

L. F. MORAWETZ.
Music-Leaf Turners.

No. 134,557.

Patented Jan. 7, 1873.

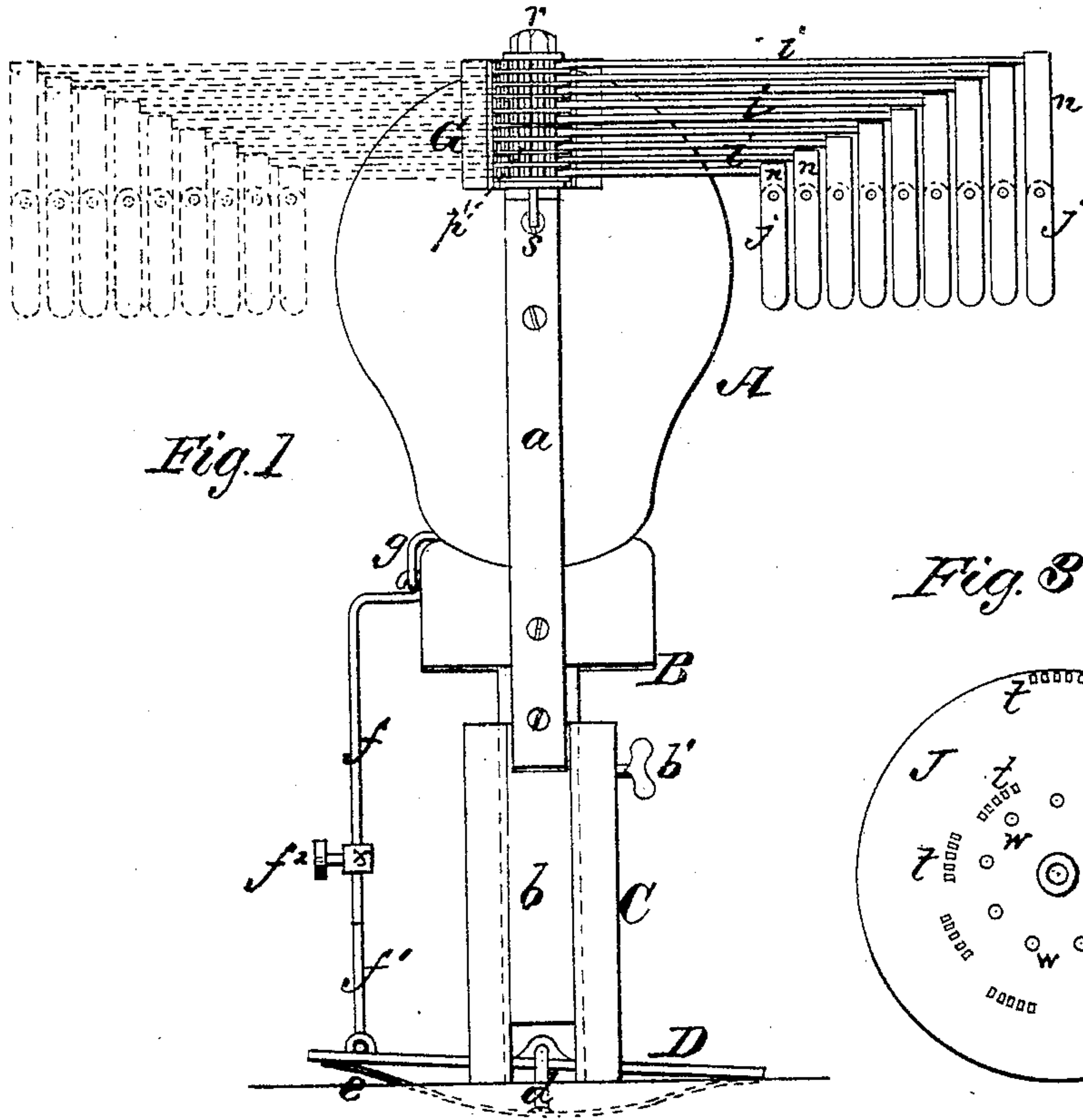


