

No. 658,283.

Patented Sept. 18, 1900.

F. SCHAFFTER.
MUSIC LEAF TURNER.

(Application filed June 7, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

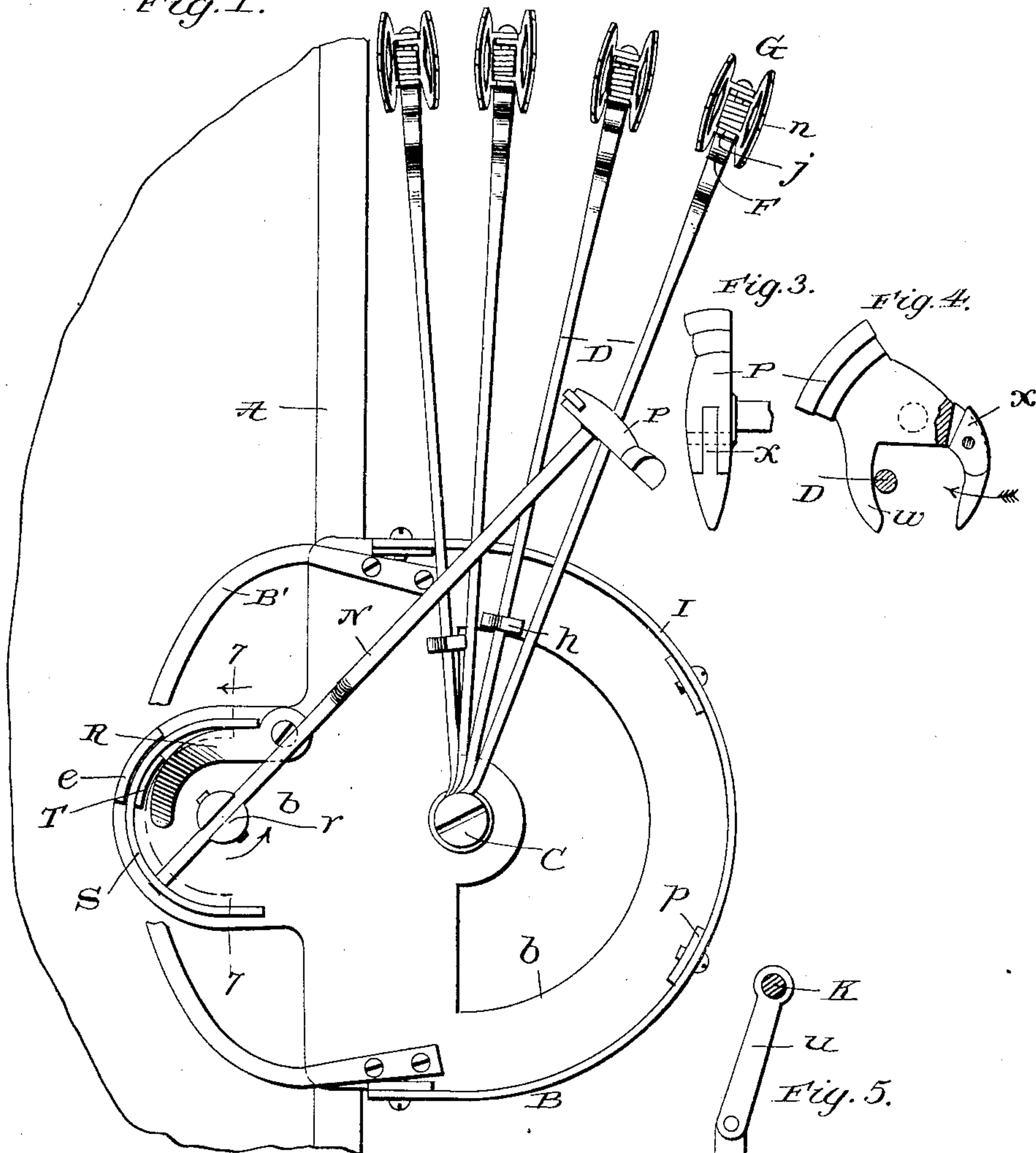


Fig. 3.

Fig. 4.

