

L. OLDSHUE.
MUSIC-LEAF TURNER.

No. 176,987.

Patented May 2, 1876.

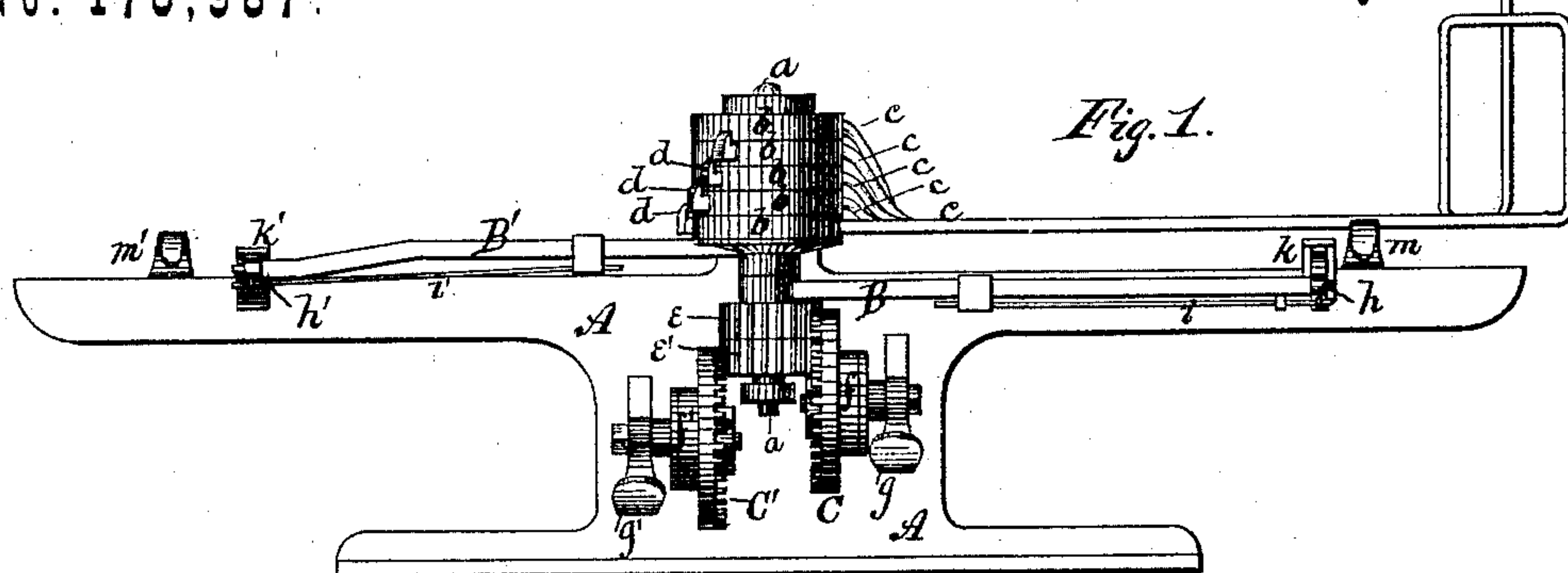


Fig. 2.



Fig. 3.

