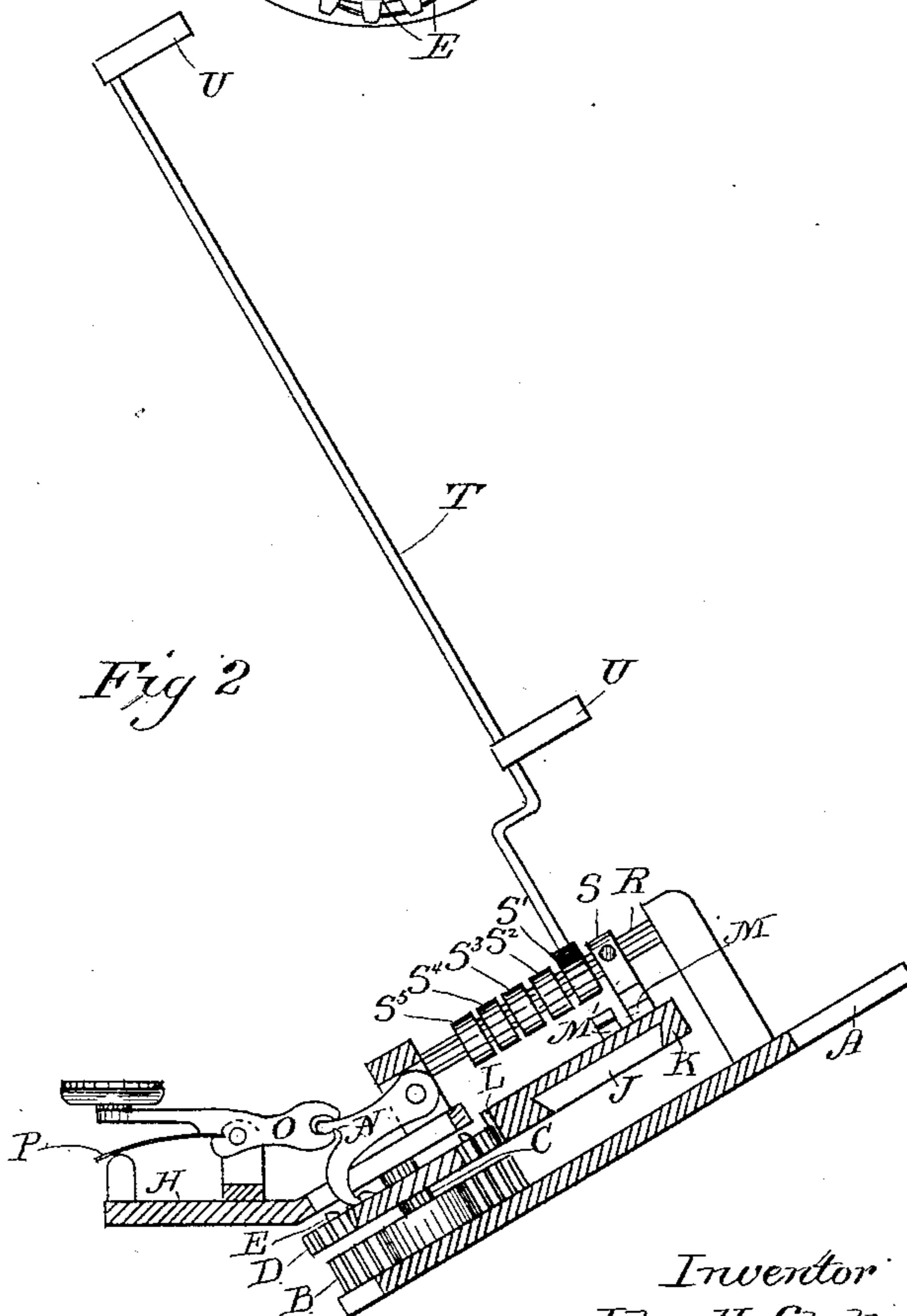
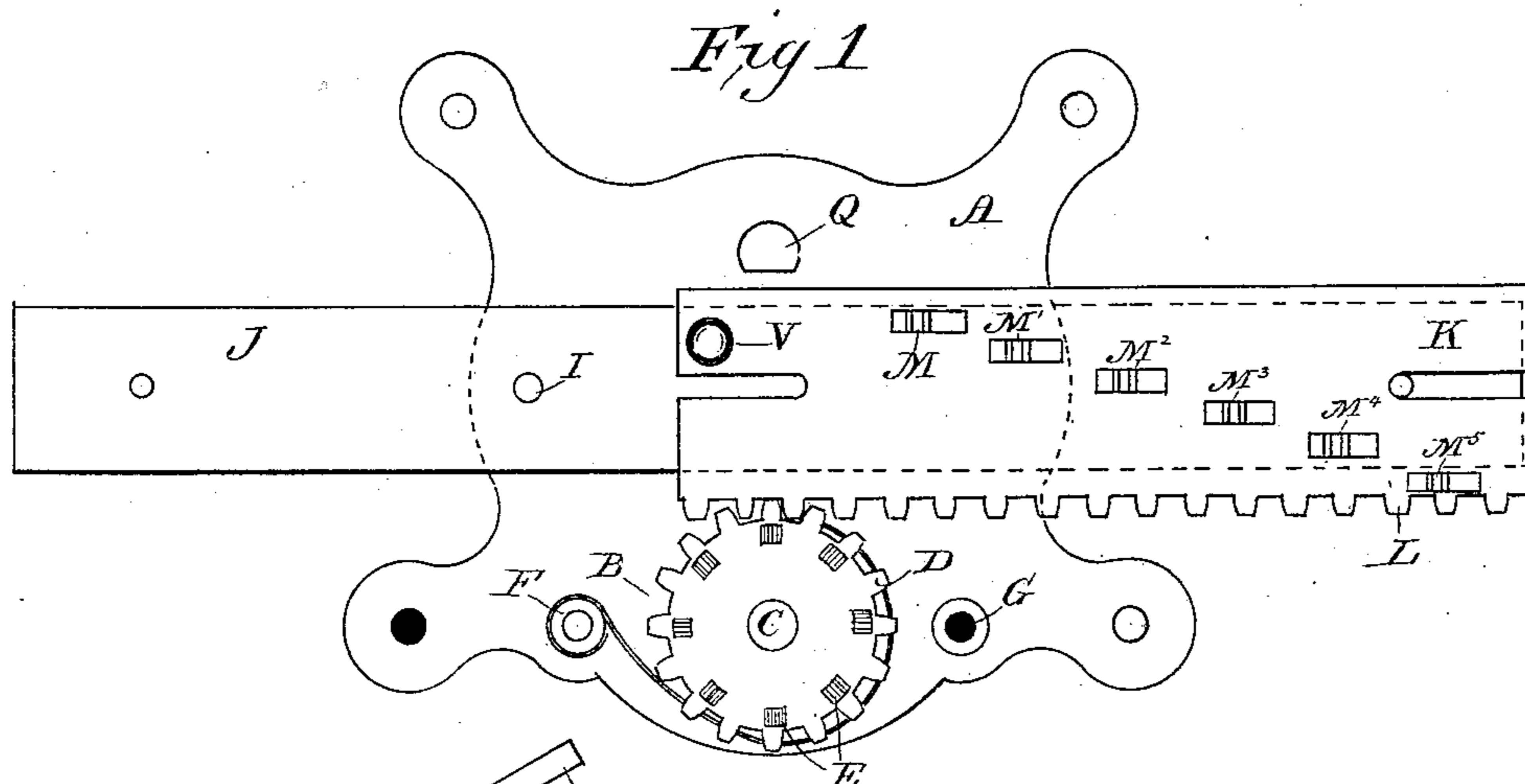


