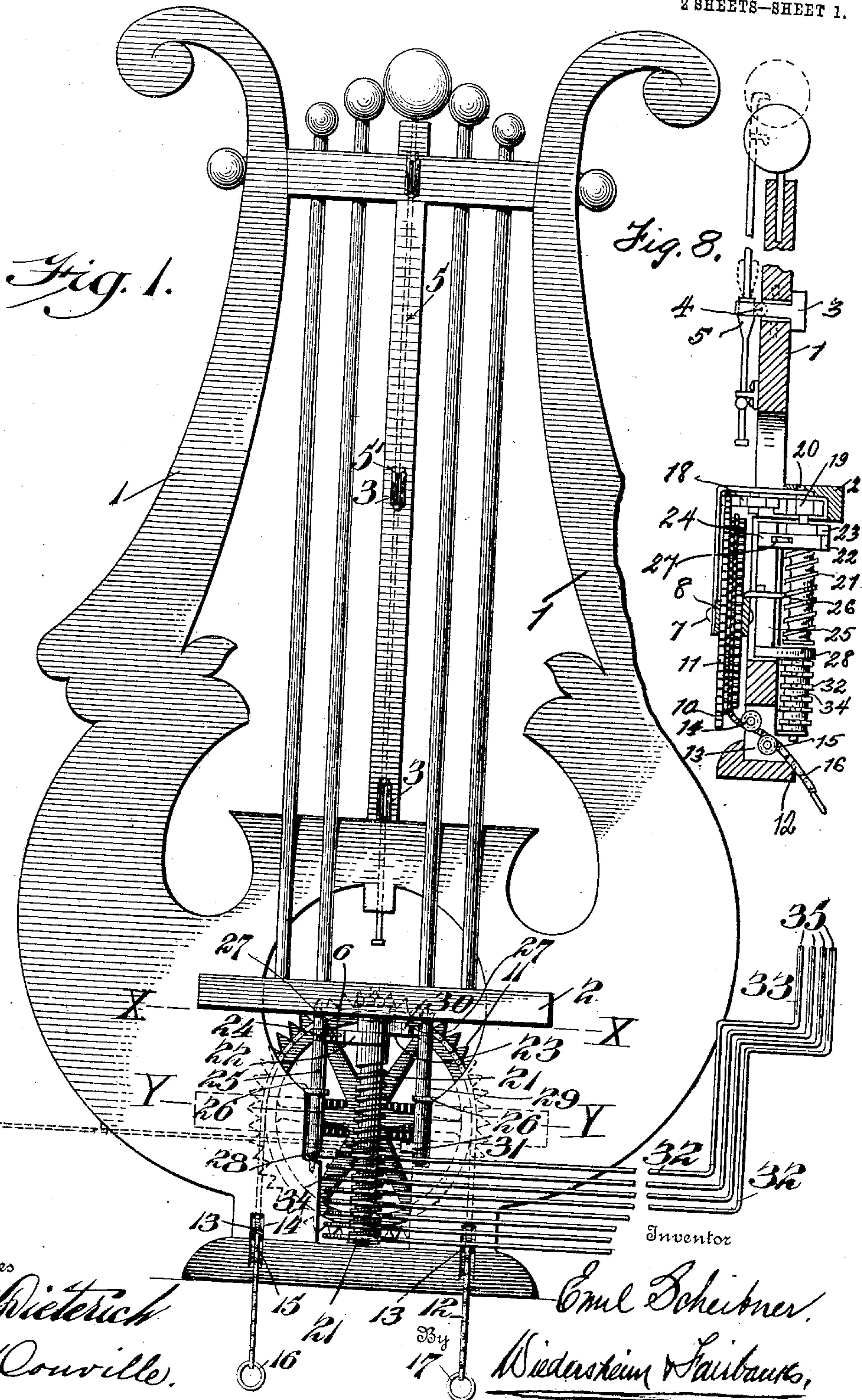


970,400.

E. SCHEIBNER.
MUSIC LEAF TURNER.
APPLICATION FILED JAN. 13, 1908.

Patented Sept. 13, 1910.