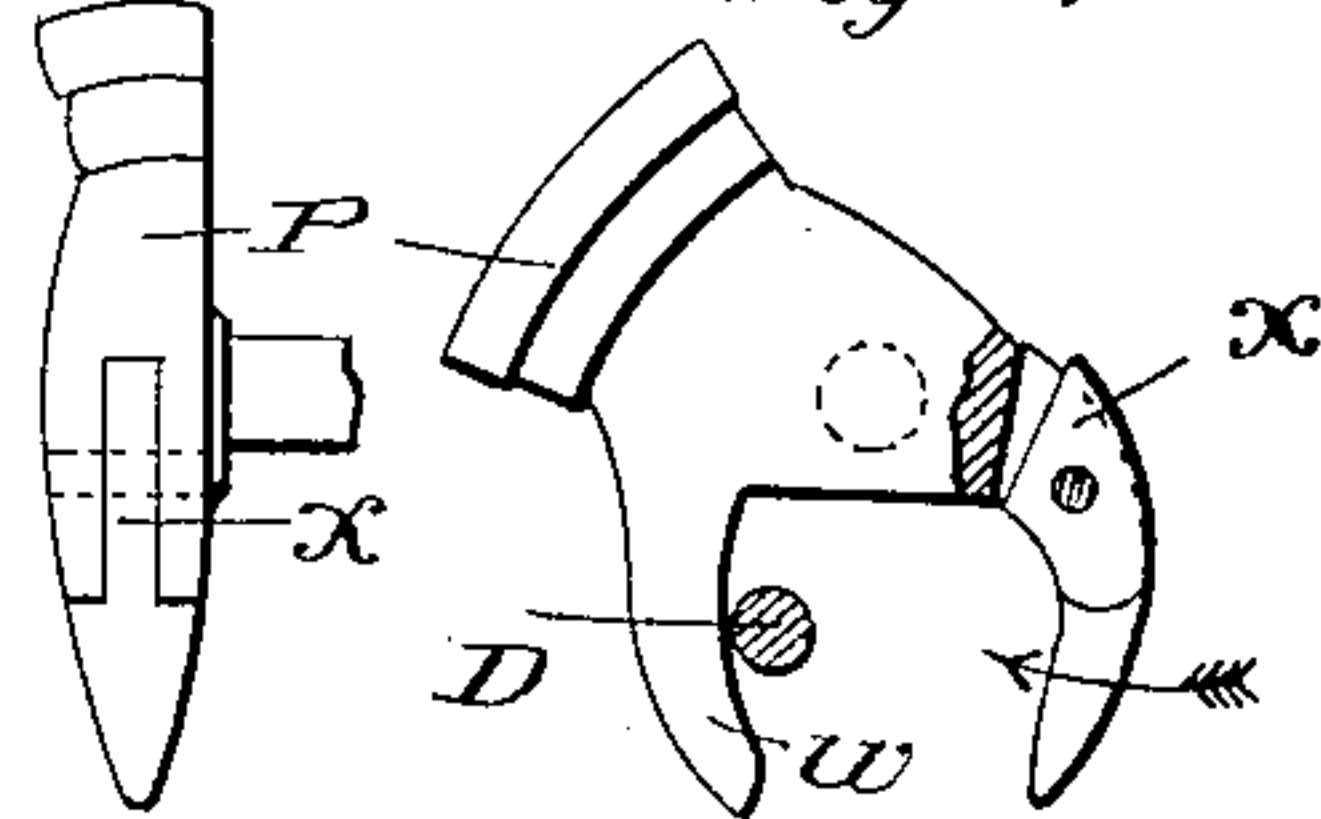


Fig. 2.

