(No Model.) 2 Sheets—Sheet 1.

H. KRAMER.

LEAF TURNER.

No. 527,997. Patented Oct. 23, 1894.

Fig. 1.

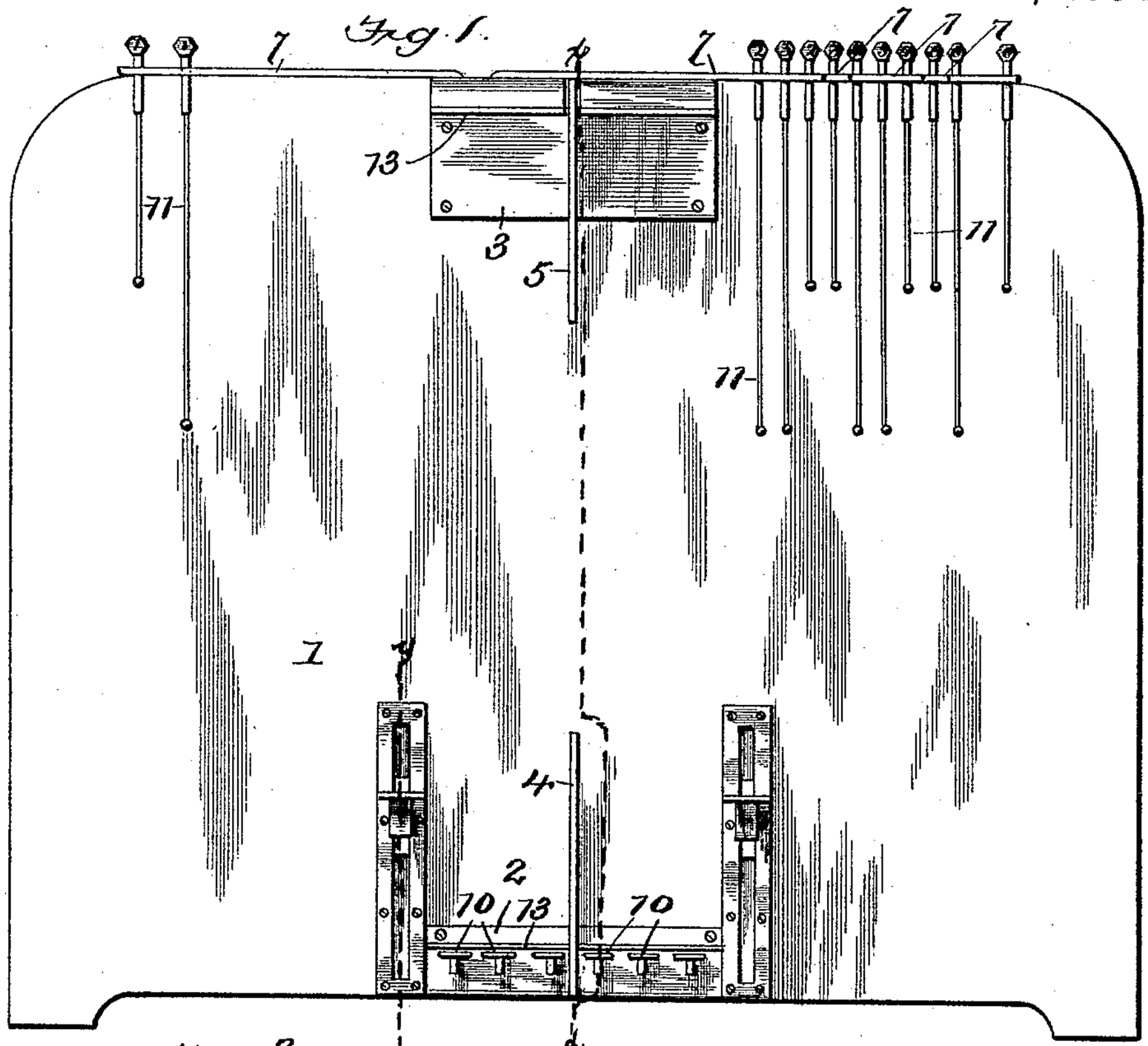


Fig. 3.

