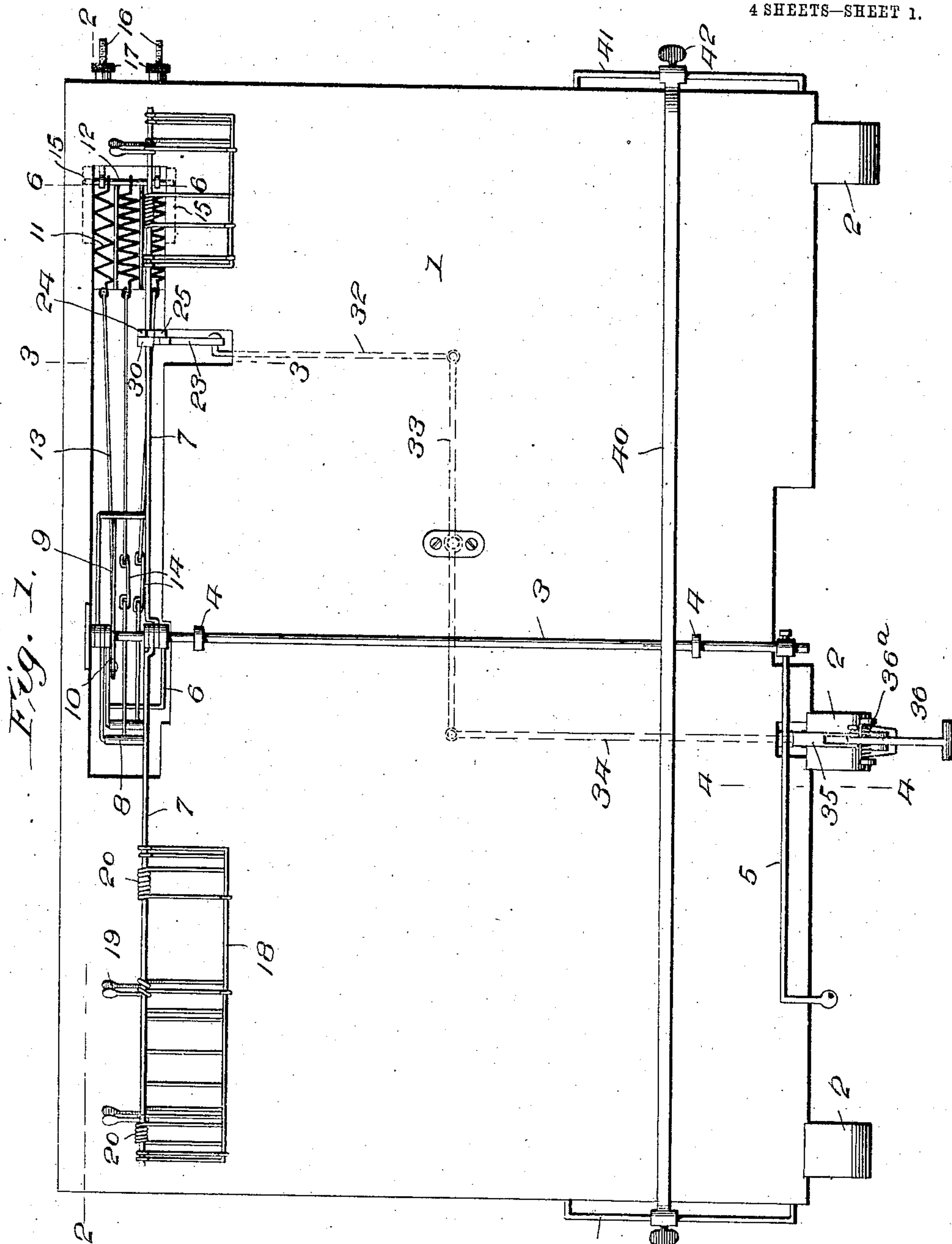


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PATENTED APR. 9, 1907.