Fig. 1

Fig. 3

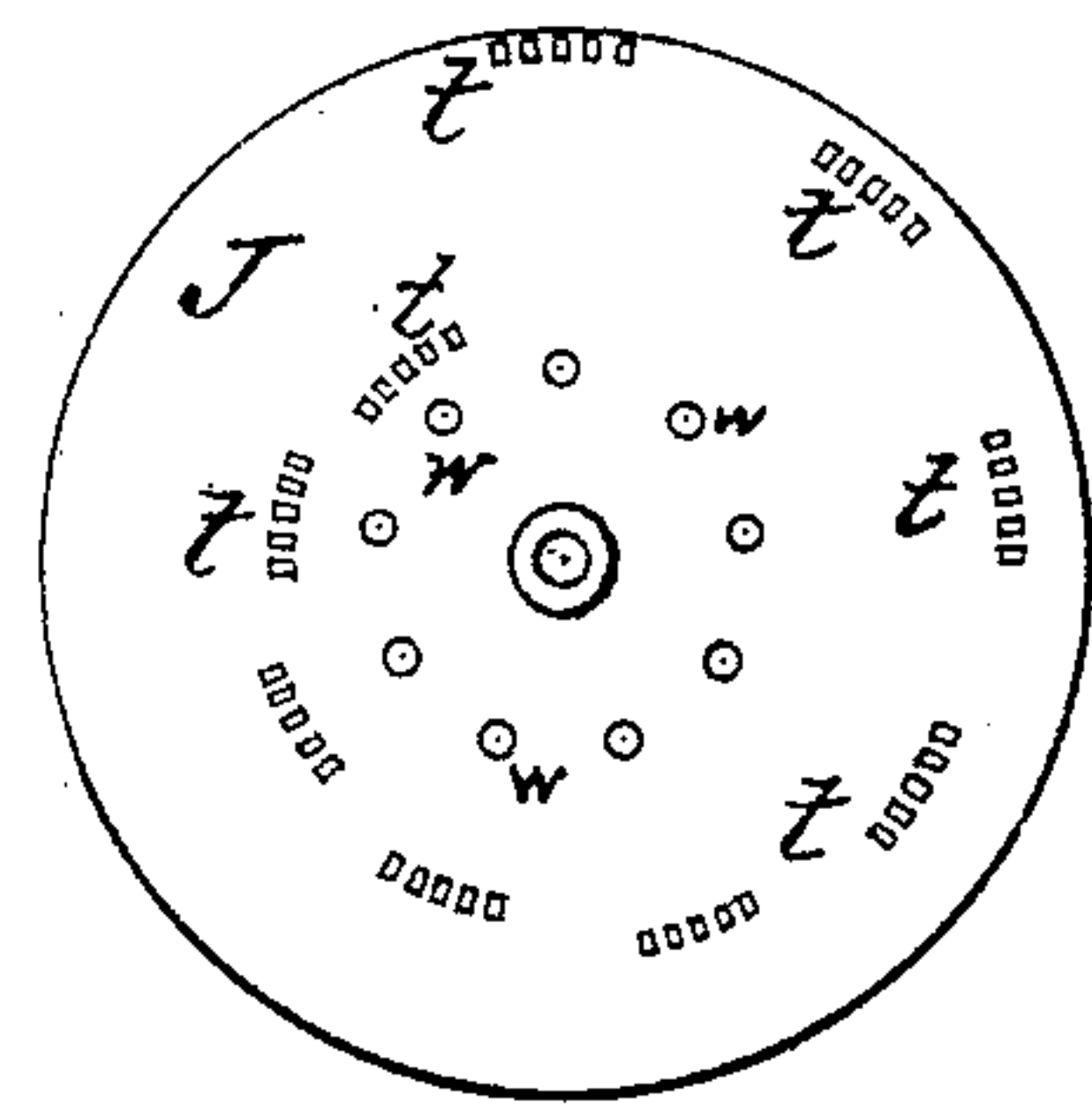
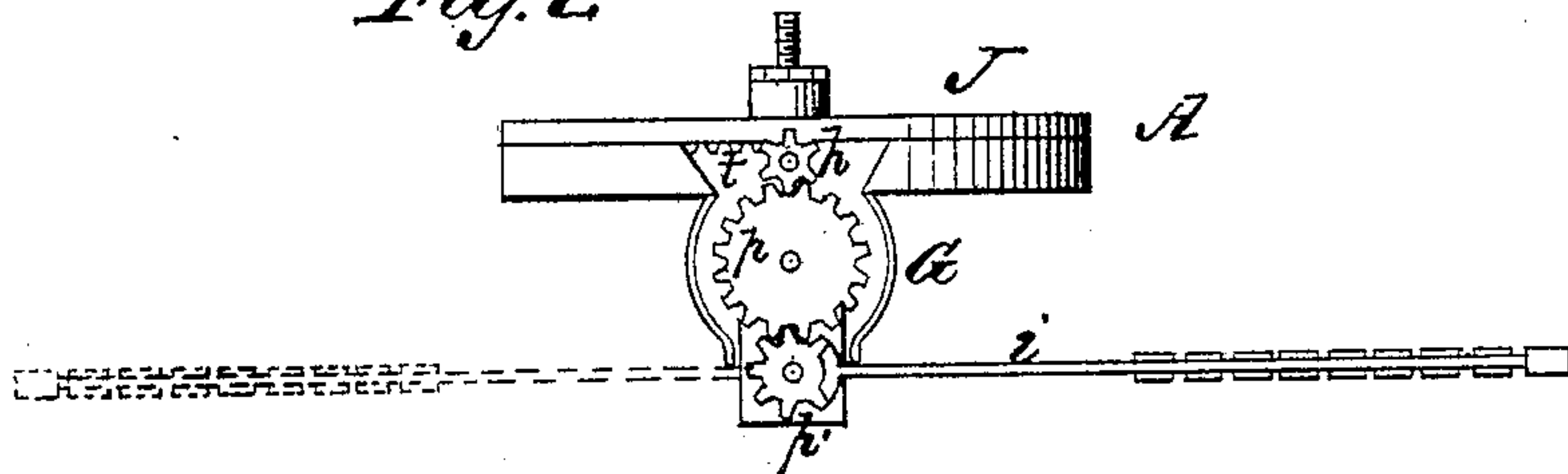