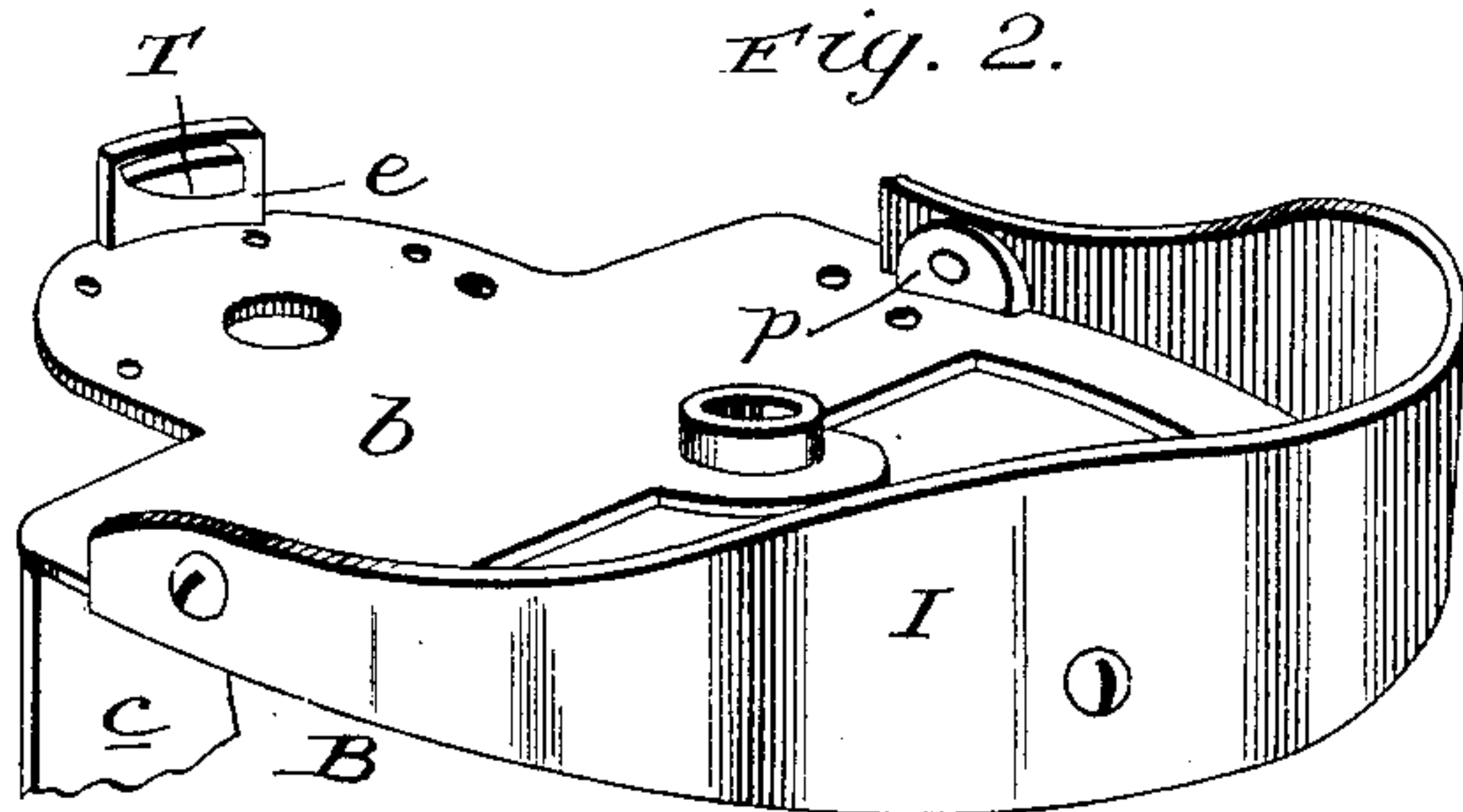
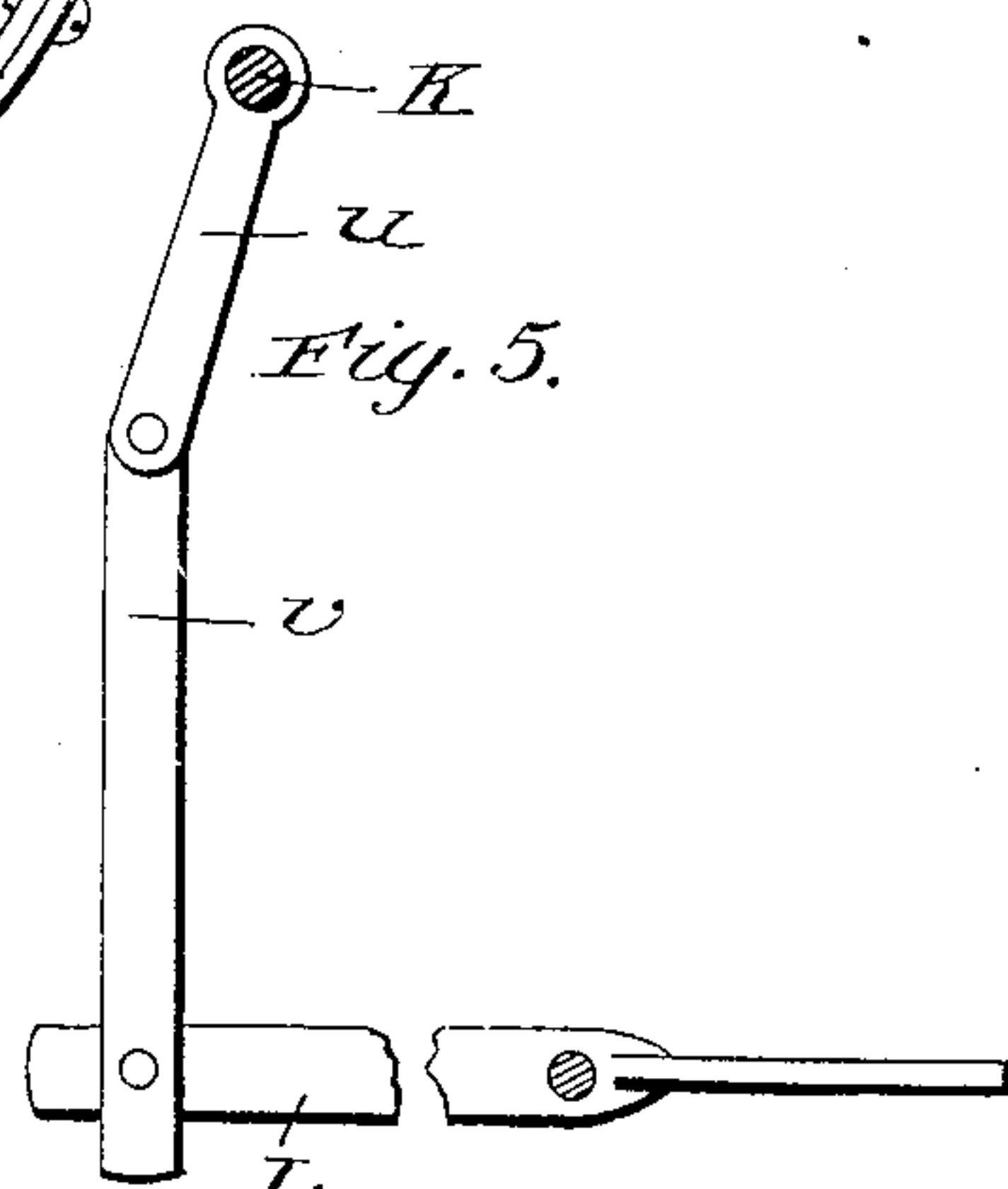