W. G. BENSON.  
MUSIC LEAF TURNER.  
APPLICATION FILED MAR. 30, 1906.

4 SHEETS—SHEET 1.



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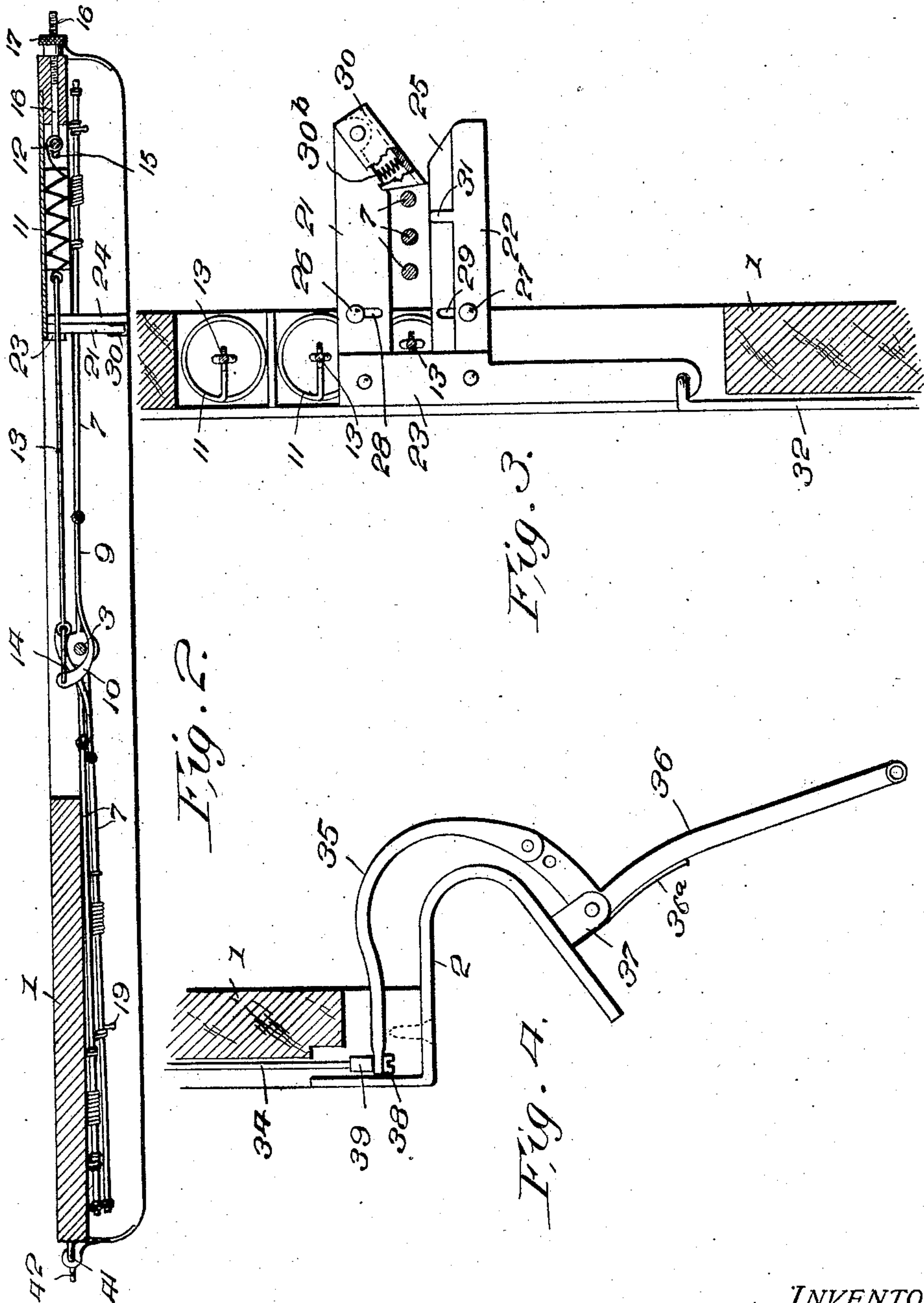
*W. J. Fitzgerald & Co.*  
Attorneys

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4 SHEETS—SHEET 2.