2 SHEETS—SHEET 1.



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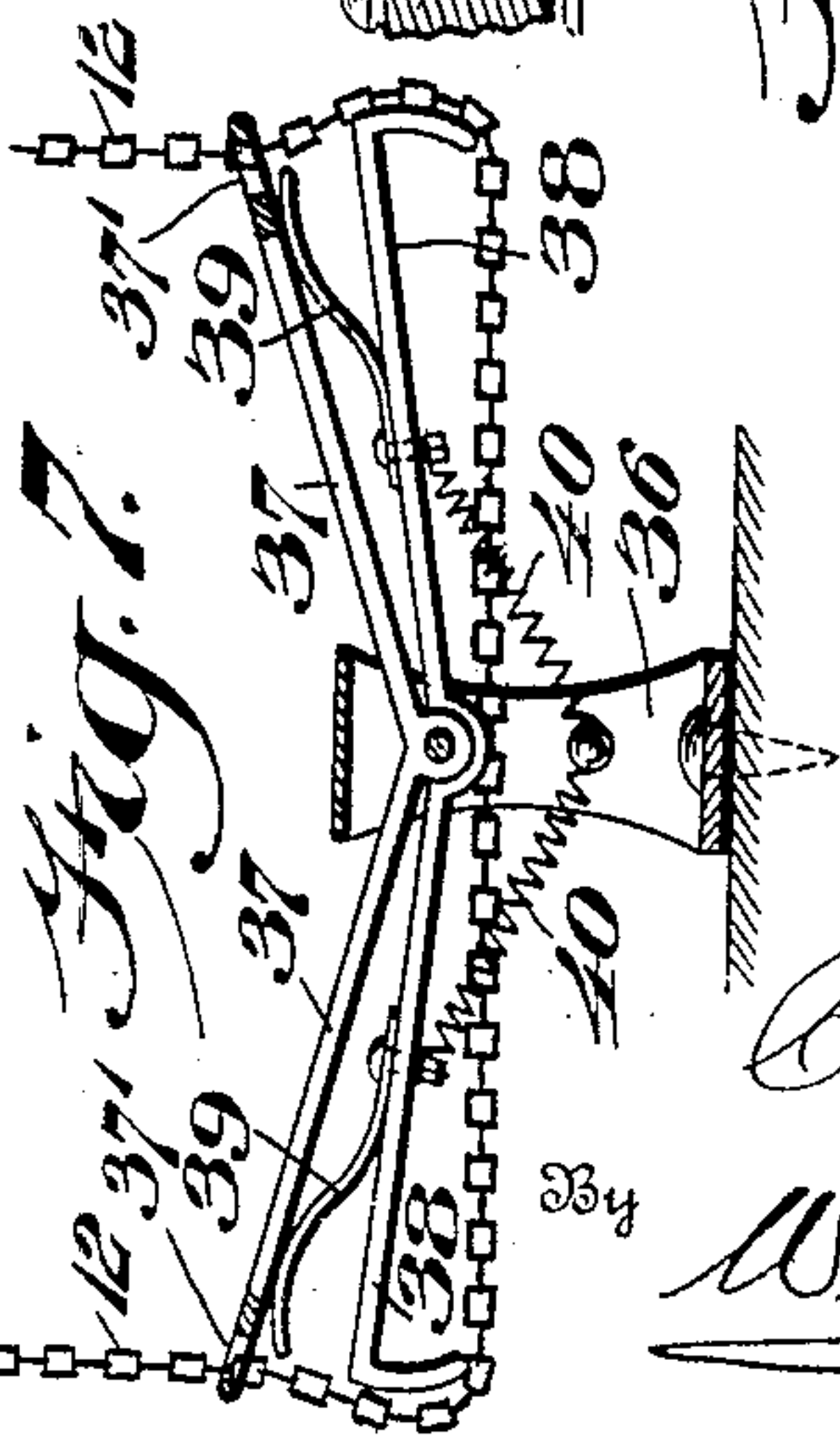