(No Model.)

J. H. SHELTON.  
MUSIC LEAF TURNER.

No. 318,398.

Patented May 19, 1885.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOHN H. SHELTON, OF BRIDGEPORT, CONNECTICUT.

## MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 312,398, dated May 19, 1885.

Application filed October 4, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. SHELTON, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Leaf-Turning Music-Racks; and I 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.

My invention relates to certain novel and useful improvements in leaf-turning music-racks, and has for its object to furnish a device of this description whereby music-leaves may be supported and turned certainly, quickly, and by a touch; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter fully and in detail explained, and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may more fully understand its construction and operation, I will proceed to describe the same in detail, referring by letters to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of my device with the bridge-plate, the segments, and their shaft removed; and Fig. 2, a cross-sectional view showing the tripping mechanism in elevation, and also the position of the segments and their wires after several of the leaves have been turned.

Similar letters denote like parts in both figures of the drawings.

A is the back plate of my device, adapted to be secured upon any musical instrument or rack, and upon its face is the coil-spring B, the inner end of which is secured to a shaft, C, whose lower end is journaled in plate A. Rigidly secured upon this shaft is a gear-wheel, D, of ordinary construction as to its periphery, but provided upon its upper surface with teeth E, whose function will be presently explained. These teeth present upon one side a vertical face, and from the top of this face are beveled backward to their base.

F G are posts set upon plate A, and to F the outer end of spring B is secured. Rest-

ing upon these posts, and secured thereto, is the bridge-plate H, and in this plate the upper end of the shaft C is journaled. I are other posts supporting a way-strip, J, upon which is mounted and adapted to travel the plate K, provided upon its edge with rack L, meshing with geared wheel D.

Formed upon the upper surface of plate K are the short racks M M' M<sup>2</sup> M<sup>3</sup> M<sup>4</sup> M<sup>5</sup>.