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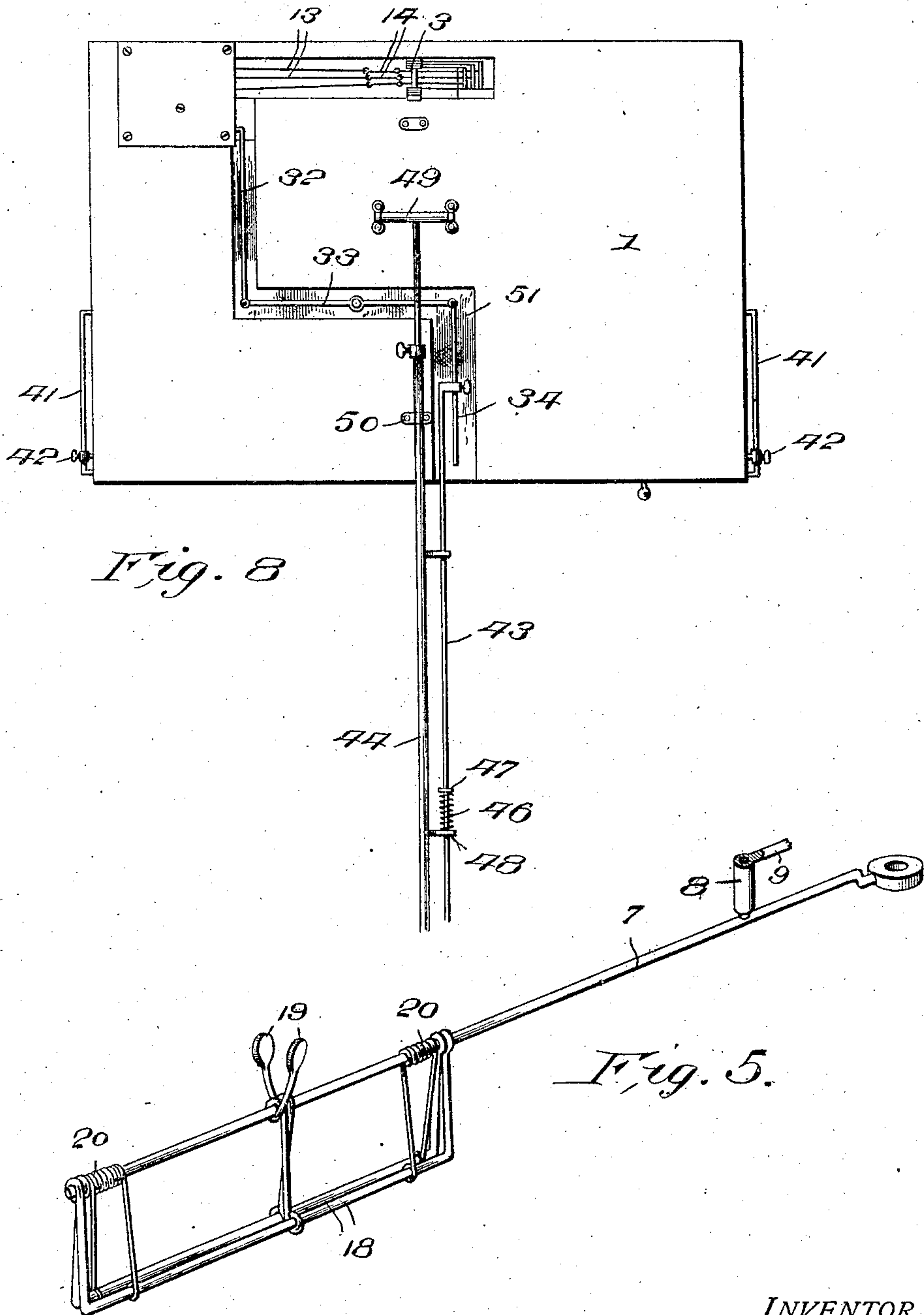
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APPLICATION FILED MAR. 30, 1906.