Fig. 5.



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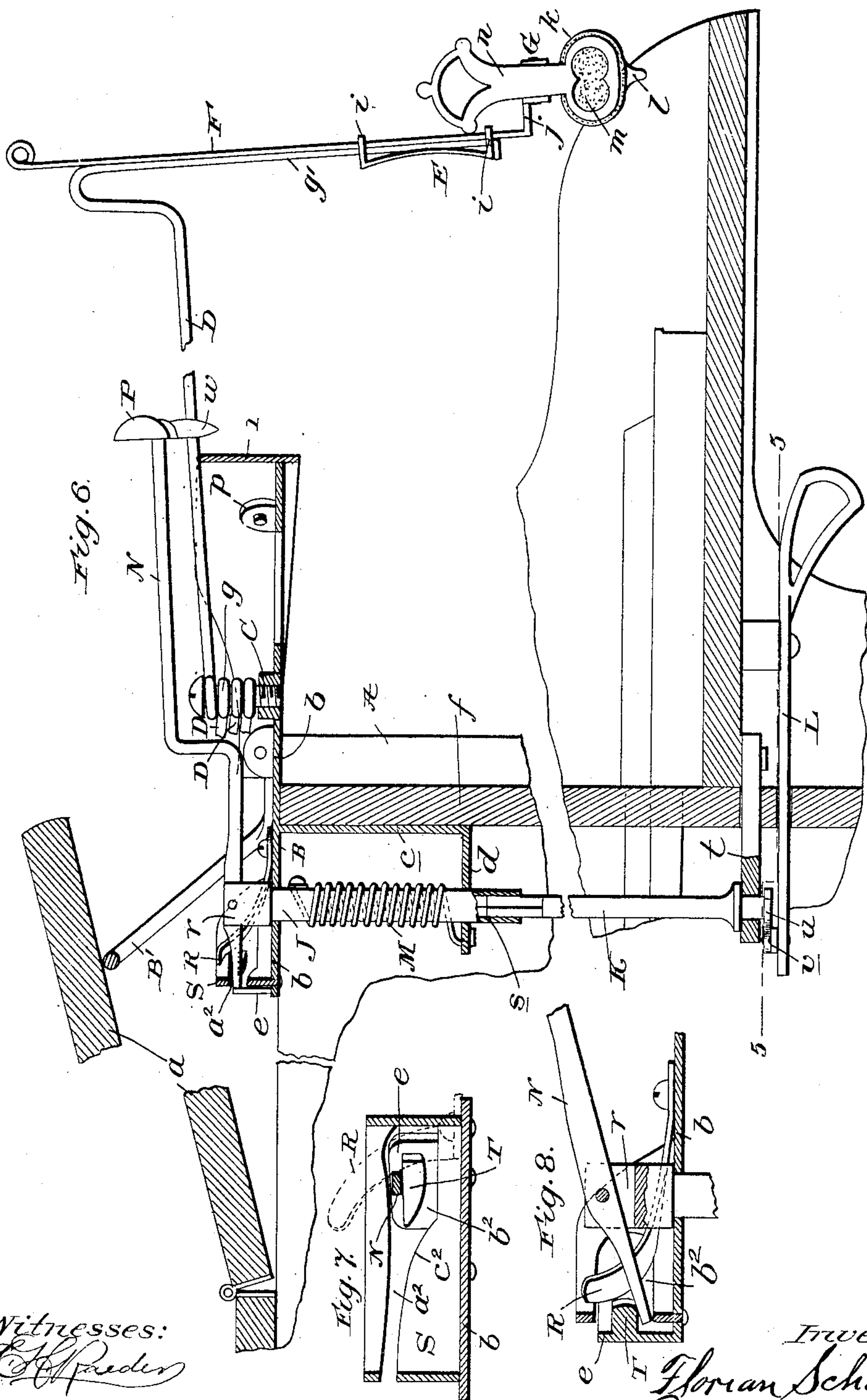
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 658,283, dated September 18, 1900.