Fig. 2



Witnesses
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Inventor
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Fig. 4

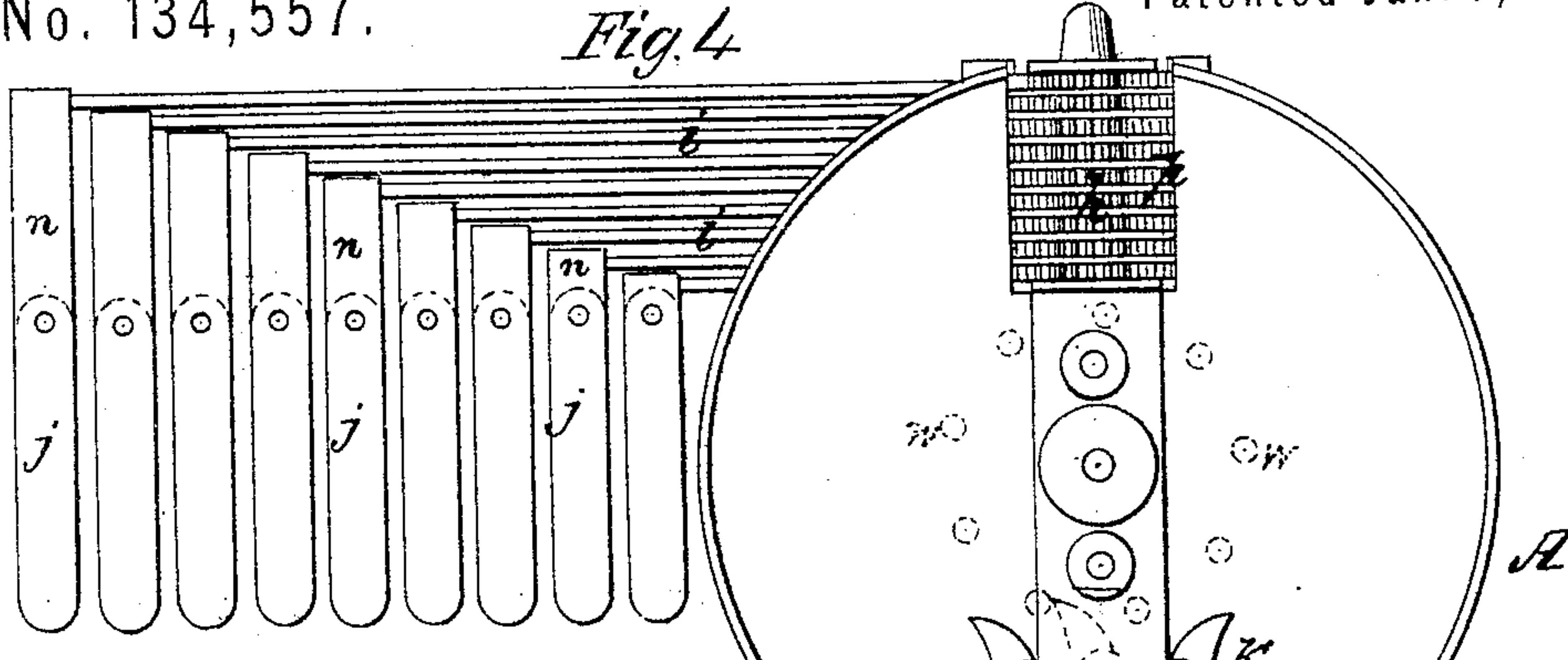