4 SHEETS—SHEET 3.



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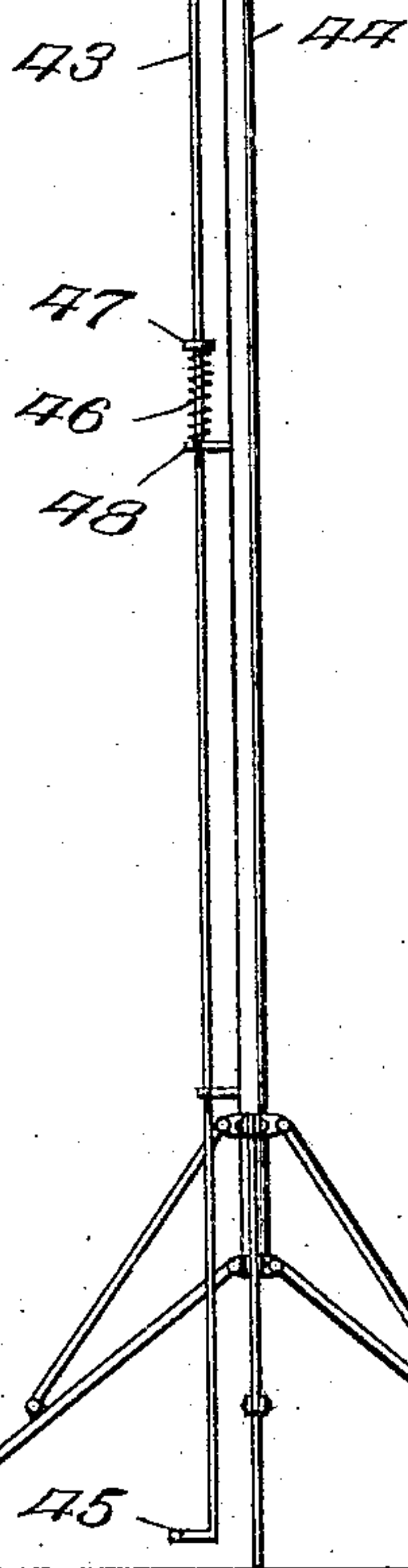
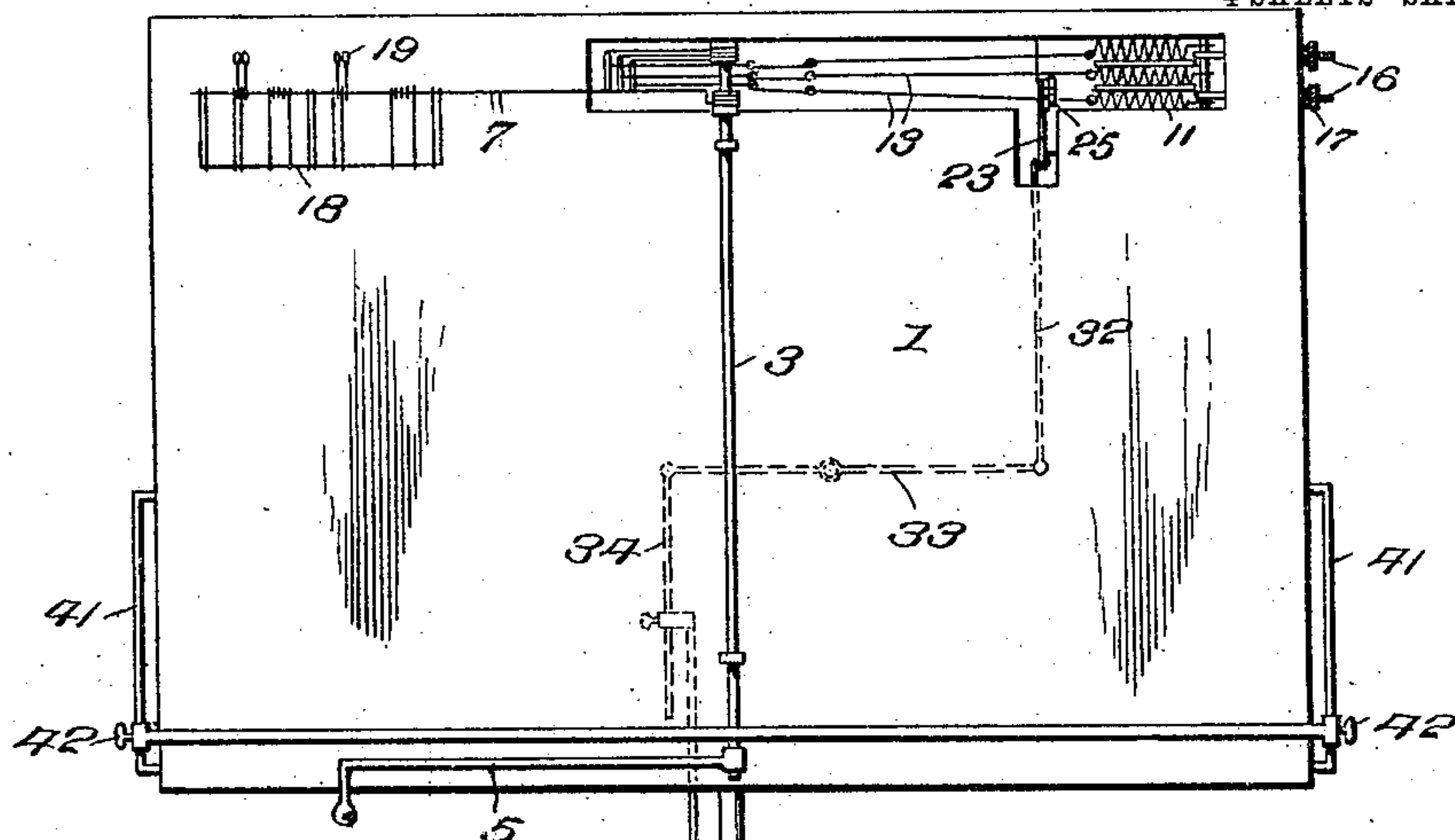
BY  
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4 SHEETS—SHEET 4.