Application filed June 7, 1900. Serial No. 19,439. (No model.)

To all whom it may concern:

Be it known that I, FLORIAN SCHAFFTER, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Music-Leaf Turners, of which the following is a specification.

My invention relates to improvements in music-leaf turners; and it consists in the highly-efficient device hereinafter described, and particularly pointed out in the claims appended, through the medium of which a musician is enabled to expeditiously turn the several leaves of a piece of music in succession.

In the accompanying drawings, Figure 1 is a plan view of my improved music-leaf turner as it appears when in its proper position on a piano. Fig. 2 is a perspective view of the body of the device. Figs. 3 and 4 are enlarged detail views of the hand of a sweep forming part of the device. Fig. 5 is a detail section taken in the plane indicated by the broken line 5 5 of Fig. 6. Fig. 6 is a broken view illustrating my improved device and the piano in transverse section. Fig. 7 is an enlarged detail section taken on the broken line 7 7 of Fig. 1. Fig. 8 is a similar view illustrating the manner in which the sweep is elevated or rocked in a vertical plane to disengage it from the swinging arms.

In the said drawings similar letters designate corresponding parts in all of the several views, referring to which—

A is an upright piano having the usual lid *a*, and B is the body of my improved device. The said body is preferably formed in one piece of sheet metal and comprises a horizontal portion *b*, a depending portion *c*, terminating at its lower end in an angular branch *d*, and a rear upwardly-reaching portion *e*. It is applied to the piano as shown in Fig. 2—that is to say, its horizontal portion is arranged on the upper edge of the front panel *f* of the piano, and its depending vertical portion is disposed at the inner side of said panel.

C is a post on the portion *b* of the body B, and D D are swinging arms which have eyes *g* at their inner ends loosely arranged one above the other on the said post, and also having depending portions *g'* at their outer

ends. There are preferably four swinging arms, and in order to prevent them from lapping or tending to assume positions one above the other when they are assembled at one side of the body, as shown in Fig. 1, two of them are provided with enlargements *h*.