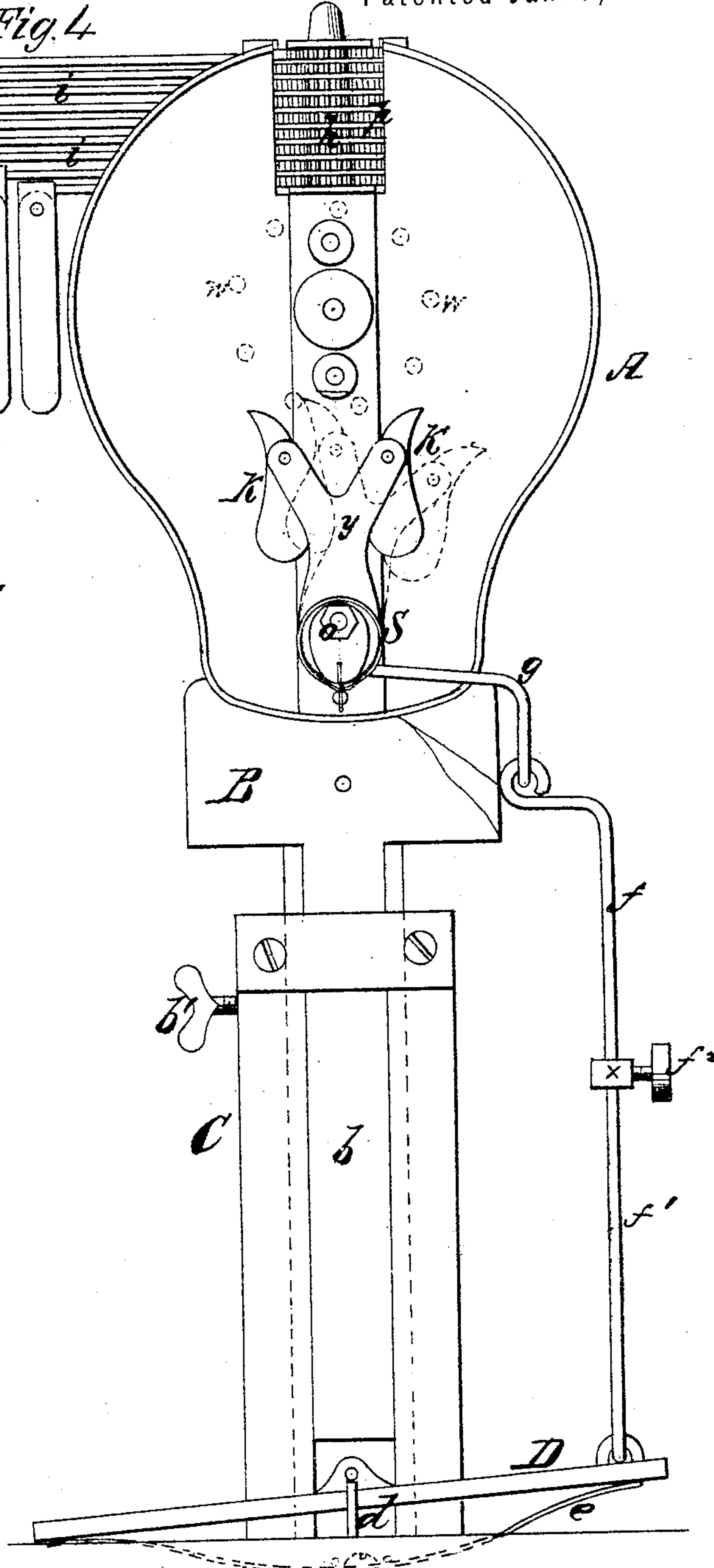
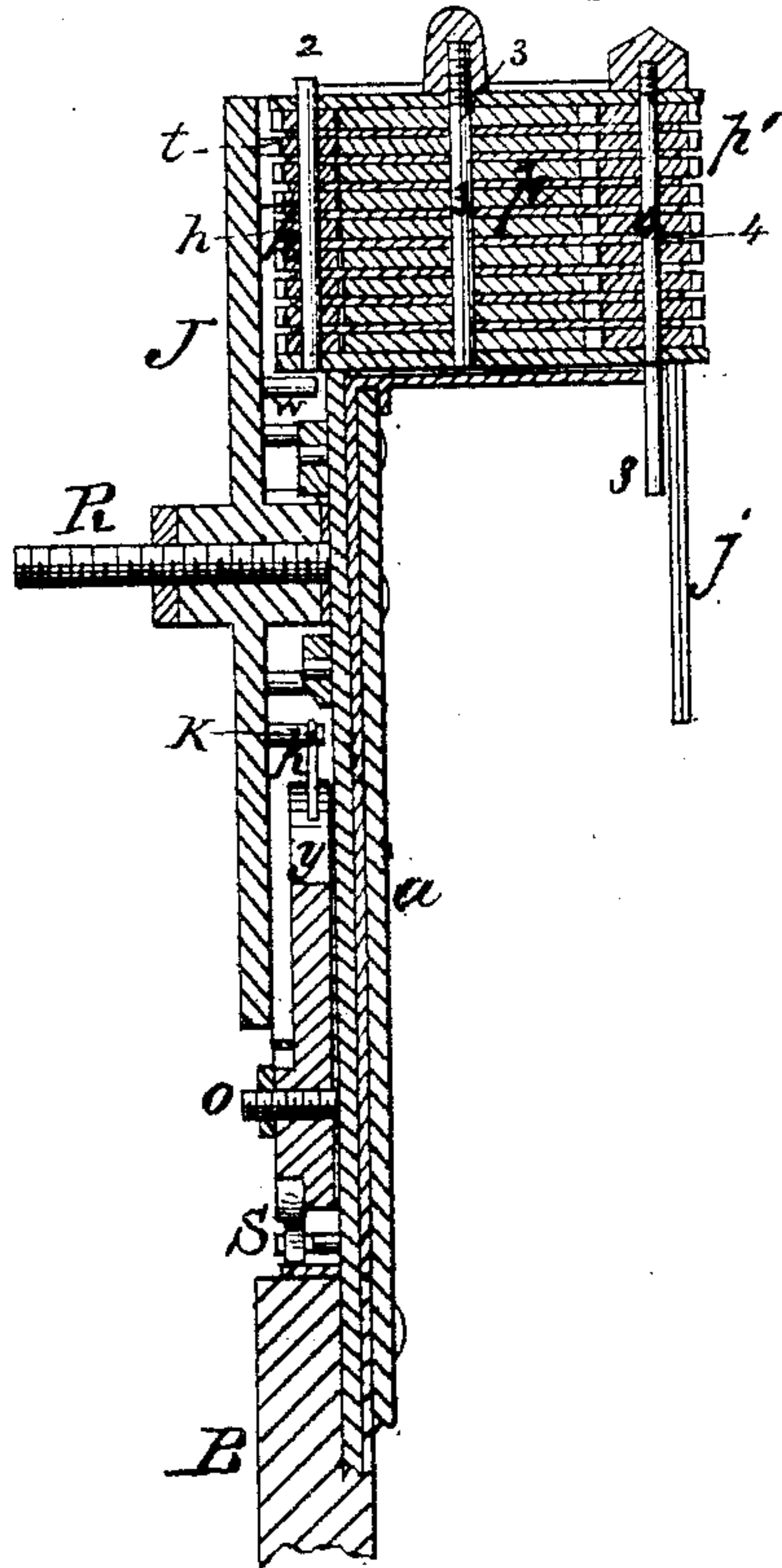