Pivoted in an upward projection from the bridge-plate H is an L-shaped dog, N, whose shorter end is so arranged as to catch and hold on the perpendicular surfaces of the upwardly-projecting teeth upon wheel D against the resiliency of the spring B. Pivotally attached to the heel end of the dog is a pivoted trigger, O, having a spring, P, which serves to keep it in position, and by pressure upon this trigger the dog is adapted to be lifted clear of the ends of the teeth E. Upon releasing the trigger the dog is depressed by the action of the spring P, and once more holds upon a tooth.

Q is a support extending upward from the back plate, and between this and the edge of bridge-plate H is a shaft, R, upon which are strung gear-segments S S' S<sup>2</sup> S<sup>3</sup> S<sup>4</sup> S<sup>5</sup>, and from these segments project wires T, furnished with gripping-fingers U, in which a leaf of music may be readily adjusted. The segments are of such width as to be each in the same vertical plane as the short rack bearing the similar sign. The plate K is furnished with a handle, V, by means of which it may be readily pulled along by the hand. The same end may, however, be accomplished with equal facility by a knob or key formed on the upper end of shaft C as a means of winding the spring and thereby moving the plate.

The operation of my invention is as follows: The leaves of music are first fixed in the gripping-fingers upon the wires. Then by turning all the wires, so that they lie on the left of their supporting-shaft, the gear-segments are on top of the shaft and away from possible contact with the racks upon the plate. The plate K is then pushed to the left under the shaft by means of the knob; or the same result is accomplished by winding up the spring. In the former case the rack on the edge of the plate, meshing with the gears upon

wheel D turns the latter and coil-spring B. The beveled teeth upon wheel D cam up the dog, which acts as a pawl and holds the spring in coil by engagement upon the vertical surface of a tooth. The wires and music are then turned upon their shaft to the right, so that the gear-segments depend and lie each in the plane of its corresponding rack. A depression of the trigger lifts the dog from its hold upon the tooth, and the trigger-spring, acting upon the dog, causes its point to hold upon the next succeeding tooth. This allows a movement to the plate K equal to the distance traversed by the periphery of wheel D. This distance is by the spacing of the racks just sufficient to move the first rack from the left to the right of the shaft R. In its passage beneath said shaft its teeth engage with the teeth upon its segment, and by this engagement the segment is turned and the leaf attached thereto is raised from its position upon the right of the shaft, carried past the perpendicular, and thence by gravity it is dropped to its place upon the left of the shaft. At the same time the next rack moves up to its position, so that at the next impulse of the plate it will engage with its segment in turn. By successive depressions of the trigger the racks one after another pass beneath the shaft, each in its passage actuating its segment and turning the leaf attached thereto until all the racks have moved from the left to the right of the medial line, and the tension imparted to the spring by the pushing of plate K has been expended in turning the leaves.

In this my invention I do not wish to be confined to the exact combination and arrangement of parts shown and described; neither do I wish to be limited in the application of my device simply to the turning of music-leaves, for by immaterial changes and without departing from the spirit of my invention the device may be adapted to the holding and turning of other articles, as pictures and the like.

The gist of my invention rests in the idea of using in a device of the character described a coil-spring, a means of escapement for the same, and further means whereby the power of the spring may be applied to the turning of leaves or sheets, as has hereinbefore been set forth.

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

1. In combination with the spring mounted on the back plate, the geared wheel having upwardly-projecting beveled teeth and resting upon and receiving motion from said spring, the racked plate bearing the short racks and meshing with the circumferential teeth of the said geared wheel, the pivoted dog controlled by the trigger and holding upon the upwardly-projecting teeth of the geared wheel against the resiliency of the said spring, and the journaled segments holding the supporting-wires and adapted to be engaged and turned in rotation by the short racks upon the sliding plate, all arranged as described, and for the purpose set forth.

2. In combination with the geared and toothed wheel mounted upon the coil-spring and receiving motion therefrom, the L-shaped dog pivoted in an upward projection of the bridge-plate, controlled at its heel end by the pivoted trigger, and holding upon the vertical surface of the beveled teeth on the gear-wheel against the resiliency of the coil-spring, substantially as described.

3. In combination with the geared wheel, to the shaft of which is secured the inner end of the coil-spring, the rack-plate, the edge of which meshes with the circumferential teeth of said wheel, having the short racks upon its upper surface adapted to slide upon the way-strip and to either receive motion from the gear-wheel when the spring is at tension and the dog withdrawn from its hold on the teeth or to impart motion to said gear-wheel and tension to the spring when pushed from right to left, substantially as set forth.

4. The combination of back plate, A, spring B, geared wheel D, bearing teeth E, bridge-plate H, having pivoted therein dog N and thereon trigger O, way-strip J, bearing racked plate K, adapted to slide thereon, and having short racks M, and segments S, journaled independently on the same shaft, and having attached thereto the wires for holding the leaves, all arranged as described, and adapted to be operated substantially as hereinbefore set forth and specified.

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

JOHN H. SHELTON.

Witnesses:

S. S. WILLIAMSON,  
E. C. SUMNER.