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# UNITED STATES PATENT OFFICE.

WILLIAM G. BENSON, OF MOORESVILLE, MISSOURI.

## MUSIC-LEAF TURNER.

No. 849,717.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed March 30, 1906. Serial No. 308,969.

*To all whom it may concern:*

Be it known that I, WILLIAM G. BENSON, a citizen of the United States, residing at Mooresville, in the county of Livingston and State of Missouri, 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 appertains to make and use the same.

My invention relates to new and useful improvements in music-leaf turners, and more particularly to that class adapted to be used in connection with racks or directly upon a piano or organ.

The object of my invention is to produce a cheap, durable, and efficient device and one which will be positive in its operation.

A further object is to provide a device which can be operated by hand or by the foot of the player.

A still further object is to provide means for accommodating said turner to different lengths of leaves.

Further objects and advantages will be hereinafter referred to in the specification and pointed out in the claims.

In the accompanying drawings, which are made a part of this application, I have shown the preferred form of my invention.

In said drawings, Figure 1 is a plan view of my device adapted to be used in connection with a piano, organ, or the like. Fig. 2 is a longitudinal sectional view through the device as seen from the dotted line 2 2, Fig. 1. Fig. 3 is a detail sectional view, on an enlarged scale, as seen from the dotted line 3 3, Fig. 1. Fig. 4 is a detail sectional view, on an enlarged scale, as seen from the dotted line 4 4, Fig. 1. Fig. 5 is a detail perspective view of one of the leaf-engaging arms removed from the turner. Fig. 6 is a detail sectional view, on an enlarged scale, as seen from the dotted line 6 6, Fig. 1. Fig. 7 is a plan view showing my improved music-leaf turner used in connection with the well-known form of music-stand, and Fig. 8 is a similar view showing the opposite side of the music-leaf turner proper.

Referring to the figures by numerals of reference, 1 indicates the body or frame of my improved leaf-turner, to the lower edge of which are secured curved arms 2, by means of which said body is secured to a piano or like musical instrument. To the

front of said body portion 1 is secured a vertically-disposed rod 3, said rod being rotatably mounted in suitable bearings 4. To the lower end of the rod 3 is secured a controlling-lever 5, and near the upper end thereof is secured a laterally and upwardly extending arm 6, said arm and lever being rigidly secured to the rod. Pivotaly secured to the upper end of the rod 3 are a series of leaf-engaging arms 7, said arms being so disposed upon said rod that they will travel in a uniform plane. Secured to the upper side of each of said arms are auxiliary arms 8, said arms being vertically disposed and having lateral extensions at their upper ends, which extensions are pivotaly secured to the rod 3.

