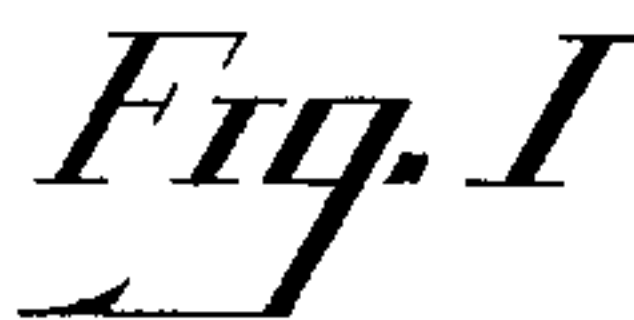


2 Sheets—Sheet 1.

No. 592,021.

Patented Oct. 19, 1897.



INVENTOR

George Robbins
By Geo. Murray
Atty

(No Model.)

2 Sheets—Sheet 2.

G. ROBBINS.
MUSIC LEAF TURNER.

No. 592,021.

Patented Oct. 19, 1897.

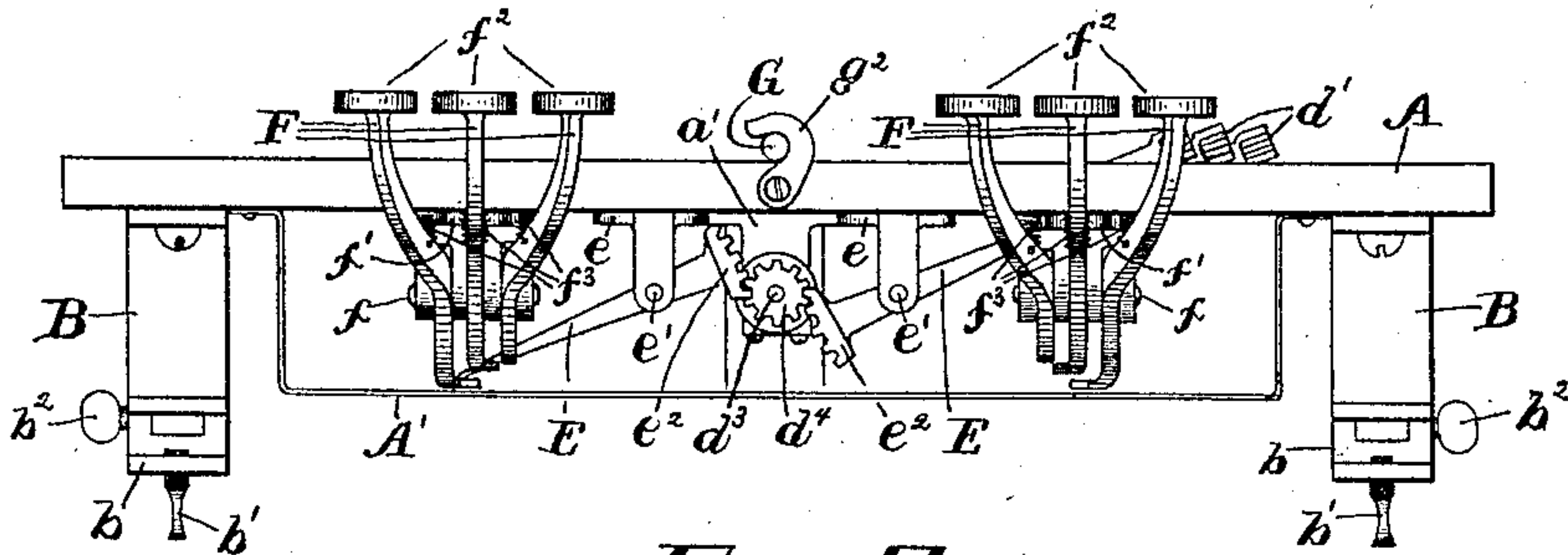


Fig. 3

Fig. 6

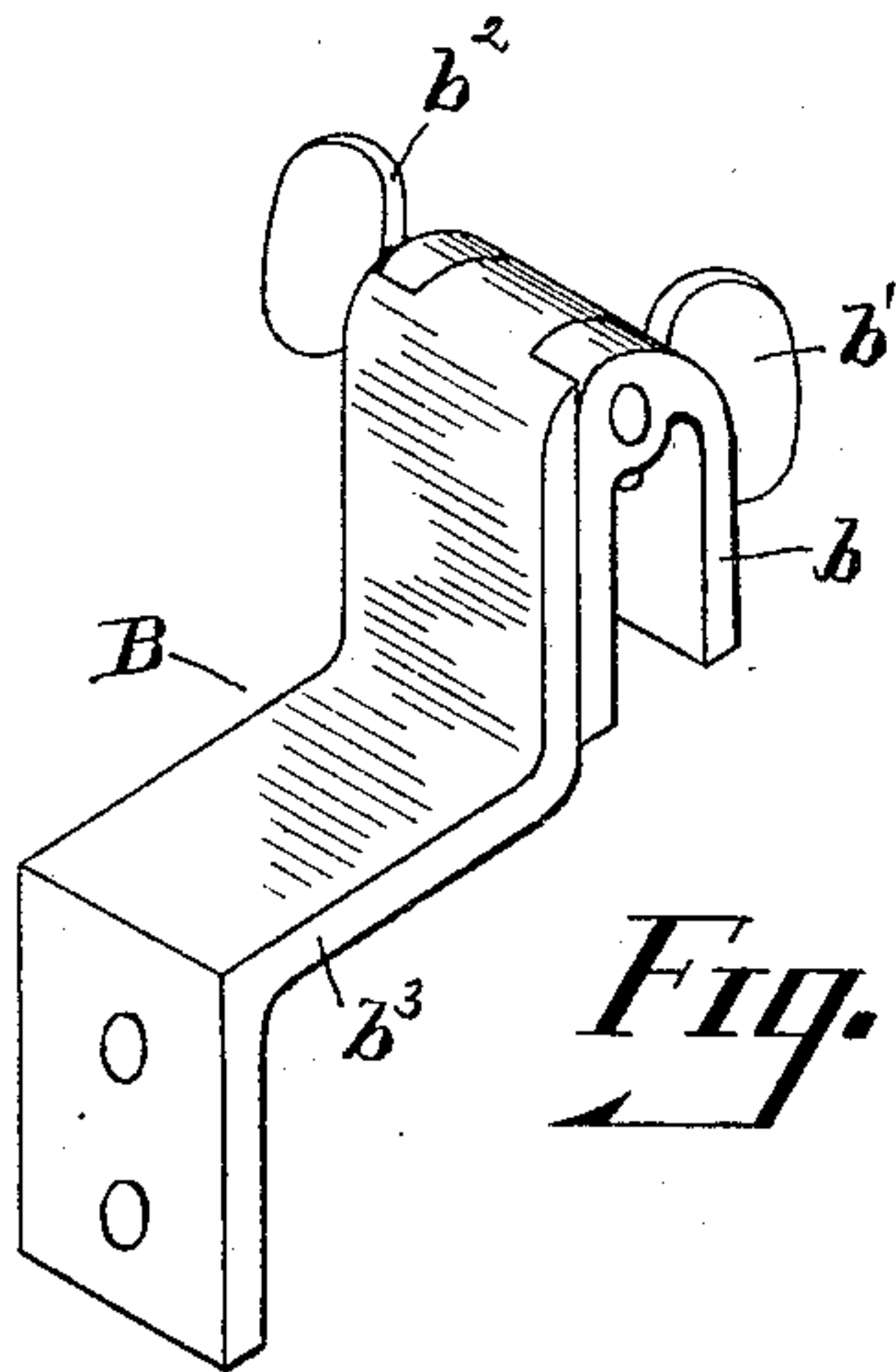
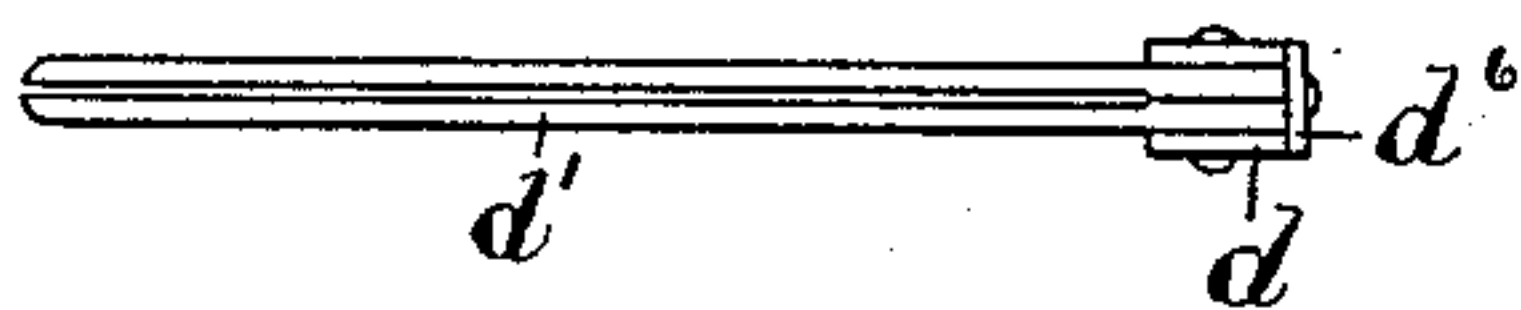