Fig. 5



Witnesses:
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J. H. Campbell.

Inventor
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by
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UNITED STATES PATENT OFFICE.

LEOPOLD F. MORAWETZ, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MUSIC-LEAF TURNERS.

Specification forming part of Letters Patent No. 134,557, dated January 7, 1873.

To all whom it may concern:

Be it known that I, LEOPOLD F. MORAWETZ, of the city and county of Baltimore and State of Maryland, have invented a new Apparatus for Turning Leaves; and I do hereby declare that the following is a full, clear and exact description thereof, reference being had to the accompanying drawing making part of the specification, in which—

Figure 1, Plate 1, is a front elevation of the apparatus; Fig. 2, Plate 1, is a top view of the same with the top bearing of the toothed wheels removed to show these wheels; Fig. 3, Plate 1, is a view of the back plate, showing the teeth and studs thereon; Fig. 4, Plate 2, is a back view of the apparatus with the back plate removed; Fig. 5, Plate 2, is a vertical central section through the upper part of the apparatus.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to afford musicians the means of turning over the leaves of music while performing on any instrument without in any manner interfering with the performance, as will be hereinafter explained.

The following description of my invention will enable others skilled in the art to understand it.

In the accompanying drawing, A represents a hollow box or head, which is formed of a front flanged stationary plate and a back circular rotary plate, J. The front plate of this hollow box is secured by a bar, *a*, to a vertically-adjustable support, B, the tongue *b* of which is fitted between standards C and secured at any desired height by means of a set-screw, *b'*. At the upper end and in front of the hollow box A is a case, G, which is open in front and which contains a number of spur-wheels arranged so as to rotate about vertical shafts. The front series of wheels *p'* turn about a shaft, 4, and have arms *i i* secured to them. The intermediate and larger series of wheels *p* turn about a shaft, 3, and transmit motion from a third series of smaller wheels, *h*, to the pinions *p'*, as indicated in Figs. 2 and 5. The arms *i* are of different lengths, as shown in Figs. 1 and 4, and each arm has applied to it at its outer extremity a device for gripping the edge of a leaf, consisting of a pair of gripping-fingers, *j*, pivoted to a plate, *n*. By