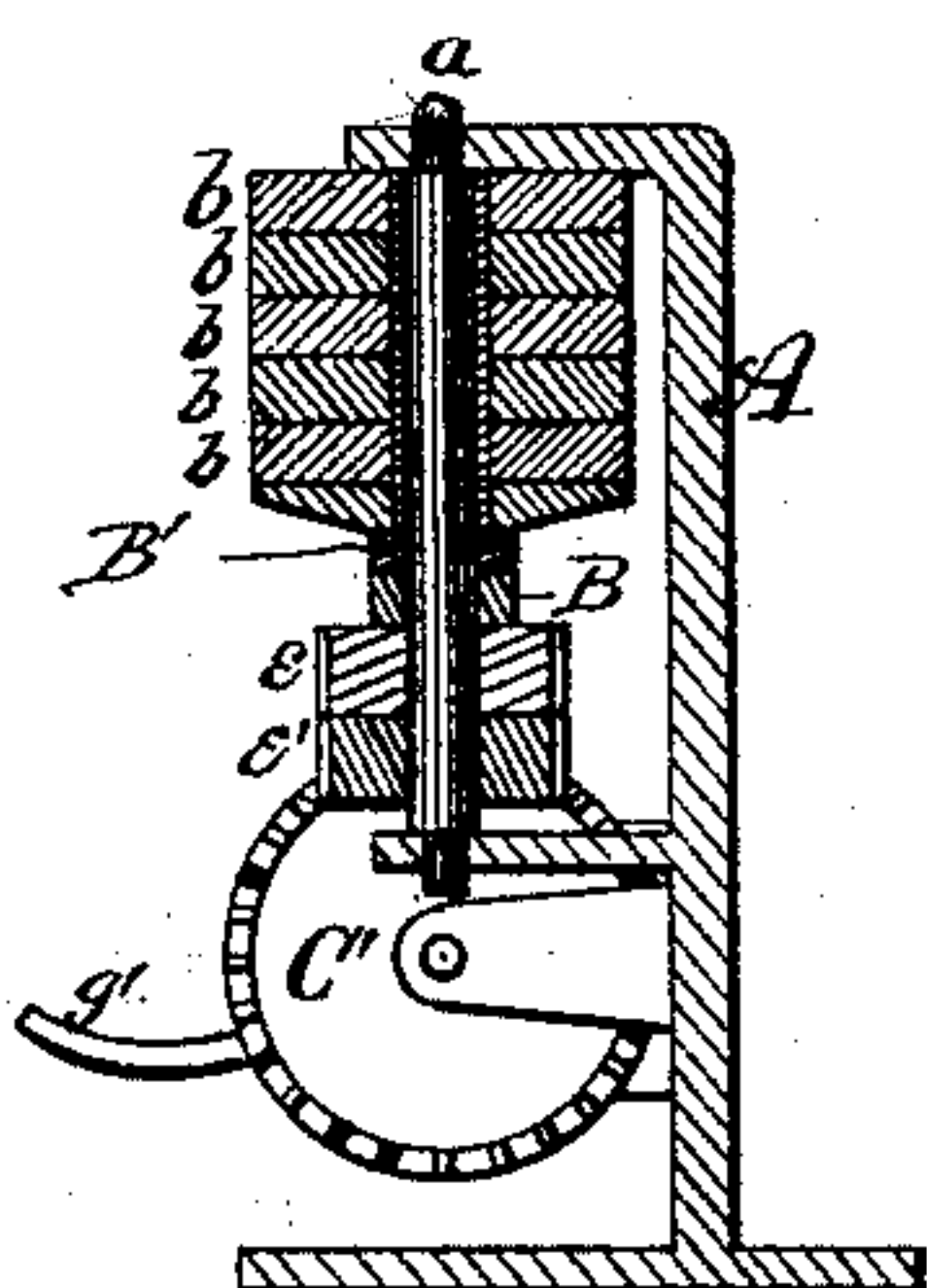
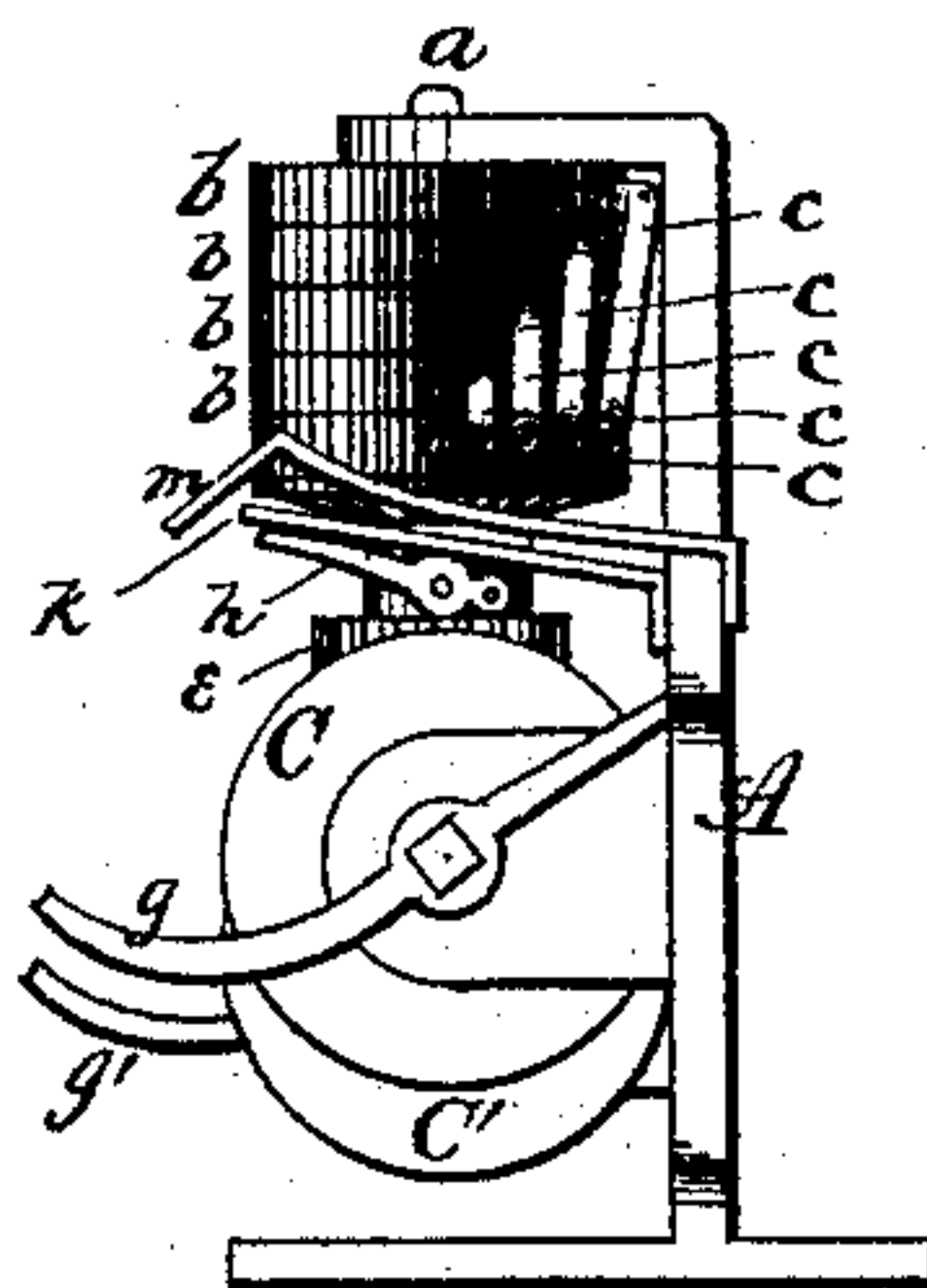