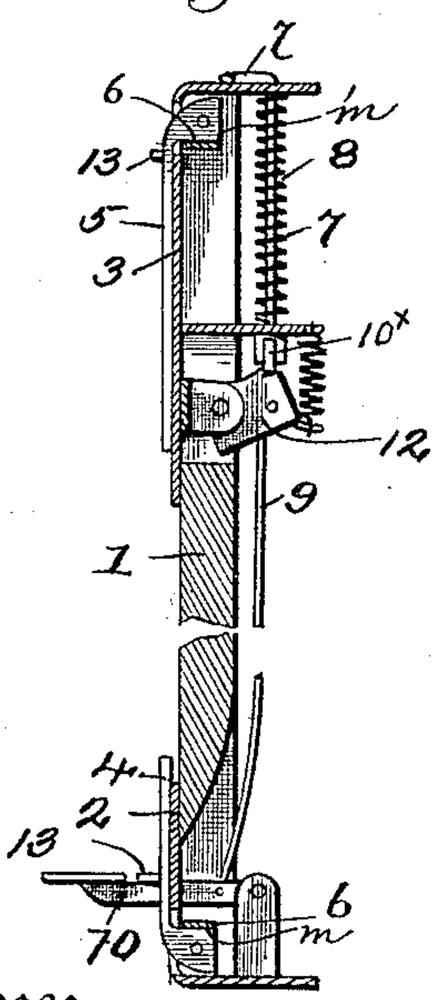
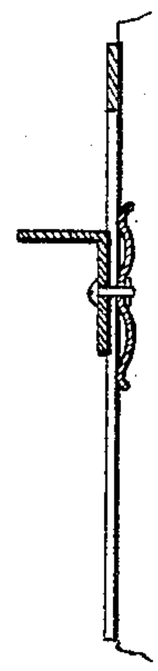


Fig. 4.



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(No Model.) 2 Sheets—Sheet 2.

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LEAF TURNER.

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Fig. 2.

