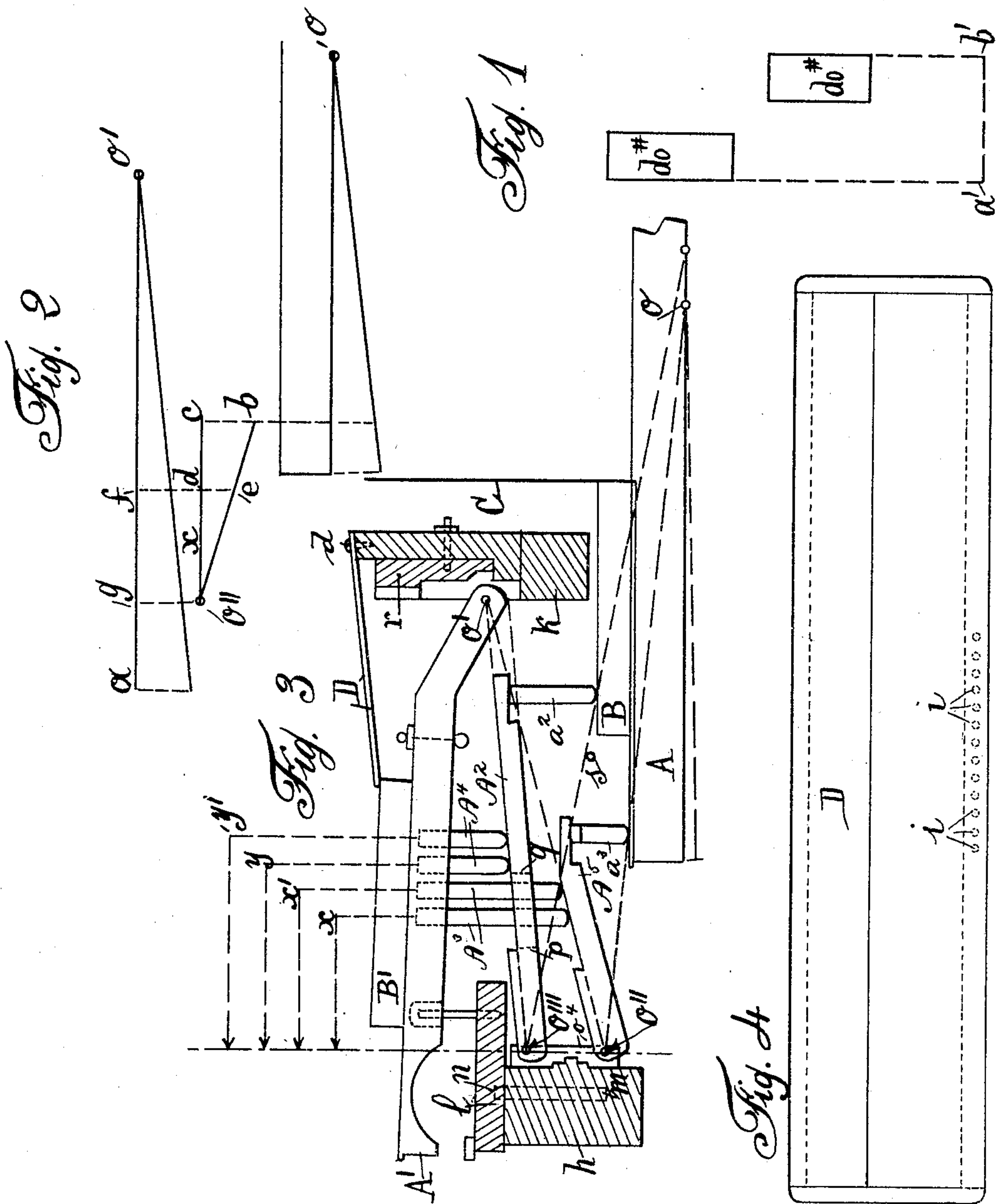


(No Model.)

L. A. IVON.
TRANSPOSING DEVICE FOR PIANOS.

No. 502,907.

Patented Aug. 8, 1893.



Witnesses:-

H. K. Boulter

C. G. Northrup.

Inventor:—

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UNITED STATES PATENT OFFICE.

LOUIS ADOLPHE IVON, OF PARIS, FRANCE.

TRANSPOSING DEVICE FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 502,907, dated August 8, 1893.

Application filed January 21, 1893. Serial No. 459,908. (No model.)

To all whom it may concern:

Be it known that I, LOUIS ADOLPHE IVON, a citizen of the French Republic, residing at Paris, France, have invented certain new and useful Improvements in Transposing Devices for Pianos and Similar Instruments, of which the following is a description.

My invention has relation to musical instruments and more especially to transposers for use in connection with pianos and similar key-board instruments, and among the objects in view is to provide a simple, efficient and readily-operated device of the character referred to, which may be quickly attached to or removed from a piano or the like, and with the above and other objects in view all of which will be apparent from the following description, the invention consists in the construction, arrangement and combination of parts, as hereinafter described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—Figure 1 is a diagrammatic plan view showing the relative position of a key of the piano key-board and a key of my transposer. Fig. 2 is a diagrammatic side view of the parts of my transposer in combination with a key of the piano. Fig. 3 is a vertical sectional elevation of my transposer when applied to a piano. Fig. 4 is a plan view on a small scale of the transposer detached.