Fig. 4.



Witnesses

S. F. [Signature]
Rev. A. W. [Signature]

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LINCOLN OLDSHUE, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. **176,987**, dated May 2, 1876; application filed March 25, 1876.

To all whom it may concern:

Be it known that I, LINCOLN OLDSHUE, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Music-Leaf Turners; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a front elevation. Fig. 2 is a detail. Fig. 3 is a vertical transverse section through the middle. Fig. 4 is an end elevation.

This invention relates to devices for turning music-leaves; and consists in the construction and arrangement of parts, whereby I effect a simple operation of the whole in such a manner that, once adjusted, the leaves may be turned either way, and may be instantly reversed to any desired page without further adjustment or trouble.

Upon a shaft stepped in the frame, and placed about in the line of the binding of the book or portfolio, and immediately under it, I mount a number of disks, from each of which projects laterally a wire, which extends outwardly some distance, and then upwardly, so as to register between the leaves. At the opposite side of each disk is a lug, projecting upwardly above the lower edge of the disk next above it, so that when one wire is thrown to turn a leaf the lug will catch the wire of the next disk and push it into position for the next throw. The reversal is obtained by the wire of one disk pushing that below it by means of the lug. On the shaft are two pinions, gearing, respectively, with two crown-wheels, to which are attached springs for recovery, and each pinion carries a lateral arm in its rotation. These arms are held normally in opposite sides diametrically of the pinions, and are provided with spring-fingers, or the arms themselves are made to act as springs. When the pinions are operated by means of levers attached to the crown-wheels, the arms rotate and move the wires, and with them the leaves, from side to side.