Fig. 7

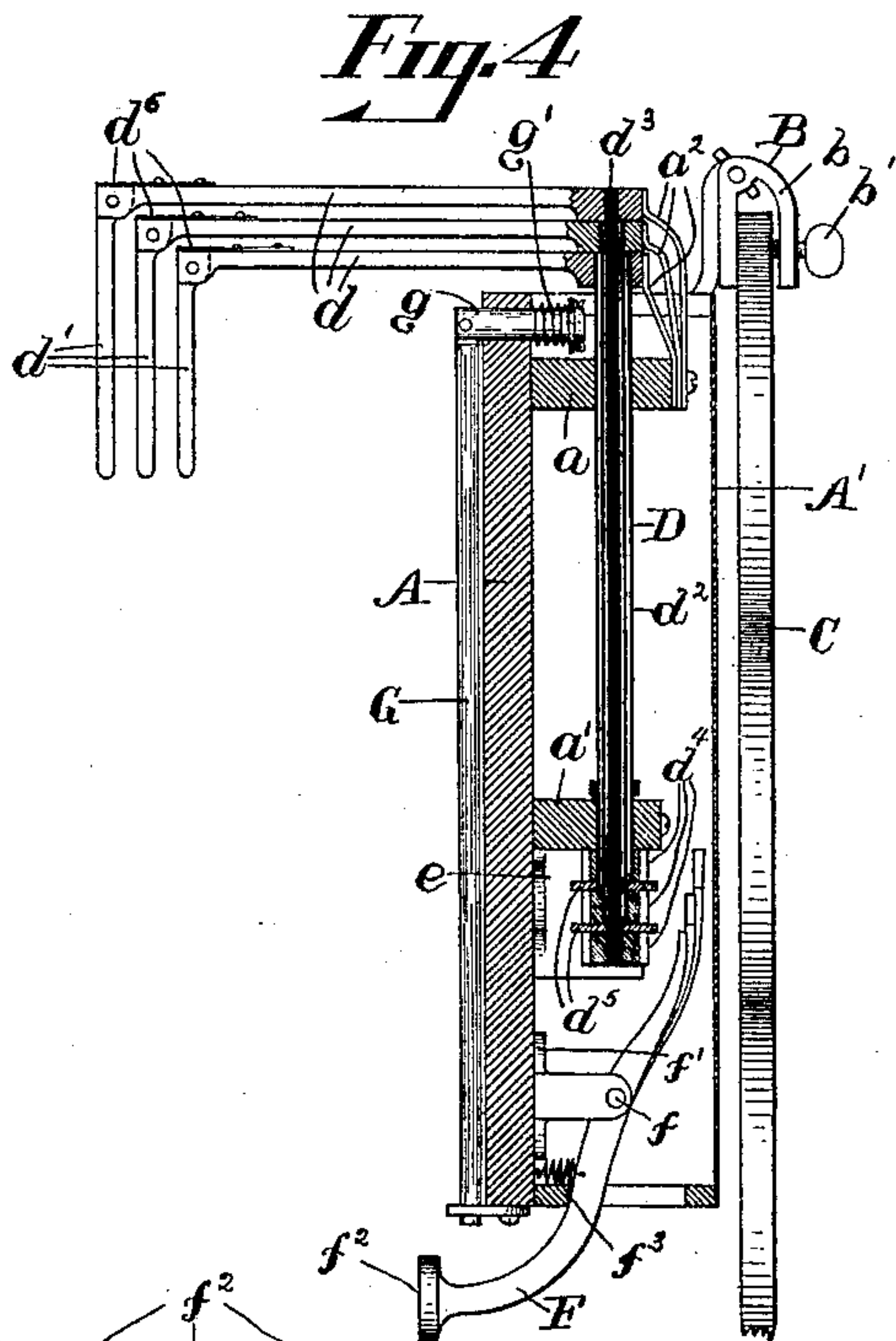


Fig. 4

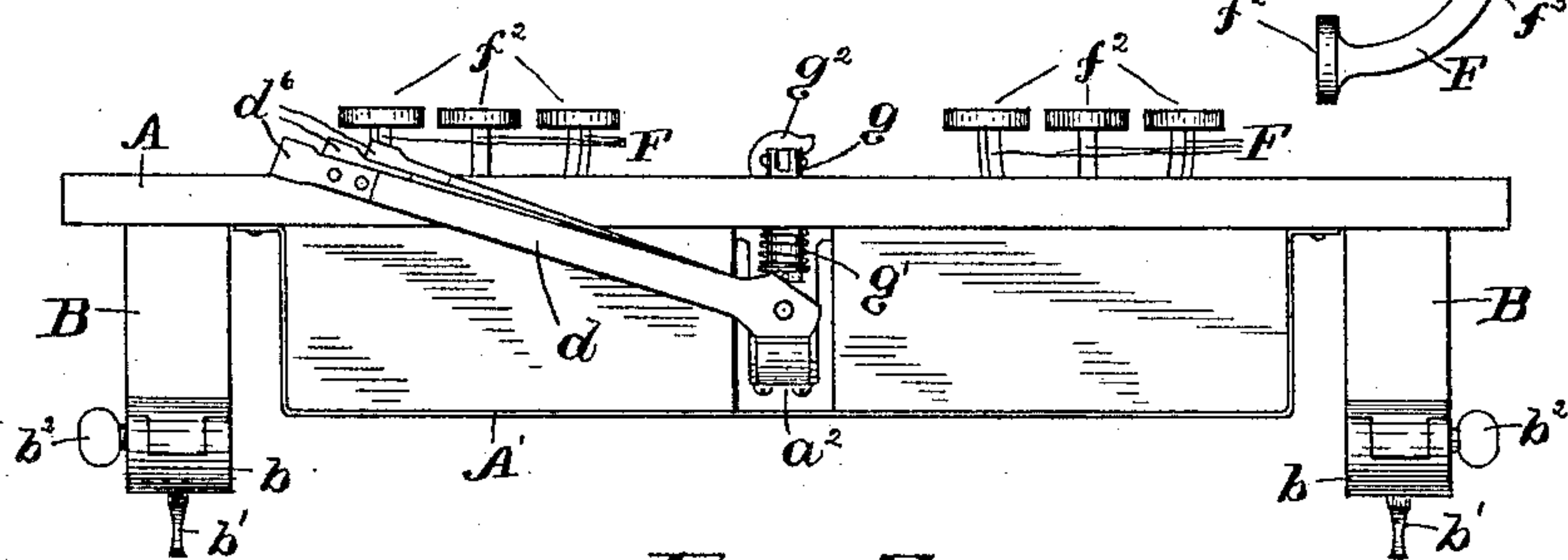


Fig. 5

WITNESSES

Sherwood R Taylor.
Emma Lyford

INVENTOR

George Robbins
By Geo. Murray
Atty

UNITED STATES PATENT OFFICE.

GEORGE ROBBINS, OF SLATE HILL, NEW YORK, ASSIGNOR OF ONE-THIRD
TO CHARLES M. WOOD, OF SAME PLACE.

MUSIC-LEAF TURNER.

SPECIFICATION forming part of Letters Patent No. 592,021, dated October 19, 1897.

Application filed February 1, 1897. Serial No. 621,414. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ROBBINS, a citizen of the United States, and a resident of Slate Hill, in the county of Orange and State of New York, have invented certain new and useful Improvements in Music-Leaf Turners, of which the following is a specification.

The object of my invention is to provide an attachment for music-racks to receive and hold the pieces of music to be played, and means connected to said attachment whereby the performer may, without interruption in performing the pieces, turn the leaves in either direction desired.

