer extremity e^1 to which is pivoted the rod f and clip g preferably formed integrally as shown (Figs. 4 and 5) and between which the lower edges of the pages or sheets to be turned are inserted, while to the bracketed extremity e^2 of each arm a link h is pivoted upon a pin h^2, the free arm of which is secured to a spring i, the other end of the said spring being connected to a vertical rod j carried by the frame or bracket c (Fig. 1) in such a manner that, when the said arm is turned to the set position, (Fig. 2) and the spring is in a state of tension, the line of "pull" is in front of the pivoted center of the arm until the initial start is given to bring the line of "pull" behind the pivotal center while when the arm has swung over and the spring is in its normal state, the line of "pull" is behind the pivotal center and serves to retain the

arm in that position until turned back by hand thereby again setting the spring.

At or about the center of the base board, a vertical rod *k* is secured at its lower extremity designed to hold the sheets of music or the like in position, while to the right hand side a shorter rod *l* is secured, designed to hold the last sheet (which has not to be turned) in place. Rubber strips *r* are secured to the bottom of the back board to take a bearing on the music desk, stand or the like.

Having now described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a music-leaf turner, the combination, with a back, of spring-controlled turning-arms pivoted at one end to the middle part of the back and having thin guide-disks at their free ends, leaf-holders, for engaging the sheets, provided at their lower ends with loop-shaped clips which straddle the said disks and the lower parts of the sheets, and pins pivotally connecting the said clips and disks.

2. In a music-leaf turner, the combination, with a back, of turning-arms having forked brackets at one end which are pivoted to the middle part of the back, said arms having also thin guide-disks at their free ends, leaf-holders provided with loop-shaped clips which are pivoted to the said disks, said clips being arranged to straddle the said disks and the lower parts of the sheets, curved links pivoted in the said forked brackets on one side of their pivot, and springs secured between the said links and back.

In testimony whereof we affix our signatures, in presence of two witnesses.

WILLIAM MARK.
ROBERT MARK.

Witnesses:
T. S. Story,
Wm. Nixon.