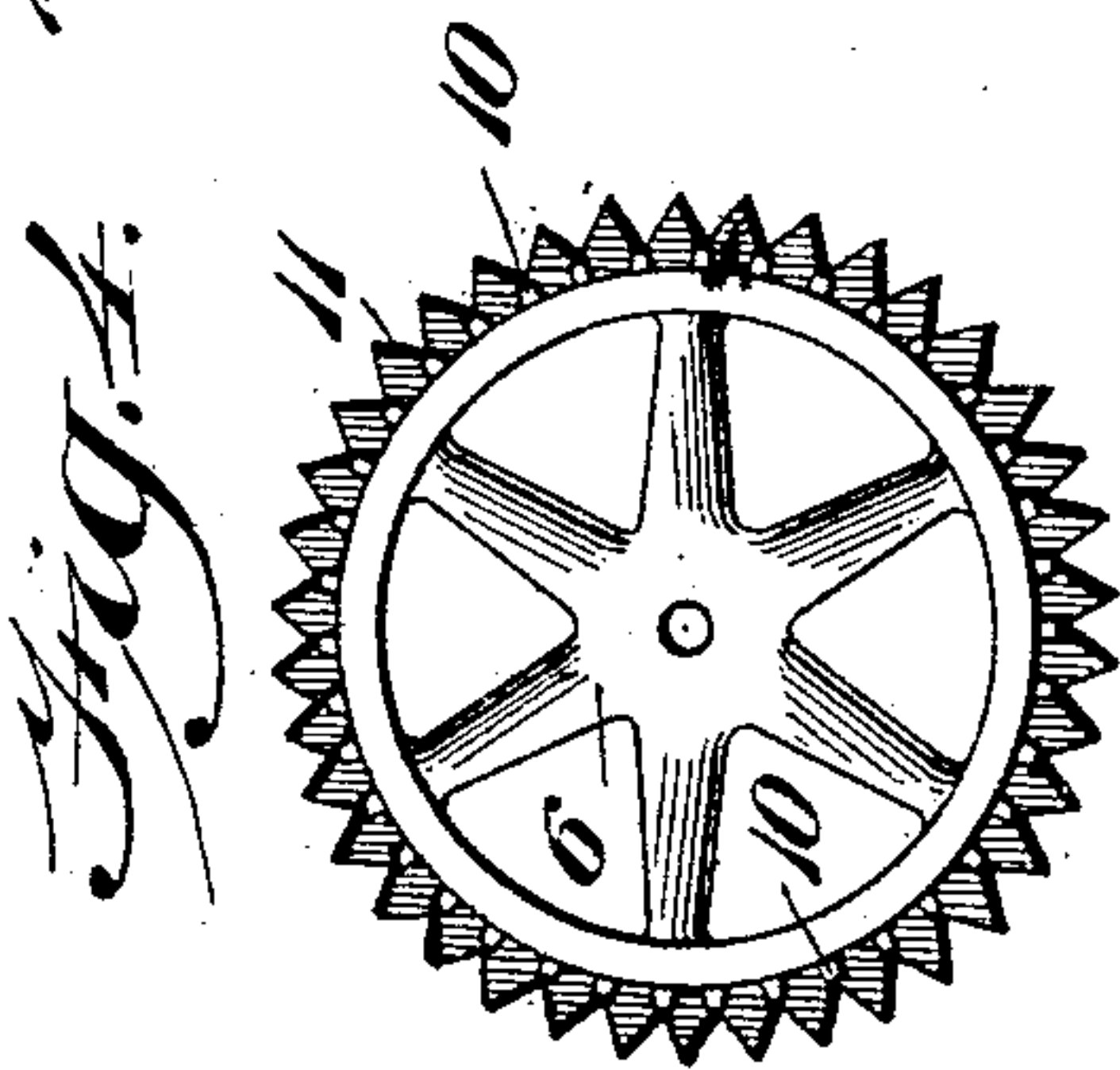
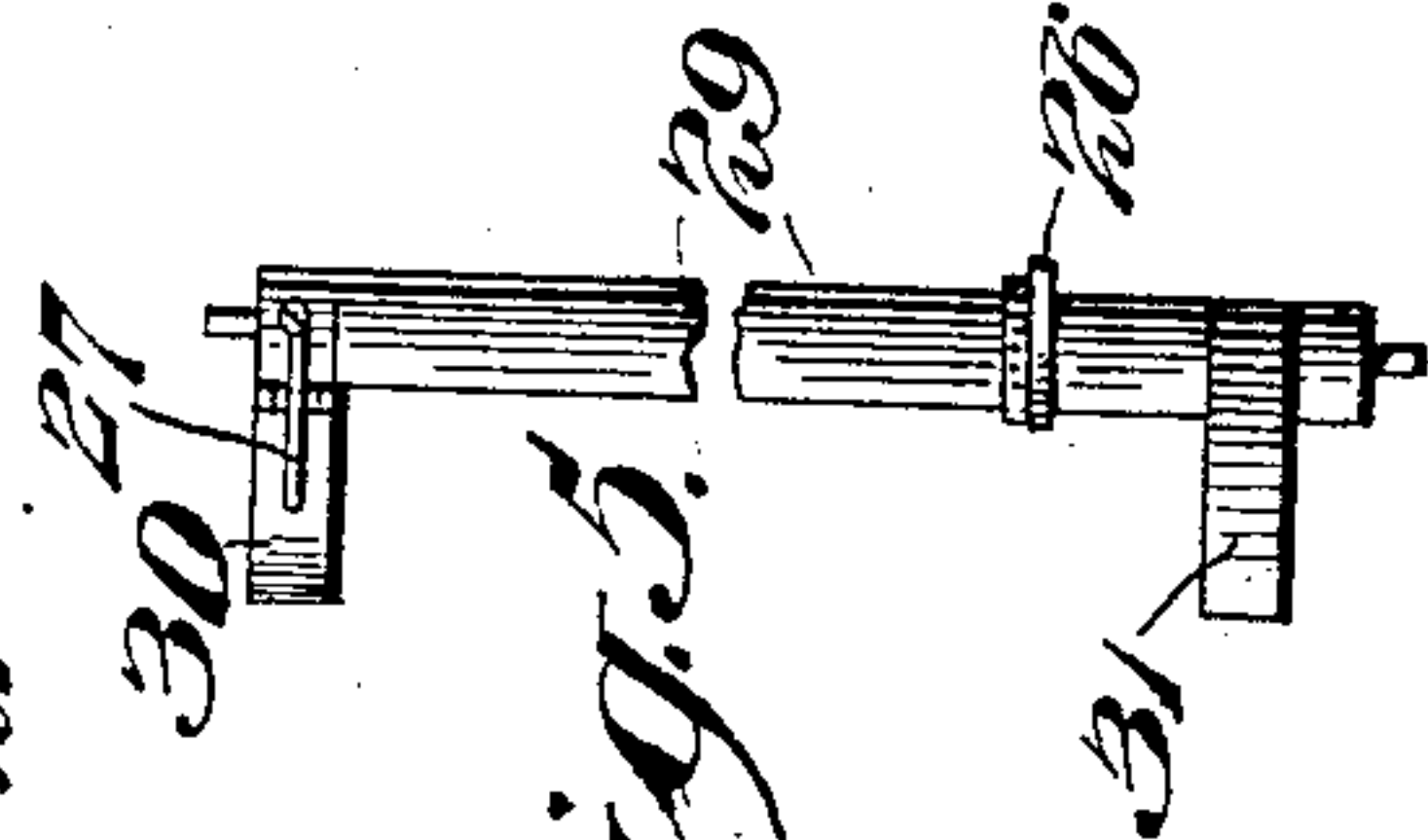
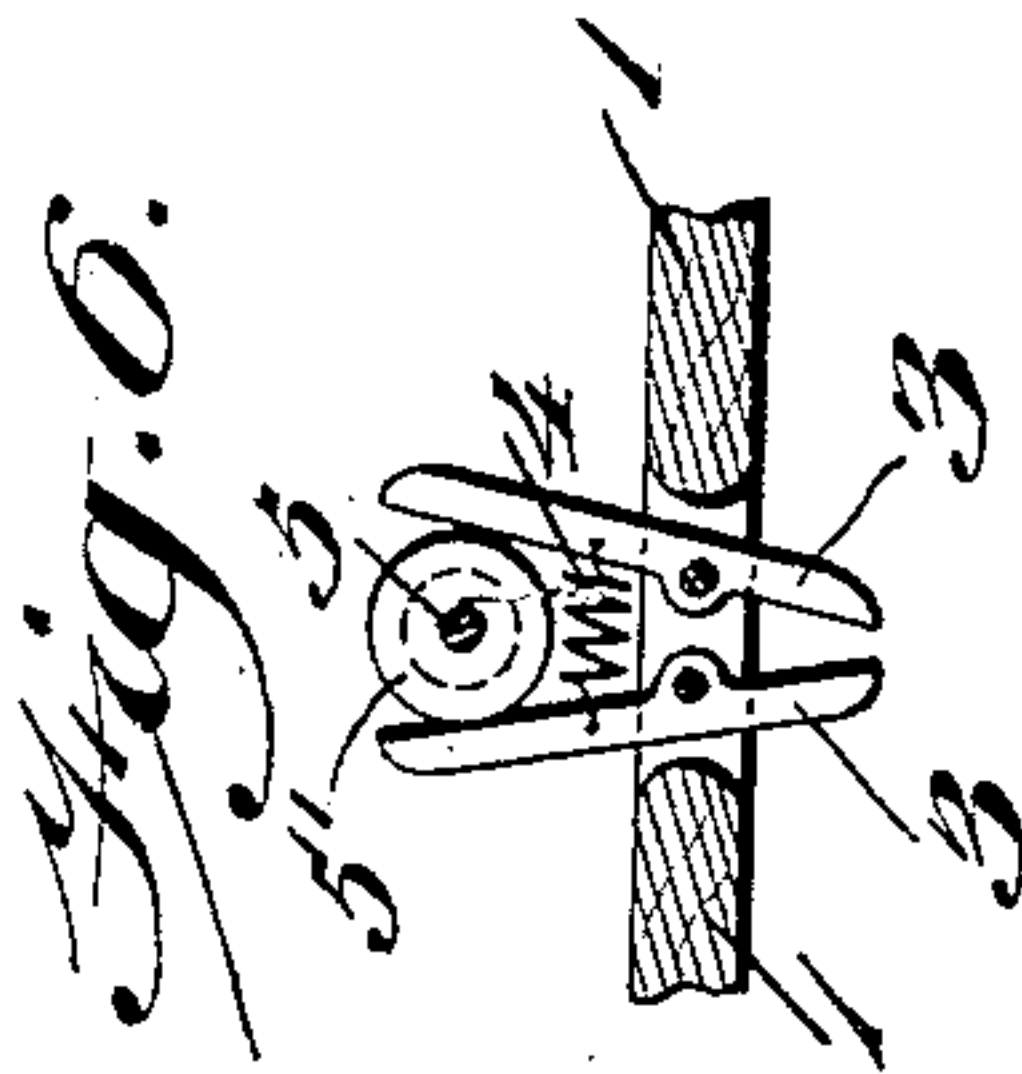