The invention will be first fully described in connection with the accompanying drawings, and then particularly referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar reference-letters wherever they occur throughout the various views, Figure 1 is a front elevation of my attachment with a piece of music held thereon. Fig. 2 is a rear elevation of the same with the housing inclosing the operative mechanism removed. Fig. 3 is a lower end elevation of the same. Fig. 4 is a central vertical sectional view of the same with the housing in position and the attachment shown connected to the music-rack, which may be the rack of a piano, organ, or music-stand. Fig. 5 is a top or plan view of the device with the housing in place. Fig. 6 is a detailed view in edge elevation of one of the fingers which grasp the music-leaf to be turned. Fig. 7 is an enlarged view in perspective of the clamp for securing the attachment to the music-rack or other fixed part of the piano, organ, or music-stand.

Referring to the parts by reference-letter, A is the foundation-plate, preferably of wood, upon which the operative parts of the leaf-turner are secured.

B represents the clamps, which are secured to the rear face of the foundation-plate.

C represents the music-rack, or some permanent part of the music-stand, to which the attachment is held by the clamp B, and A' represents a sheet-metal housing secured to the rear face of the plate A to inclose and protect the operative parts of the leaf-turner.

To the rear wall of the plate A are secured two rearwardly-projecting brackets *a* and *a'*, which furnish bearings for the outer tubular shaft D, upon the upper end of which is secured an arm *d*, which carries at its outer end one of the sheet-grasping fingers *d'*. The tubular shaft D serves as a bearing for an inner tube *d*², which carries at its upper end another arm *d*, which at its outer end carries another grasping-finger *d'*. The inner tube *d*² serves as a bearing for a rod *d*³, upon the upper end of which is secured another arm *d*, carrying at its outer end another grasping-finger *d'*. The three arms *d* and the three fingers *d'* are exactly the same in construction except their differences in length. The outer tube D, intermediate tube *d*² and the rod or shaft *d*³ have each secured upon their lower ends pinions *d*⁴, which are separated by loose washers *d*⁵. To the rear wall of the plate A is also secured a lug-plate *e*. The rearwardly-projecting lugs upon each side and upon opposite sides of the center are perforated to pass journal-pins *e'*, upon which of each pins are journaled three arms E. The lower end of each of these arms has rack-segments *e*², which mesh with the pinions *d*⁴, secured upon the lower ends of the tubular shafts *d* *d*² and the rod or shaft *d*³. The outer ends of these arms project over the inner bent arms of key-levers F, which are journaled on pins *f*, which pass through perforated lugs which project rearwardly from lug-plates *f'*, which are secured to the rear face of the plate A. The forwardly-protruding curved ends of the levers F are provided with finger pieces or keys *f*², and the key-levers are held in their forward position by coil-springs *f*³, the opposite ends of which are connected to the key-levers and to the rear face of the plate A.

The means for holding the piece of music to the face of the plate A is a rod G, one end of which is pivoted to a sliding pin *g*, which passes centrally through the upper part of the plate A and is provided upon its inner end with a nut or washer, between which and the rear face of the plate A is the coil-spring *g'* to draw the rod G with yielding pressure upon the piece of music, which is held against the face of the plate by a hook *g*², which is journaled upon a screw passing through it

into the lower edge of the plate A. The inner ends of the arms d are cam-shaped, as clearly seen in Fig. 5, and engaged by springs a^2 , the lower ends of which are secured one above the other upon the inner face of the bracket a . The object of this arrangement is to assist in throwing the arms d to one side or the other after they have passed the center and retain them with spring-pressure in either position.

The grasping-fingers d' are pivoted in the slotted ends of the arms d , and their upper ends are pressed by springs d^6 , which are secured upon the upper edges of the arms d , so that either or both of the spring-fingers may be thrown up when the music-sheet is placed upon the rack and lowered to the vertical position, as shown in Fig. 4, one at a time, so as to bring one finger of each pair upon the opposite sides of the leaf.