The objects of the lateral extensions at the upper end of the auxiliary arms are twofold in that they brace the auxiliary arms and compensate for any undue strain thereon and also serve to retain the arms 7 in their horizontal position and prevent the same from sagging, which is an important function, from the fact that were the leaf-engaging arms not supported they would in time sag to such an extent that they would extend below the engaging and releasing mechanism at one side of the frame.

Pivotaly secured to the vertically-disposed section of the members 8 are controlling members 9, said members having one of their ends 10 curved, as best shown in Fig. 2, so that when the leaf-engaging arms 7 are disposed at one side of said rod 3 a leverage will be exerted upon the curved ends of the controlling members 9 for a purpose to be hereinafter set forth. Disposed in a housing at one end of the frame 1 are springs 11, said springs being equal in number to the number of leaf-controlling arms.

One end of the springs 11 are secured to a shaft 12, and to the opposite ends thereof are secured rods 13, said rods being connected to the curved ends 10 of the controlling-arms 9 by means of links 14. The opposite ends of the shaft 12 are disposed in ways 15, whereby said shaft may be moved longitudinally when desired. Secured around the shaft 12 and disposed laterally through an adjacent part of the frame 1 are adjusting-rods 16, said rods having their outer ends threaded and provided with adjusting-nuts 17, by which construction the tension upon the springs 11 may be increased or diminished. The leaf-engaging arms 7 are each provided with



spring-controlled engaging members 18, said members being so arranged that when the arms 19, carried thereby, are forced together the engaging members 18 will be separated, so that a leaf of the music or book may be inserted therebetween, and when said arms 19 are released the springs 20 will bring said engaging members 18 together and clamp the leaf therebetween. Secured to the frame 1 in juxtaposition to the springs 11 and in the path of the arms 7 is a device adapted to receive and intermittently release said arms 7, said device comprising a pair of horizontally-disposed movable parallel arms 21 and 22, to the rear ends of which is rigidly secured a controlling-bar 23.

The arms 21 and 22 are disposed parallel with a pair of arms 24 and 25, said arms being secured to the frame 1 in any preferred way. The arms 21 and 22 are movably secured to the arms 24 and 25 by means of pins 26 and 27, the pin 26 being carried by the arm 24 and extending through an elongated slot 28 in the arm 21, while the pin 27 is carried by the arm 22 and extends through an elongated slot 29 in the arm 25. Pivotaly secured to the free end of the arm 21 is a latch or dog 30, said latch being so arranged that when the arms 7 are being moved inwardly between said arms 21 and 22 said latch will move upwardly and allow said arms 7 to pass thereunder, and after said arms 7 are seated between the arms 21 and 22 the latch 30 drops down in front of said arms and retains them therebetween, and to more readily dispose the latch in front of the arms after said arms have been inserted between the arms 21 and 22 I dispose a spring 30<sup>b</sup> between the tapered end of the arm 21 and the latch 30, so that said latch will be normally held in its lowered position, this construction being shown in Fig. 3 of the drawings. The arm 22 is of less width than the arm 25 and is provided upon its upper edge with a finger 31, said finger being designed for a purpose to be hereinafter set forth.

Secured to the depending end of the controlling-bar 23 is a vertically-disposed rod 32, said rod connecting at its lower end with a horizontally-disposed lever 33, which is pivoted at its center to the rear of the frame 1. The lever 33 is pivoted at its opposite end to a vertically-disposed controlling-rod 34, said rod extending downwardly to the lower edge of the frame 1, where it is secured to a link 35, said link being in turn pivotaly secured at its free end to a crank-arm 36, said crank-arm being pivotaly mounted between ears 37 upon one of the members 2. The link 35 is secured to the rod 34 by means of a securing-bolt 38, said bolt passing through the end of said link and into a socket formed in the enlarged end 39 of the rod 34. Disposed laterally across the face of the frame

1 is a leaf-supporting bracket 40, said bracket being adjustably secured to guide members 41 on the opposite ends of the frame 1, said bracket being held in its adjusted position by means of thumb-nuts 42, as best shown in Fig. 1 of the drawings.