E E are spring-clips which bear against the depending portions *g'* of the arms D and have eyes *i* at their ends receiving said portions *g'*, and F F are vertically-adjustable fingers which extend through the eyes of the clips and are yieldingly held by the same against the depending portions of the arms D, so as to permit of them being moved up or down, according to the size of the sheets of music to be engaged. At their lower ends the adjustable fingers F are provided with lateral branches *j*, on which are mounted clasps G. These clasps are similar in construction, and therefore a description of the one shown in Fig. 6 will suffice to impart an understanding of all. Said clasp comprises a member *k*, fixed at an intermediate point of its length on the branch *j* of a finger F and having a tongue *l* at its lower end, and also having a felt or other suitable cushion *m* on the inner side of its lower portion, and a spring-pressed member *n*, which is pivotally connected to the member *k* at an intermediate point of its length, so that its lower portion is normally held against the cushion *m* of said member *k*. By virtue of the lower portion of member *n* being smaller than the lower portion of member *k*, as shown, and the member *k* being provided with the tongue *l*, it will be observed that when the clasp is opened the lower portion of member *k* may be readily inserted between two leaves of a piece of music. It will also be seen that because of the cushion *m* on member *k* the clasp is enabled to securely hold a leaf of a piece of music without cutting, tearing, or otherwise injuring or marring the same. The upper portions of the members of the clasp afford good finger-holds, and hence it follows that the clasp may be readily opened when it is desired to move it down with its finger F and into engagement with a leaf of a piece of music.

I is a semicircular support of sheet metal or other suitable material, which is connected to lugs *p* on the body B. This support has for its purpose to hold the arms D against

sagging downwardly while the said arms are at rest and also while they are being swung in either direction. It may, when desired, be ornamental in design, so as to enhance the beauty of the device.

J is a vertically-disposed rock-shaft which is journaled in the portions b d of the body B. This shaft is provided at its upper end with an enlargement r , which bears on the portion b of the body and is designed to hold the shaft against downward movement. Said shaft is also provided in its lower end with a socket s , designed to receive the upper end of a rock-shaft K, with which it is adapted to rock. The said shaft K is stepped in a bracket t , connected to the keyboard of the piano, and is provided below said bracket with an angular arm u for a purpose presently described. The keying of shaft J to shaft K, as shown, causes the former to rock with the latter and permits of said shaft J being readily lifted out of engagement with the shaft K and removed with the body B and its appurtenances from the piano when desired.

L is a knee piece or lever which is fulcrumed on the under side of the keyboard of the piano in a suitable position to be engaged by the left knee of the performer. The inner end of this lever is connected by a link v to the arm u of shaft K, whereby it will be seen that when the outer end of the lever is pressed toward the left the shaft J will be rocked toward the left for a purpose presently described.

M is a coiled spring surrounding the shaft J and connected at one end to said shaft and at its opposite end to the body B. This spring has for its purpose to rock the shaft toward the right subsequent to said shaft being rocked toward the left through the medium of the knee-piece L.

N is a sweep connected in a hinged manner to the upper end of the shaft J and adapted to swing in a vertical plane. This sweep is provided at its outer end with an enlargement P, which is preferably in the form of a hand and is provided with a rear depending projection or thumb w and a forward depending projection or finger x , the latter comprising a knuckle-joint, as best shown in Fig. 4, whereby its lower portion is adapted to flex in the direction indicated by arrow in Fig. 4, but is held against flexing in the opposite direction for a purpose presently described.

R is a sweep elevator or device for raising the outer arm of the sweep to disengage its hand P from a swinging arm D after it has moved said arm D from a position at the right to a position at the left of the body B. The said elevator is preferably in the form of a curved spring, which is connected at one end to the upper side of the portion b of the body and is inclined upwardly therefrom, so as to enable the inner arm of the sweep to take beneath it when the outer arm of said sweep is swung from right to left. It is arranged adjacent to a curved plate S, which is connect-

ed to and rises from the body portion b at the rear thereof. The said plate is provided, as best shown in Fig. 7, with a longitudinal slot a^2 , which merges at its forward end into a comparatively-large opening b^2 and has its lower wall c^2 inclined, as shown. In the said opening b^2 of the plate is arranged a lug T, which is mounted on the upwardly-reaching portion e of the body and has a straight upper side and a curved lower side, as shown.

When the outer arm of the sweep N is swung from right to left, with its hand P in engagement with an arm D, the inner arm of said sweep will be moved toward the right in the slot a^2 of plate S, beneath the spring R, and over the upper straight side of the lug T. Incident to the passing of the said inner arm of the sweep over the lug T the spring S is pressed upwardly, and hence is enabled when the arm reaches the forward end of the lug to instantaneously and forcibly depress said arm, and thereby quickly raise the hand on the outer arm of the sweep out of engagement with the swinging arm D. When the inner arm of the sweep is depressed, as stated, the spring M operates to rock the shaft J in the direction indicated by arrow in Fig. 1, and thereby swings the outer arm of the sweep toward the right and the inner arm toward the left. Incident to the latter movement of the inner arm it passes beneath the lug T and up the inclined wall of the slot a^2 , with the result that it is raised and the outer arm of the sweep is moved down to its normal operative position, (shown in Fig. 6,) so as to enable its hand P to automatically engage one of the arms D remaining at the right of the body B.