Referring to the accompanying drawings,

my invention, more particularly, is as follows: On a frame, A, of ornamental design, having the proper bearings, I fit a shaft, *a*, placed so as to come about in line with the junction of the leaves. On this shaft, or on a sleeve thereon, I have a number of disks, *b*. Each disk has a lug, *d*, on the edge, and opposite this lug a wire, *c*, extends outward.

It being desirable to have all the wires *c* at the same level, they are bent more or less, according to their relative position, either up or down, as desired. A plain wire, bent up at its outer extremity, will serve; but I illustrate a novel form, which, by reason of its peculiar shape, is very effectual. It is bent to form a loop, and then returned upon itself in such a manner that the end projects a little above the loop, to facilitate setting, and to grasp the sheets firmly.

On the shaft *a*, under the disks, are two pinions, *e e'*, the former loose upon, and the latter fixed to and turning with, the shaft. Projecting from the pinion *e*, or from a collar attached to it, is a horizontal arm, B; and similarly attached to pinion *e'* is a like arm, B'. The pinions are turned by turning the crown-wheels C C', respectively, to which are attached recovery-springs *f f'* and hand-levers *g g'*, respectively. At the outer end of the arms B B' is a spring-finger, which, in the illustration, is constructed with a catch-lever, *h h'*, pivoted to the end of the arm, and having its position normally governed by a flexible spring, *i i'*, fastened to the lever and arm. The normal position of both spring-fingers *h h'* is vertical, in which position they are supported against pressure one way by stops on the arms. The fingers are thrown into horizontal position by the inclined guides *k k'*, which project from the frame, so as to cause the fingers to be turned into that position when idle. Beyond the guides, and likewise projecting from the frame, are two checks, *m m'*, so shaped as to yield to an incoming wire, but to offer slight resistance to any wire that may tend to fly out by a sudden jerk.

Constructed thus, the operation is as follows: Suppose the wires *c* are all on one side, behind the check *m*, as in Fig. 1. Now, it must be kept in mind that by means of the springs on the crown-wheels C C' the arms B B' are kept

down under their respective guides $k k'$. The wires c are adjusted to their leaves in such a manner that if a wire is rotated it carries a leaf with it. To make all ready, the foremost wire c is pulled out just outside of the check m . Now, to operate and turn the leaves one by one, the hand-lever g is depressed, causing the wheel C to turn one-fourth of a revolution, which turns the pinion e one-half, carrying the arm B with it; but as soon as the arm B comes forward to the end of the guide k the spring-finger h flies into vertical position behind the wire c , which has been set for that purpose. Depressing the lever g to its limit causes the arm B to be carried over to the opposite side, carrying the wire c , and forcing it behind the check m' . Just as it is passing the check m' the lug d on its disk has come round to, and pushed against, the wire of the next disk, which is thus forced out past the check m . Now, releasing the lever g , it flies back to its original position, the finger h yielding to all pressure from behind, and passing to a horizontal position under the guide k . Then the lever is depressed as before, and the second wire turns its page, while the third is made ready. To reverse at any time during these operations, the lever g' is depressed, and the arm B' is operated till its finger h' pushes back the wire made ready on the opposite side. This brings out the next wire, and the operation is precisely like the former.

It will thus be seen that the leaves can be turned in succession from left to right, from right to left, or, in the midst of either operation, they can be reversed.

I do not consider it essential that the spring-

fingers on the arms $B B'$ should be constructed exactly as shown, because the same result may be attained otherwise without departing from my principle. For instance, the arm may itself constitute the spring by being torsionally elastic, or the arm might be an integral part of the flexible spring.

For some purposes it might be desirable to have the apparatus only single-acting. In that case I simply dispense with the duplicate or reversing portion.

Having fully described my invention, I claim—

1. In a music-leaf turner, the combination of the following elements, viz: a series of wires projecting from a series of disks, having opposite the wires overlapping lugs; a semi-rotating arm, provided with a spring-finger to yield one way, and be rigid the other; gearing to give motion to the wires, and a recovery-spring to make the return automatic, all constructed and arranged substantially as described.

2. The duplicate combination of the semi-rotating arm, spring-finger, gearing, and recovery-spring, substantially as and for the purpose specified.

3. The combination of the guide k , spring-finger h , and the arm B , substantially as and for the purpose shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of March, 1876.

LINCOLN OLDSHUE.

Witnesses:

THOS. J. MCTIGHE,
SAMUEL ANDERSON.