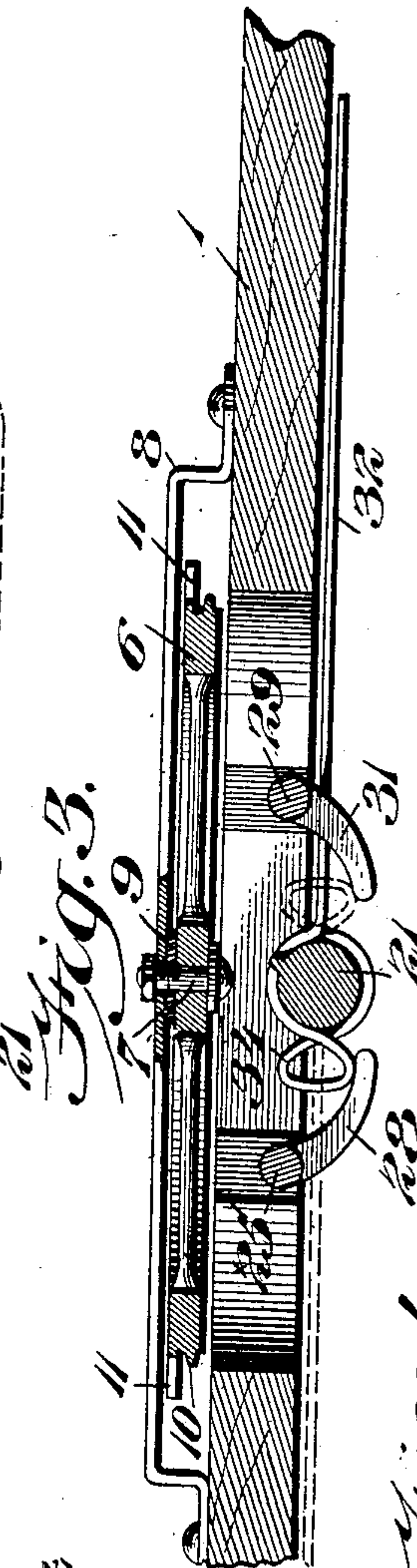
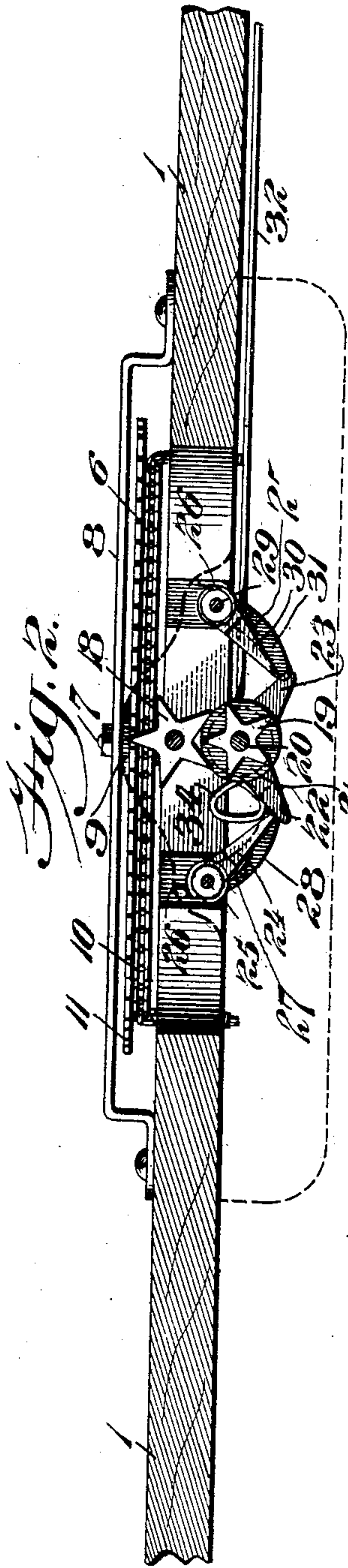
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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MUSIC-LEAF TURNER.