In the practical operation of the invention the clasps G are placed in engagement with the upper edges of the leaves of a piece of music, while the arms C are in the position shown in Fig. 1. When the playing of the music on the first leaf is completed, the performer presses the knee-piece L toward the left with his knee, and thereby rocks the shaft K J and swings the sweep N toward the left. The finger x of the hand P on sweep N first rests in rear of the first arm D, and hence it follows that when the sweep is swung toward the left, as stated, the said first arm D and the leaf of the music attached thereto will be swung toward the left. Incident to the swinging of the sweep N, arm D, and leaf of music toward the left and when arm D and leaf of music have almost reached the panel f of the piano the sweep is swung upwardly to lift its hand P out of engagement with the arm D and is then swung toward the right and during such movement is swung downwardly to its normal position by the means before described in detail. The said movement of the sweep N toward the right is caused by the spring M rocking the shaft J in the direction indicated by arrow in Fig. 1. The sweep N is swung toward the right until the depending projection w of the enlargement P

thereon engages and is stopped by the second arm D, and it will be noticed that before the projection *w* of the enlargement or hand P brings up against the second arm the finger *x* will have flexed toward the left and dropped into a position in rear of the second arm ready to move it toward the left, when the device is again actuated.

The operation described with reference to the first and second arms D is repeated until all the arms D and the leaves attached thereto are swung over toward the left and against the panel of the piano.

If the performer desires to repeat the music on the first leaf, he does not move the knee-piece L sufficiently far to the left to disengage the sweep N from the first arm D, but only far enough to enable him to read the music on the second page of the first leaf. By virtue of this the performer after playing the notes on the second page of the first leaf has but to release the knee-piece L, when the spring M will rock the shaft K J, and thereby return the arm D, the sweep N, and the leaf of music to their original position.

The body B of the device is preferably provided with a bail-shaped support B', which has for its purpose to hold the lid *a* of the piano above the device when the same is applied as shown in Fig. 6. The said support B' is preferably of such height as to hold the lid *a* in but a slightly-inclined position and permit of the placing of ornaments, &c., thereon. It may obviously be dispensed with when the leaf-turner is used on instruments other than upright pianos.

When the leaf-turning device is to be used on an organ, a square or grand piano, or a music-stand, it is obvious that the body B may be applied in any suitable manner and also that, if necessary, the rock-shaft may be turned through the medium of means other than a knee-piece.

It will be noticed that the support I on the body B is so shaped as to carry the music evenly and hold it up straight before and after turning. It will also be noticed that by reason of the lower portion of the member *n* of each clasp being open the music is visible through the same.

Having thus described my invention, what I claim is—

1. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms; said sweep having an enlargement provided with depending portions arranged one in advance of the other in a plane to enable both of them to engage the swinging arms, and the forward depending portion comprising a knuckle-joint, and means for raising the sweep and thereby disengaging it from an arm.

2. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms, a support over which the sweep is ar-

ranged to move, and a spring arranged adjacent to the support for moving the sweep vertically as it passes off the support, substantially as specified. 70

3. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms, a support over which the sweep is arranged to move horizontally in one direction, a spring arranged adjacent to the support for moving the sweep vertically in one direction as it passes off the support, and a cam for moving the sweep vertically in the opposite direction incident to its return horizontal movement, substantially as specified. 75

4. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms, and a spring extending above the plane of movement of the sweep, for engaging and moving the same vertically at the termination of its horizontal movement in one direction, substantially as specified. 80

5. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms; said sweep being fulcrumed at an intermediate point of its length, a support over which the inner arm of the sweep is arranged to move incident to the horizontal movement of the sweep in one direction, a sweep-elevating spring for engaging the inner arm of the sweep incident to the horizontal movement of the sweep in one direction and for moving the same vertically when it passes off the support, and a sweep-depressing cam for engaging the inner arm of the sweep incident to the horizontal movement of the sweep in the opposite direction. 85

6. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms; said sweep being fulcrumed at an intermediate point of its length, and having an enlargement provided with depending portions arranged one in advance of the other in a plane to enable both of them to engage the swinging arms, and the forward depending portion comprising a knuckle-joint, a support over which the inner arm of the sweep is arranged to move horizontally in one direction, a spring arranged to engage the inner arm of the sweep and move the same vertically in one direction as it passes off the support, and a cam for engaging the inner arm of the sweep so as to move the sweep vertically in the opposite direction incident to its return horizontal movement, substantially as specified. 90