thus pivoting or hinging the fingers *j* they can be readily adjusted upon the leaf of a book or sheet of music, whereas if the finger were stiff it would be very difficult to adjust the leaves into them where a number of leaves are required. The circular plate J, which forms the back of the hollow head A, is applied on a stud, R, around which this plate J turns and on which the latter is held by means of a nut, as shown in Fig. 5. On the inner side of the plate J and concentric with its axis are studs W, which correspond in number to the number of spur-wheels in each one of the series and to the number of arms *i* applied to the front series. There are also formed on the inner side of the rotary plate J a number of teeth, *t*, which are arranged in the form of a convolute, and opposite the different studs W, as shown clearly in Fig. 3. These teeth are separated in groups of five teeth each, said groups corresponding to the number of spur-wheels in each series, and the number of teeth in each group is such, relatively to the number of teeth in the wheels of the three series, that the arms *i* receive a semicircular movement—that is to say, the arms are respectively moved a distance equal to one-half a circle. By reference to Fig. 4 it will be seen that I employ two pivoted dogs or pawls, K K, for moving the plate J. These dogs are pivoted to the bifurcated ends of a vibrating arm, *y*, which is pivoted at *o* and acted on by a spring, S, so as to assume the position shown in Fig. 4 in full lines, when at rest. To the arm *y* a cranked rod, *g*, is secured which extends outside of the box A, and has attached to it a rod, *f*. This rod *f* extends down through a coupling-block, *x*, which is formed on the upper end of a rod, *f*¹, and to which the rod *f* is secured by a set-screw, *f*². The lower end of the rod *f*¹ is pivoted to a double rocking treadle, D, which is pivoted at *d* to the base of the machine and acted on by a spring, *e*.

For a portable music-stand the treadle will be attached to its base in a convenient position to be operated by one or both feet of the musician, and the apparatus is fastened to the back of the rack by a pin on which the slides are held at the desired distance from the rack by a thumb-screw. This allows the proper adjustment for varying thicknesses of books. For a piano the adjustable standard B C will

be arranged behind the music-rack and connected by an adjusting-screw, or in any other suitable manner to the base of said rack, and the rod *f* will pass down through the bottom of the piano, and be suitably connected to a treadle near the loud and soft pedals.

In either of the above-named applications of my invention a pin, *s*, which depends from the bottom of the case *G* will keep the sheets in place against the music-rack and serve as a turning-pin.

The operation of the machine as above described is as follows: A book, or unbound sheets of music, is placed against the music-rack, and certain of the fingers *j* adjusted upon the number of leaves which it is desired to turn while performing. Having adjusted the machine, the performer can turn the leaves over to the right or left by working the treadle *D*. The arms *i* with their support can be readily raised or depressed according to the different heights of books or sheets of music; also, that the fingers or clips *j* can be turned up in line parallel to and around their respective arms *i*, thus allowing them to be conveniently adjusted over the edges of the leaves.

Having described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. The gripping fingers *j* jointed to pieces *n* which are pivoted to the arms *i*, as described and shown.

2. A plate, *J*, or its equivalent, toothed as described, and combined with one or a number of series of toothed wheels for actuating the arms *i*, substantially as described.

3. Double-acting dogs or pawls *K K* applied to a vibrating lever which is acted on by a spring, *S*, and a treadle, *D*, in combination with the plate *J* and arms *i*, substantially as and for the purpose described.

4. The vertically-adjustable head *A*, carrying-arms *i*, and mechanism for actuating these arms, in combination with a treadle, *D*, an extensible connecting-rod, and dogs or pawls *K*, substantially as described.

5. The fixed pin *s*, serving the double purpose of a turning center for the leaves and also, by its upward extension 4, a shaft for the pinion *p'*, as described and shown.

LEOPOLD F. MORAWETZ.

Witnesses:

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WILLIAM KLOCH.