970,400.

Specification of Letters Patent. Patented Sept. 13, 1910.

Application filed January 13, 1908. Serial No. 410,488.

To all whom it may concern:

Be it known that I, EMIL SCHEIBNER, a subject of the Emperor of Germany, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Music-Leaf Turner, of which the following is a specification.

This invention relates to a music stand adapted to be attached to a piano, organ or orchestra stand, or it may be formed as an integral part of the same and consists of an ornamental rack to support music books or sheets and a device for holding them securely in place.

It further consists of a novel mechanism whereby a leaf of music may be turned at the proper time without necessitating the performer on the instrument stopping in the middle of a piece to reach up and turn the leaf by hand.

It still further consists of a device capable of turning any number of leaves one at a time and is therefore well adapted for exercise books, music scores and pieces having a number of pages.

It further consists of novel details of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention I have shown one form of construction which in practice gives satisfactory and reliable results but it will be evident that various changes may be made therein which will come within the scope of my invention and I do not therefore desire to be limited in every instance to the exact construction herein shown and described.

Figure 1 represents a front elevation of a music stand embodying my invention. Fig. 2 represents a section on line $x-x$ Fig. 1. Fig. 3 represents a section on line $y-y$ Fig. 1. Fig. 4 represents a view of the operating gear. Fig. 5 represents a detail of one of the rock levers. Fig. 6 represents a detail of the clasp members. Fig. 7 represents a modification for foot operation.

1 designates a frame for supporting books or sheet music and may be used in connection with the usual music rack on pianos or organs, or attached to a music stand. A shelf 2 is connected to or formed integral with this frame and forms a rest for the music, while a number of jaws or clasps on the frame hold the music against displacement. The jaws 3 are preferably pivoted to the frame 1 and are normally held apart

or in open position by a spring 4 or like means so that they are ready to receive the binding of a book or sheet of music. A rod 5 mounted for sliding movement in the frame 1 carries wedge shaped members 5' adapted to fit between the jaws 3 and counteract the action of the spring 4 so as to close the jaws 3 tightly on the music leaves inserted between them. As here shown the wedge members 5' are so located on rod 5 as to close the jaws 3 upon a lowering of the rod 5 though of course they could be turned around so as to make the reverse or upward movement perform the closing. It will be apparent that various forms of clasps or clips may be used for the purpose described and I do not wish to be limited to the exact construction shown in the present instance.

A gear wheel 6 is suitably mounted for rotation on the frame 1 and in the present instance is shown journaled on a bolt 7 secured to a bracket 8 which is fastened to frame 1. Washers 9 serve as side bearings permitting free rotation of the wheel 6. This gear wheel 6 is provided with a double set of teeth, one set 10 serving as a driving means for the wheel and the other set 11 transmitting the movement to the several parts constituting the leaf turning mechanism. Of course the gear wheel 6 may be attached in any desired manner to the frame 1 and may be formed in various ways to carry out the function intended.