The clamping-bracket B (shown upon an enlarged scale in Fig. 7) consists in a U-shaped member b , adapted to pass over the edge of the music-rack C, or any other fixed support, and to be secured to it by a set-screw b' , which is tapped through its rear leg. The upper portion of the member b is slotted and perforated to receive the screw-pintle b^2 , which secures the bracket member b^3 to it. The pintle b^2 is screw-threaded at its end to engage a screw-thread tapped in one end of the U-shaped member b . The object of this arrangement is to allow the plate A, to which the bracket member b^3 is secured, to be adjusted at any desired angle to the music-rack or other support to which the member b is secured, and when adjusted to the position, by tightening the screw-pintle, the member b^3 is clamped between the perforated lugs and held in this position.

The operation of the device is as follows: The attachment being secured in place upon the music-rack of a piano or other instrument a piece of music, as seen in Fig. 1, is placed upon it, the rod G brought over the center of the sheet and the hook g^2 turned over the end of the rod to hold it in position. The different leaves to be turned are then passed between the fingers d' , the performer, after having executed the piece before him, presses one of the keys inward, when the leaf is quickly turned to the opposite side, and should it be necessary to repeat any of the parts upon the leaf turned, by pushing in the corresponding key on the opposite side the leaf will be turned back to its original position. Each leaf may be turned in succession in either direction desired by simply pressing in the proper key, and it requires no more time to turn the leaf than it does to strike a note.

I have shown my invention in the best and most compact form known to me and believe that the arrangement of the shafts one within another and the leaf-arms secured upon them is the best arrangement, but it is obvious that separate shafts for the finger-actuating arms would accomplish the same result and be but

an inferior modification on my invention, and it is also obvious that many mere mechanical changes may be made without varying the invention in principle or scope and hence I do not desire to limit myself to the precise details shown.

Instead of making my device detachable, it may be mounted directly on the music-rack C, whether that rack be the rack of a piano, organ, or music-stand.

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

1. In a music-leaf turner the combination of the music support or plate, bearings secured to the rear thereof for the shafts and their actuating devices, shafts journaled at the rear of said plate, pinions secured upon said shafts, arms secured on the upper projecting ends of said shafts, the leaf-grasping fingers depending from the outer ends of said arms in front of the plate, the retaining-rod to hold the music on the plate, pivoted arms having rack-segments at their inner ends to engage pinions on said shafts and their outer ends extending over the inner ends of the actuating key-levers, and the key-levers having their inner ends to engage the rack-arms and having pieces passing to the front of the plate in convenient position to be operated by the performer.

2. The combination substantially as set forth of the plate or support, bearings secured to the rear thereof for the shafts and their actuating devices, a tubular shaft journaled in bearings in the rear of the plate, an intermediate tubular shaft therein and a central shaft within said intermediate shaft, pinions secured upon the lower ends of said shafts, arms secured upon the upper protruding ends of said shafts, grasping-fingers depending from the outer ends of said arms, levers having rack-arms at their inner ends to engage the pinions upon said shafts, the lever-keys engaging said arms and having finger-pieces protruding to the front of the plate or support in convenient position to be operated by the performer.

3. The combination of the plate or support, a pivoted rod to hold the piece of music upon said support, reciprocating shafts journaled in bearings in the rear of said support pinions secured to the lower ends of said shafts, arms secured to their upper ends having their inner ends cam-shaped, the leaf-grasping fingers depending from the forward ends of said arms in front of the plate, springs bearing upon the cam ends of said arms to assist in throwing them from one position to the other and retaining them in position, pivoted arms having racks upon one end to engage the pinions upon the said shafts, and key-levers to impart motion to said rack-arms for the purpose of rotating the shafts and throwing the grasping-fingers from one side to the other of the support, substantially as set forth.

4. The combination in a music-leaf turner of the character described of the support for

the operative parts, a clamp consisting of a hinged arm secured to the rear thereof, a U-shaped member to pass over the music-rack or other fixed part of the instrument or stand, 5 a set-screw to clamp said member to the fixed support, and a screw-pintle uniting the arm to the U-shaped member for adjusting and holding the support at any desired angle, substantially as shown and described.

10 5. In a music-leaf turner the combination of the support having operative mechanism secured to the rear end thereof for turning

the leaves, a spring-pressed pin passing centrally through the upper end of said support, a retaining-rod pivoted in the outer end of 15 said pin and a retaining device pivoted in the lower edge of said support to hold the rod with yielding pressure upon the music-sheet, substantially as shown and described.

GEORGE ROBBINS.

Witnesses:

JOHN L. WIGGINS,
JOHN WIGGINS.