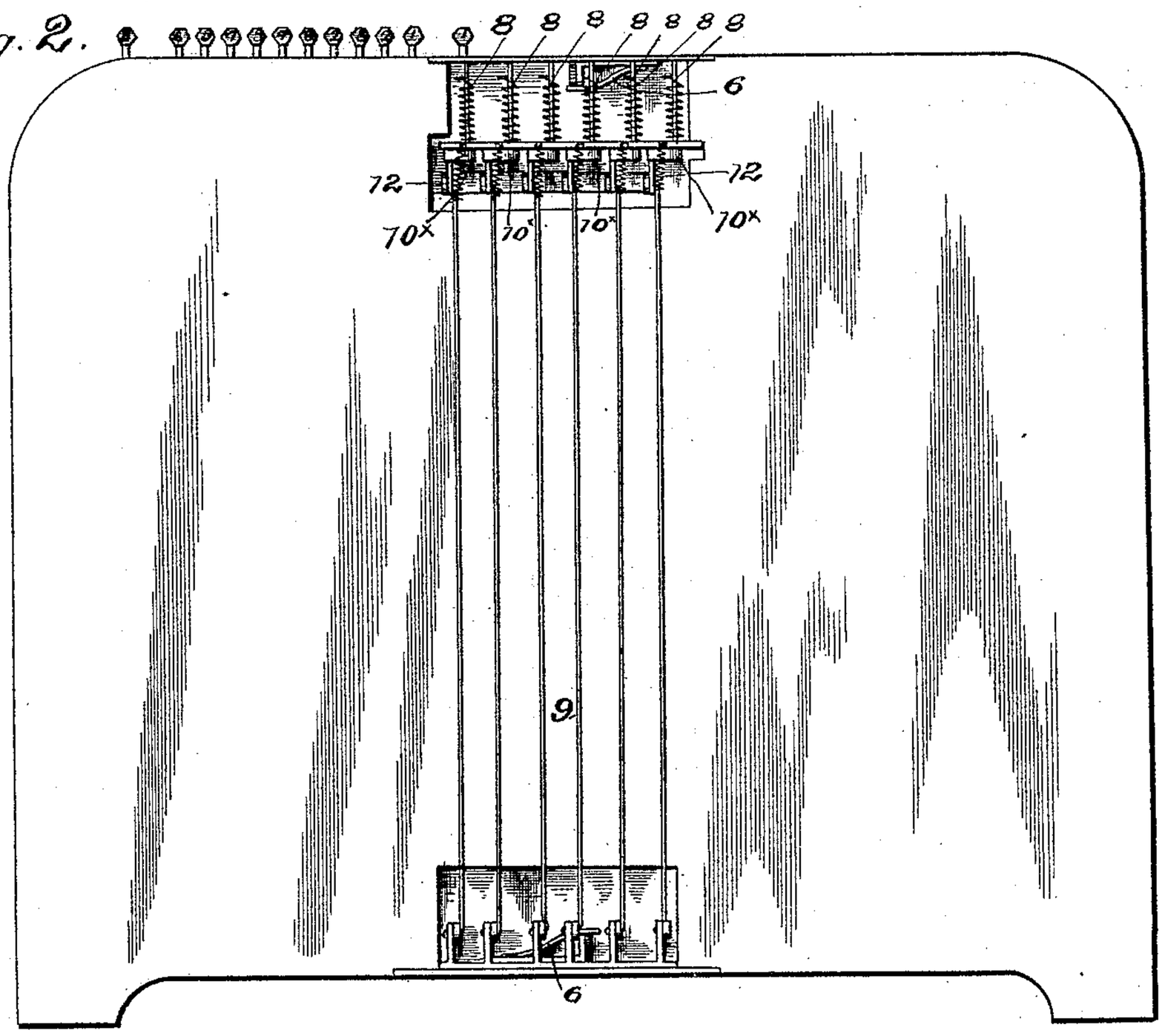


Fig. 5.

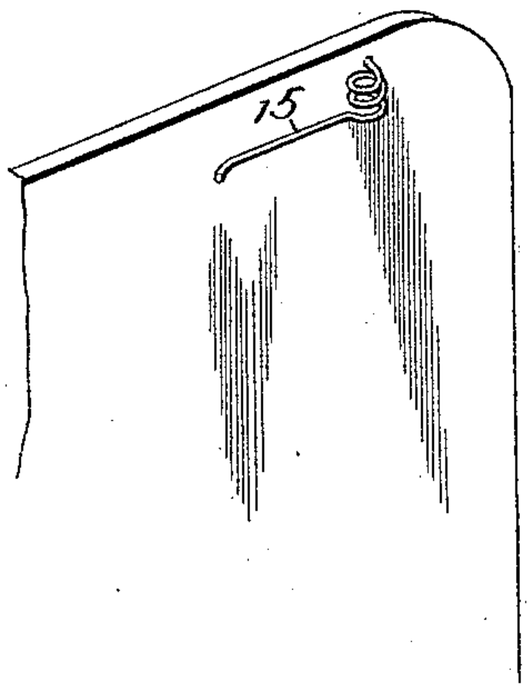
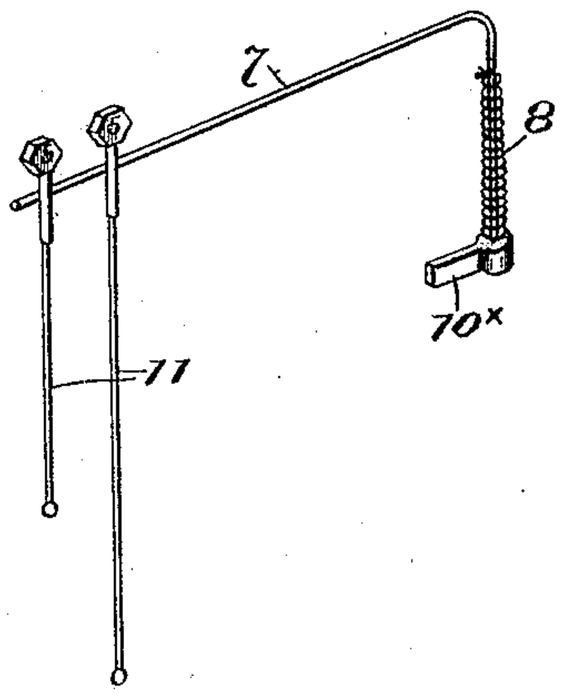


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY KRAMER, OF SAN FRANCISCO, CALIFORNIA.

LEAF-TURNER.

SPECIFICATION forming part of Letters Patent No. 527,997, dated October 23, 1894.

Application filed January 10, 1894. Serial No. 496,386. (No model.)

To all whom it may concern:

Be it known that I, HENRY KRAMER, a citizen of the United States, and a resident of San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in 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.

This invention relates to leaf turners, for music and books, and has for its object to simplify the construction and arrangement of such devices, and render them more positive in their action.

With these and other objects in view, the invention consists of the construction and arrangement of the several parts which will be more fully hereinafter described and claimed.