12 designates a chain passing over gear teeth 10, the ends of which are extended within reach of a person reading the music located on the frame 1. It is to be understood that I do not wish to be limited to a gear and chain for rotating the gear 6 as other means would serve the purpose equally as well. In the preferred form I use the gear and chain described and pass the ends of the latter through slots 13 in the frame 1 adjacent which are friction rollers 14 and 15 to facilitate the movement of the chain. Rings or handles 16 and 17 are fastened to the ends of the chain and by pulling on one or the other the gear 6 may be rotated to turn a leaf of music in the direction desired.

A pinion 18 meshing with gear teeth 11 is mounted to engage a second pinion 19 on shaft 20 which carries a worm 21 and trip arms 22 and 23. The trip arm 22 is in position to engage a hinged lug 24 secured to a rock-shaft 25 which it is adapted to swing in one direction. A spring 26 is preferably

employed to return the rock shaft 25 to its normal position. It will be noted that the lug 24 is hinged to the rock shaft 25 so that in one direction of movement of arm 22 the
 5 lug 24 is merely swung back without affecting rock shaft 25 while in the other direction of movement it carries rock-shaft 25 with it. A spring 27 normally maintains
 10 lug 24 in contact with rock shaft 25, as clearly shown in Fig. 2. A lug 28 is secured to rock-shaft 25 and rotates therewith to perform a function to be hereinafter described. The arm 23 is in position to rock
 15 a rock shaft 29 of similar construction to rock shaft 25 and also provided with similar lugs 30 and 31, the only difference being in the hinged lug 30 which is hung to swing rock shaft 29 in the reverse direction from rock shaft 25.

20 The worm 21 is adapted to carry a series of rods 32 so shaped as to be in position to engage a sheet of music and terminating in fingers 33 for turning the leaves of the same. Each rod 32 carries a projection 34
 25 which in certain positions of the rod is so located as to be engaged by one or the other of lugs 28 or 31. The rods 32 are so connected to the worm 21 as to be moved upward or downward thereby according to
 30 the direction of movement of the worm 21 and one rod always being in position to have its projection 34 picked up by lug 28. Preferably I connect the rods 32 to the worm 21 by simply winding each of them
 35 around a convolution of the worm thread and twisting one end of each to form the projection 34. Thus it will be seen that each rod 32 makes a half turn around the shaft 21 and is then bent back on itself to
 40 form the projection 34, whereupon it makes another half turn about the shaft 21 and terminates in close proximity to the first turn, thereby forming around the shaft 21, a substantial ring, whereby as soon as the
 45 worm is rotated the rods 32 are advanced step by step in the direction of the axis of the shaft. The fingers 33 are preferably each formed with a split end 35 in which a sheet of music is adapted to be slipped and
 50 is thereby securely held during a turning movement.

In Fig. 7 I show a modification whereby the chain 12 may be operated by means of the foot instead of by hand. 36 designates
 55 a support resting on the floor and having pivoted thereto a treadle member 37 and chain guide member 38. This latter member has secured thereto, a spring 39 preferably having an end adapted to engage the
 60 chain 12 and bind it against movement, in slot 37' in the treadle 37 whenever the treadle 37 is depressed. A pair of springs 40 are connected from the support 36 to the chain guide 38 and serve to maintain the
 65 same in normal position. The operation

of this part will be clear: As the member 37 is depressed the spring 39 straightens out and engages the chain 12 which is pulled down on a further depression of the treadle
 37, the motion of which is transmitted to the
 70 chain member 38, which swings downward and carries the chain with it. The return of the parts is effected by the springs 40.