In carrying out my invention I employ a key-board similar in arrangement, number and size of keys to the key-board of the instrument to which my transposer is to be attached, said key-board of my device consisting of the white keys A' and the black keys B' , all of which should be suitably pivoted in a manner similar to the corresponding keys of the instrument, and in practice I would pivot the white and black keys of my device at about the point o' , as shown.

My improved transposer is adapted to be portable and readily applied to and removed from a piano or similar instrument, and it comprises the transversely-arranged rails h , and k the former being at the front of the device, and the latter rail at the rear thereof. These rails h , and k , should be connected with each other at the sides by suitable connecting bars or rails (not shown). Upon the rail k is

slidingly mounted a rail r , to which are pivoted the rear ends of the keys of my device.

Upon the rail h , is slidingly mounted a rail or plate l , provided on its under side with a pin $m-n$ which is adapted to take into any of a series of perforations i , provided in the rail h . If desired the perforations may be formed in the rail l , and the pin $m-n$ secured to the rail h , and the same result obtained.

The distance of the perforations i , from each other corresponds to the distance apart of the white and black keys of the instrument. In other words, the perforations are so spaced that when the transposing devices are shifted a distance corresponding to the distance between two adjacent perforations, the note will be transposed a semi-tone higher or lower depending upon whether the transposer is shifted to the right or left, as will be understood. I prefer to provide twelve of these perforations so that my transposer may be adapted to transpose notes a distance of six semi-tones to the right and six semi-tones to the left.

For transmitting the movements of the keys A' B' to the keys A , B , of the piano or other instrument, I employ the following-described transmitting devices:—

A^2 indicates a lever pivoted at its forward end as at o''' to a plate o^4 which is carried by the rail h . (There should of course be one of these levers for each black key B' .) Each lever A^2 should be sufficiently long to extend from its pivotal point over and above a black key B , as shown, and the rear end of the lever is provided with a vertical pin a^2 which rests lightly upon a black key B .

A^3 , A^4 indicate pins which are secured within the white and black keys of my transposer (preferably by means of screw-threads to adapt them to be vertically-adjusted) and the lower ends of these pins rest upon the upper faces of the levers A^2 , A^5 , the levers A^2 being provided each with an opening $p-q$ to permit the free movement therethrough of the pins A^3 . The levers A^5 are somewhat shorter than the levers A^2 (and of these levers A^5 there should be one for each white key A' of my device). Each lever is pivoted to the rail o^4 as at o'' vertically beneath the pivotal points of the levers A^2 and said levers A^5 are sufficiently long to extend over and

above the white keys A. The rear end of each lever A^5 is provided with a pin α^3 which rests lightly upon the white key A beneath it.

D indicates a covering plate which is secured to the rail h , by screws d , as shown, said plate extending forwardly and covering the rear portion of the transposing mechanism

In case it should be desired to adjust the transposing device to a limited extent vertically so as to bring the mechanism thereof in proper relative position with respect to the keys of the instrument so that the latter will be properly depressed by the transmitting mechanism of my device during operation, I may employ suitable adjusting screws working in the connecting side bars or rails of the device and serving to adjust the rails h and k to the proper distance. These screws may be provided with a scale whereby the extent of adjustment may be readily determined.

For readily attaching my transposer to an instrument I may employ any suitable clamping device which is adapted to be secured to the transposer and removably secured to the underside of the instrument, as by a screw.

The keys $A' B'$ may be automatically raised to their normal elevated position by means of suitable springs, similar to those employed for raising the keys of the instrument, as is usual.

When it is desired to transpose, the plate l , is raised until a perforation i , therein is disengaged from the pin $m-n$ —or until the said pin is raised out of the perforation in the rail h (according to the arrangement of these parts as before mentioned), and the rail l , and rail r , and with them the keys $A' B'$, and pins, are then shifted either to the right or left the required distance to accomplish the desired transposition, and the plate or rail l , is then lowered and the pin made to engage a perforation, i , after which the device is ready to be operated. Owing to the inclined position of the levers $A^2 A^5$ the pins are made in the varying lengths shown to adapt them to act properly, and the exact position that the pins

are to occupy may of course be varied. I have shown the pins A^3 as being secured at a distance from the line passing vertically through the pivotal points of the levers $A^2 A^5$ as indicated by x and x' , while the pins A^4 are secured at the distances y and y' from the said vertical line (see Fig. 3).

Although I intend in practice to construct the various parts of my device and so arrange them relatively to each other that my said device may be readily applied to a piano or similar instrument and when so applied will accomplish properly the desired functions, yet I have not deemed it necessary to indicate on the drawings the precise relative sizes of the various parts or their precise relative arrangement, reserving to myself the right to modify my device in said particulars as I may deem desirable and yet not depart from the principle of my invention.

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

In a transposing mechanism, the combination with front and rear fixed and sliding rails, of a key-board comprising white and black keys pivoted to the rear sliding rail, a series of levers pivoted at their forward ends and provided at their rear ends with pins adapted to depress the white keys of the instrument a second series of levers pivoted at their forward ends and provided at their rear ends with pins adapted to depress the black keys of the instrument, pins carried by the keys of the transposer and adapted to operate the described two series of levers, a series of perforations in the front fixed rail, and a pin carried by the front sliding rail adapted to engage any of said perforations, in the manner and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 15th day of December, 1892.

LOUIS ADOLPHE IVON.

Witnesses:

JOSEPH SALING,
VICTOR MATRAY.