In the drawings: Figure 1 is a front elevation of the improved device. Fig. 2 is a similar view of the back portion. Fig. 3 is a vertical section on the line *x*—*x*, Fig. 1. Fig. 4 is a section on the line *y*—*y*, Fig. 1. Fig. 5 is a perspective view of an attachment applied. Fig. 6 is a detail perspective view of a part of the device.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

Referring to the drawings, the numeral 1 designates a frame work constructed of wood which serves as a support for the music or book to rest upon, and has metallic plates 2 and 3 secured thereto to cover the mechanism located under the same or in rear thereof, the said plates being nickel plated or otherwise ornamented. Pins or rods 4 and 5 are engaged by springs 6 respectively at their upper and lower ends. The said pins or rods extend only partially over the frame work 1 and are open at the center so that they can be easily manipulated and raised to permit the sheet music to be placed thereunder against the said frame work, and then closed tight on the sheets so as to keep them in position and prevent movement to and fro of the same. At the upper part of the frame work is located a series of protruding wire arms 7 which are strongly mounted and have a resilient action through the medium of springs 8 and which are connected by rods 9 with keys 10 at the bottom of the frame-work through the medium of arms $10^{\times}$. The ends of the wire arms are supplied with forks or pins 11 movably mounted on said wire and are to be inserted in the sheets desired to be turned by the device. The keys 10 are numbered and the forks or pins 11 are similarly numbered and when the said keys 10 have a pressure applied thereto by a slight touch or jerk, they release catches 12 on the back of the frame work 1 which hold the wire arms in position when they are on the right side, and when the said catches are released the said arms instantly fly back toward the left of the device, carrying therewith the leaves of the music. A rim or projection 13 is located at the upper and lower part of the frame work between which the sheets of music rest.

In arranging the sheets of music on the device it is necessary that the pins or rods should be in the center of the said sheets or as nearly so as possible.

In starting out to operate the device or placing it in position for convenient operation, should the wire arm be located on the left side of the stand they are turned over toward the right of the device, one by one in rotation, and forks or pins on the ends of said arms are caused to engage the sheets. When through playing the music on the first leaf or page the corresponding button or key is given a slight pressure and the leaf will at once turn and remain on the left of the performer against a preceding leaf and the operation thus becomes successive until all the leaves are turned.

When a book with heavy covers is used instead of sheet music, the rods or pins 4 and 5 are dispensed with, and oppositely heavy spring catches 15, Fig. 5, are substituted therefor which engage the covers of the book on either side and hold them in place. It must be observed that the keys must be touched in rotation so as to cause a positive action and avoid interference and consequent injury to the mechanism. The main works underneath the frame work are simple and so adjusted that any irregularity can be traced at once and rectified by unscrewing a portion of the back cover, and all the works will then be exposed to view. The device

can be used for either square or upright pianos, or organs. It can also be attached to any musical instrument or built therein and made part thereof. It responds quickly to the action of the keys with perfect ease and no skill is required in using it.

The device can be made to suit any number of leaves up to fourteen. Should there be a single leaf in the center as it often happens, about half an inch of the blank at the center is bent inwardly, the blank which is bent being nearest the center of the book. The pins or rods 4 and 5 are then placed over the said bend and the center leaf or single sheet will be held as if it were a double leaf.

It will be observed that the pins 4 and 5 which retain the music in place on the frame 1, have shouldered hub portions *m*, which are engaged by the springs 6 and serve to press the said pins against the frame 1, with sufficient tension to hold the music in place.

Having thus described the invention, what is claimed as new is—

1. In a music leaf turner, the combination with a supporting frame, and a series of arms to engage with the leaves of the music, having vertical extensions at their inner ends which are journaled to the frame, coiled springs mounted on the said vertical extensions and adapted to operate the said arms when released, a spring actuated dog or catch to engage with the arm on the vertical extension of each arm to hold the latter against the tension of the spring, and keys operatively connected with the said dogs or catches to disengage the latter from the said arms, substantially as described for the purpose set forth.

2. The herein shown and described music leaf turner comprising the following elements: a frame work provided with a suitable rest for the music, oppositely disposed pins pivoted at their outer ends and having shouldered hub portions, springs exerting a pressure against the said shouldered hub portions, a series of arms having vertical extensions which are journaled to the frame work, spring actuated catches to engage with the arms on the aforesaid vertical extensions, and a series of keys operatively connected with the said catches whereby the latter are released, substantially as described for the purpose set forth.

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

HENRY KRAMER.

Witnesses:

BENJA. SCHLOSS,

J. B. LARUE.