The operation of the device consists of placing a sheet or book of music in place
 75 on the rack 2 with the binding thereof in the jaws 3 and then manually lowering rod 5 so that the wedges 5' enter between the ends of the jaws 3 and overcome the action of the spring 4 to grip the music firmly.
 80 The fingers 33 are now placed in engagement with the leaves of the music, one leaf being slipped in the split end of each finger and the device is ready for use. As soon as the performer has read to the end of a
 85 page and wishes to turn the same without ceasing to play the instrument, the ring 16 is given a quick pull and the gear 6 thereby partially rotated. This motion is transmitted to the worm shaft 20 and swings arm 22
 90 around to trip lug 24 and oscillates rock shaft 25, which carries with it lug 28, the movement of which brings it into engagement with projection 34 on rod 32. The rod 32 is thus swung around through an
 95 angle sufficiently great to turn one leaf of the music sheet or book. The rotating of the worm 21 of course moves up all the rods 32 a distance corresponding to the pitch of the worm so that the rod which has just
 100 operated to turn a leaf is moved out of the path of lug 28 and into the path of lug 31, which if oscillated by pulling ring 17 or by depressing treadle 37, will turn the leaf of music back to its original place. It will be
 105 noted also that another rod has moved up to be engaged by lug 28 and turn the next sheet when desired. Thus it will be clear that leaf after leaf may be turned as the end of each page is reached and the performer
 110 will not have to cease playing the instrument, nor be subject to losing the place and interrupt the tune being played. Attention is directed to the further feature of turning the leaves of the music sheet without tearing or mutilating them, whereby manuscript or valuable sheet music may be used with my novel turning mechanism much more
 115 safely than by the usual manual turning method, which nearly always starts a small
 120 tear to end in the complete destruction of the sheet.

A salient feature of my invention resides in forming a supporting frame in some
 125 ornamental design and providing the same with an opening in which the operating mechanism is located that it may form no obstruction whatsoever to the placing of the music upon the rack and yet the turning members may project therefrom at a suitable
 130

point to engage the leaves of music and turn them successively one way or the other, as occasion demands.

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

1. In a device of the character described, a frame having an opening therein, a supporting shelf secured thereto, a shaft adjacent said shelf, a worm on said shaft, a plurality of leaf turning members carried by said worm and adapted for longitudinal movement relative to said shaft, and means in said opening to oscillate said leaf turning 15 members.

2. In a device of the character described, a frame having an opening therein, a supporting shelf secured thereto, means to clamp a music sheet thereon, a shaft adjacent said shelf, a worm on said shaft, a plurality of leaf turning members carried by said worm and adapted for longitudinal movement relative to said shaft, and means in said opening to oscillate said leaf turning 25 members.

3. In a device of the character described, a frame, means to support a music sheet thereon, a driving gear, a worm driven thereby, a plurality of rods mounted on said worm, fingers on said rods and means to oscillate said rods. 30

4. In a device of the character described, a frame, means to support a music sheet thereon, a driving gear, means to rotate said gear, a worm shaft, trip arms thereon, a plurality of rods on said worm shaft, and means intermediate said trip arms and rods whereby the latter are oscillated. 35

5. In a device of the character described, a frame, means to secure a music sheet thereon, a worm shaft, a plurality of members mounted to move longitudinally thereon and adapted to turn a sheet of music, a gear operatively connected to said shaft, a foot treadle for operating said gear in one direction, a second foot treadle for operating said gear in the opposite direction, and means to return said foot treadles to normal position. 45

50 6. In a device of the character described,

an ornamental frame having an opening therein, means to support a music sheet thereon, a driving gear adjacent said opening, a shaft cooperating therewith, a worm on said shaft, a plurality of rods mounted to move longitudinally on said shaft and adapted to engage sheets of music, and means to oscillate said rods. 55

7. In a device of the character described, an ornamental frame, means to support music sheets thereon, a shaft adjacent thereto, a worm on said shaft, a plurality of rods on said worm, trip arms secured to said worm shaft, pivoted members adjacent said worm shaft each having a lug thereon in the path of said trip arms, a second series of lugs on said pivoted members adapted to engage said rods, and means to rotate said worm shaft in either direction. 65

8. In a device of the character described, an ornamental frame having an opening therein, means to secure music sheets thereto, a driving gear adjacent said opening, a worm shaft driven thereby and mounted in said opening, a plurality of rods carried by said worm shaft and moved as the shaft is rotated, fingers on said rods adapted to engage sheets of music, and means to actuate said rods successively to turn a sheet of music. 75 80

9. In a device of the character described, a frame, a trip arm pivoted thereto, a plurality of members supported adjacent said trip arm and adapted to engage sheets of music, means to operate said trip arm, and means to successively move said members in either direction into the path of movement of said trip arm. 85

10. In a device of the character described, a frame, a plurality of trip arms pivoted thereto, a plurality of members supported adjacent said trip arms and adapted to engage sheets of music, means to operate said trip arms, and means to move said members into the path of movement of said trip arms. 90 95

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Witnesses:

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