7. In a music-leaf turner, the combination of a plurality of swinging arms, a swinging and vertically-movable sweep for moving the arms; said sweep being fulcrumed at an intermediate point of its length, and having an enlargement provided with depending portions arranged one in advance of the other in a plane to enable both of them to engage the swinging arms, and the forward depending 95

portion comprising a knuckle-joint, the spring for engaging the inner arm of the sweep, the curved plate having the slot provided with the lower inclined wall and receiving the inner arm of the sweep, and also having the comparatively-large opening at one end of the slot, and the lug supported in said opening of the curved plate and arranged to support the inner arm of the sweep incident to the horizontal movement thereof in one direction, substantially as specified.

8. In a music-leaf turner, the combination of a plurality of swinging arms, an upright rock-shaft, a sweep for moving the arms, fulcrumed at an intermediate point of its length on the rock-shaft so as to turn therewith and swing vertically thereon, a sweep-elevating spring for engaging the inner arm of the sweep incident to the horizontal movement of the sweep in one direction, and a sweep-depressing cam for engaging the inner arm of the sweep incident to the horizontal movement of the sweep in the opposite direction.

9. In a music-leaf turner, the combination of a plurality of swinging arms, an upright rock-shaft, a sweep for moving the arms, fulcrumed at an intermediate point of its length on the rock-shaft so as to turn therewith and swing vertically thereon, the spring for engaging the inner arm of the sweep, the curved plate having the slot provided with the lower inclined wall and receiving the inner arm of the sweep, and also having the comparatively-large opening at one end of the slot, and the lug supported in said opening of the curved plate and adapted to engage the inner arm of the sweep, substantially as specified.

10. In a music-leaf turner, the combination of a body, an upright rock-shaft journaled therein, a coiled spring surrounding the shaft and connected at one end thereto and at its opposite end to the body, a plurality of swinging arms connected to the body, a sweep for moving the arms, fulcrumed at an intermediate point of its length on the rock-shaft, a spring connected to the body and arranged to engage the inner arm of the sweep, the curved plate connected to the body and having the slot provided with the lower inclined wall and receiving the inner arm of the sweep, and also having the comparatively-large opening at one end of the slot, the lug connected to the body and arranged in said opening of the curved plate, and suitable means for rocking the shaft in one direction, substantially as specified.

11. In a music-leaf turner, the combination of a plurality of swinging arms, and a swinging sweep having an enlargement provided with depending portions arranged one in ad-

vance of the other in a plane to enable both of them to engage the swinging arms; the forward depending portion comprising a knuckle-joint, substantially as specified.

12. In a music-leaf turner, the combination of a plurality of swinging arms, and a swinging sweep for moving the arms; the said sweep being provided with a hand having a depending thumb arranged to engage the swinging arms and a finger arranged in advance of the thumb and comprising a knuckle-joint whereby it is adapted to flex in one direction and pass the arms and is held against flexing in the opposite direction so as to enable it to move the arms, substantially as specified.

13. In a music-leaf turner, the combination of a body having a curvilinear support on its forward portion, a post rising from the body, a plurality of swinging arms pivotally mounted one above the other on the post and resting on the support, and enlargements on the alternate arms whereby they are prevented from lapping.

14. In a music-leaf turner, the combination of a body having a curvilinear support on its forward portion, a plurality of swinging arms connected to a post rising from the body and resting on the support and having depending portions, enlargements on the alternate arms whereby they are prevented from lapping, fingers adjustably connected to the depending portions of the arms, and clasps on the said fingers; the clasps respectively comprising a member connected at an intermediate point of its length to a finger and having a cushion on the inner side of its lower portion and a tongue at the lower end thereof, and a second spring-pressed member fulcrumed at an intermediate point of its length and having an open, lower portion of smaller size than the lower portion of the first-named member, substantially as specified.

15. A music-leaf turner comprising a body adapted to be arranged on the upper edge of the front panel of an upright piano, a plurality of swinging arms connected to the body, suitable means for moving said arms, and a curvilinear support connected at its ends to and extending upwardly and rearwardly from the body and adapted to support the lid of the piano, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FLORIAN SCHAFFTER.

Witnesses:

GEORGE AUSTIN,
CHAS. CLYDE WALL.