In operation the sheets of music or a book is seated upon the bracket 40 and the members 18 secured to the leaves that are to be turned and the arms 7 disposed between the arms 21 and 22. After the leaves have been inserted between the members 18 all the arms 7 can be disposed at one time between the arms 21 and 22 through the medium of the controlling-lever 5, rod 3, and arm 6, the upwardly-extending portion of the arm 6 being disposed in the path of the arms 7, so that when the controlling-lever 5 is disposed to the opposite side of the rod 3 from that shown in Fig. 1 said rod and arm 6 will rotate and the arms 7 disposed between the arms 21 and 22. After the arms 7 are thus disposed and one page of the music played the operator presses the crank-arm 36 downwardly, which operation elevates the controlling-bar 23 through the medium of the rods 32 and 34 and lever 33 and raises the arms 21 and 22 until the latch 30 passes out of the path of the first arm 7, releasing said arm, so that the spring 11 through the medium of the controlling member 9 and link 14 and arm 13 will rotate said arm 7 on the shaft 3 until the leaf is disposed on the opposite side of the frame 1. At the same time that the latch 30 is disposed out of the path of the first arm 7 the finger 31 is disposed between the first and second arm 7 and the remainder of the arms retained between the arms 21 and 22 until the latch 30 is again lowered into position, when the finger 31 will pass out of the path of the remaining arms 7 and allow the next succeeding arm to engage the latch 30, said operation being repeated until all of the arms 7 are released. After all of the arms 7 have been released from between the arms 21 and 22 new sheets can be disposed between the securing members 18 and all of the arms again disposed between the arms 21 and 22 by rotating the shaft 23 through the medium of the controlling member 5.

As best shown in Figs. 1 and 4 of the drawings, it will be seen that the lateral extension upon the crank-arm 36 is provided with a series of openings, so that the link 35 may be adjusted thereon as desired. It will also be seen that said crank-arm 36 is provided with a controlling-spring 36<sup>a</sup>, whereby said crank-arm and parts secured thereto will be returned to their normal position after an arm 7 has been released.

In Figs. 7 and 8 I have shown my device as applied to the usual form of music-stand, and when so applied the link 35 and crank-arm 36 are dispensed with, and a controlling member 43, carried by a stand 44, is secured to



the rod 34, as best shown in Fig. 7 of the drawings. The controlling member 43 extends downwardly to near the bottom of the rack 44 and is provided with a laterally-disposed section 45. In this connection when it is desired to release one of the arms 7 the musician places his foot on the section 45 and presses downwardly thereon, the action upon the parts of the turner being the same as when pressure is brought to bear on the crank-arm 36. After the arm 7 has been released the member 43 is returned to its elevated position through the medium of a spring 46, said spring being disposed around the member 43 and between a head 47, secured to said member and one of the securing-brackets 48, carried by the stand 44. The frame 1 is secured to the stand 44 by means of a cross-head 49, secured to the rear of said frame, and a clip 50 at the lower edge of said frame. As best shown in Fig. 8, the rods 30 and 34 and the lever 33 are disposed in a way 51, cut in the back of the frame 1, so that said frame can be disposed upon the front of a piano without said parts contacting the face thereof.

What I claim is—

1. In a leaf-turner, the combination with a frame; of a locking device comprising a pair of arms rigidly secured to said frame, a pair of vertically-movable arms secured to said rigid arms and parallel therewith, a swinging

latch pivotally secured to the upper movable arm, a spring disposed between the end of said arm and latch whereby said latch is normally held in its lowered position a finger rigid with the lower movable arm and projecting upwardly therefrom, a controlling-bar rigidly secured to said movable arms, and means to operate said controlling-bar whereby the movable arms will be raised bodily and the devices interposed between said arms released one at a time.

2. In a leaf-turner of the class described, the combination with a frame having a shaft rotatably mounted thereon, leaf-engaging devices pivoted to said shaft and disposed in a common path, controlling members secured to said leaf-engaging devices, said controlling members having one of their ends curved and rotating around said shaft with the inner face of the curve engaging the shaft, and means secured at one end of the frame and at the opposite end to the controlling members to swing said leaf-engaging members on the shaft.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM G. BENSON.

Witnesses:

HIRAM E. BENSON,  
JOHN W. BARNES.