F. RENEK.

PIANO CASING.

APPLICATION FILED AUG. 5, 1909.

951,620.

Patented Mar. 8, 1910.

3 SHEETS—SHEET 1.

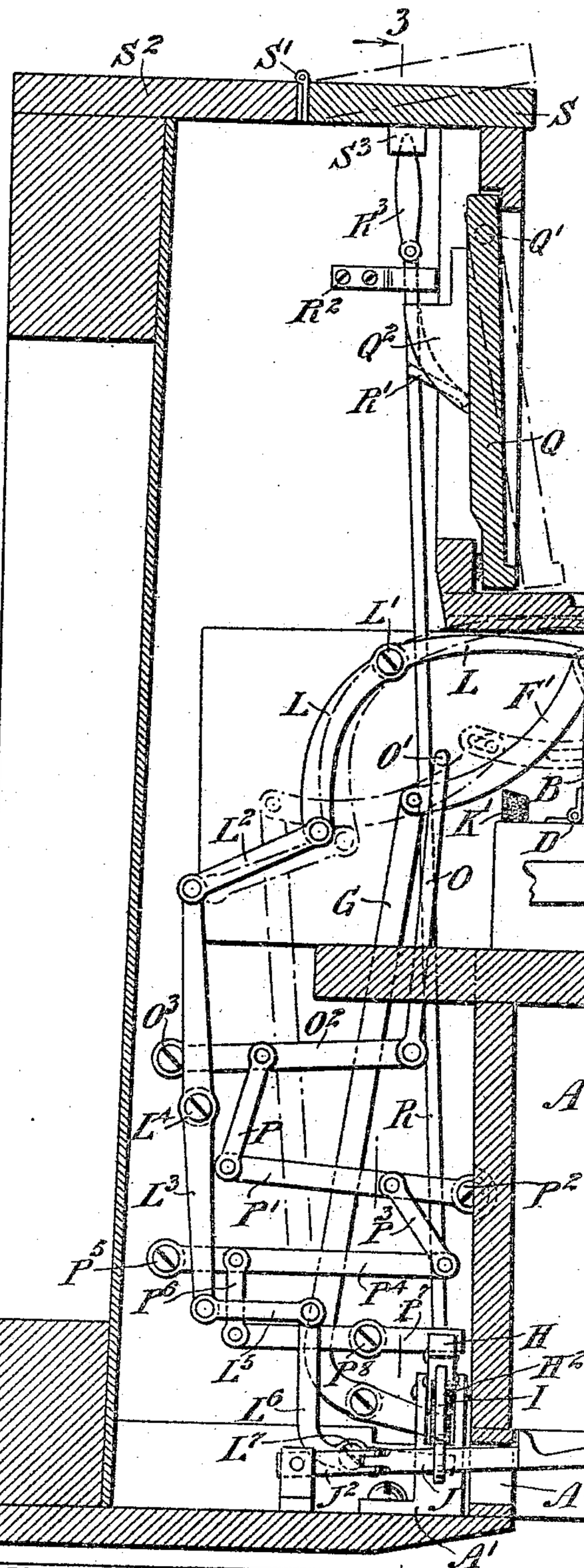

Fig. 1,

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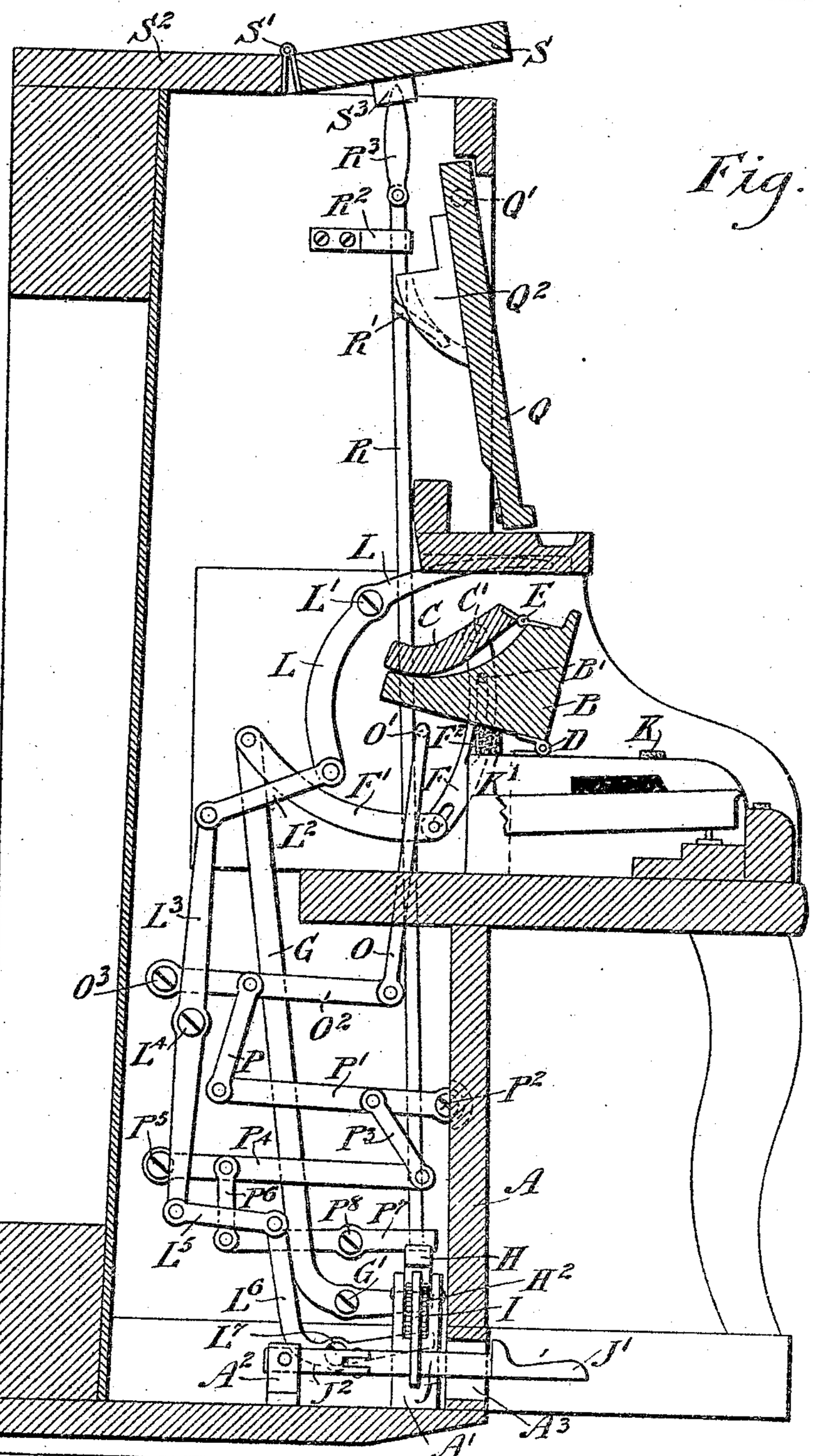

Fig. 2.

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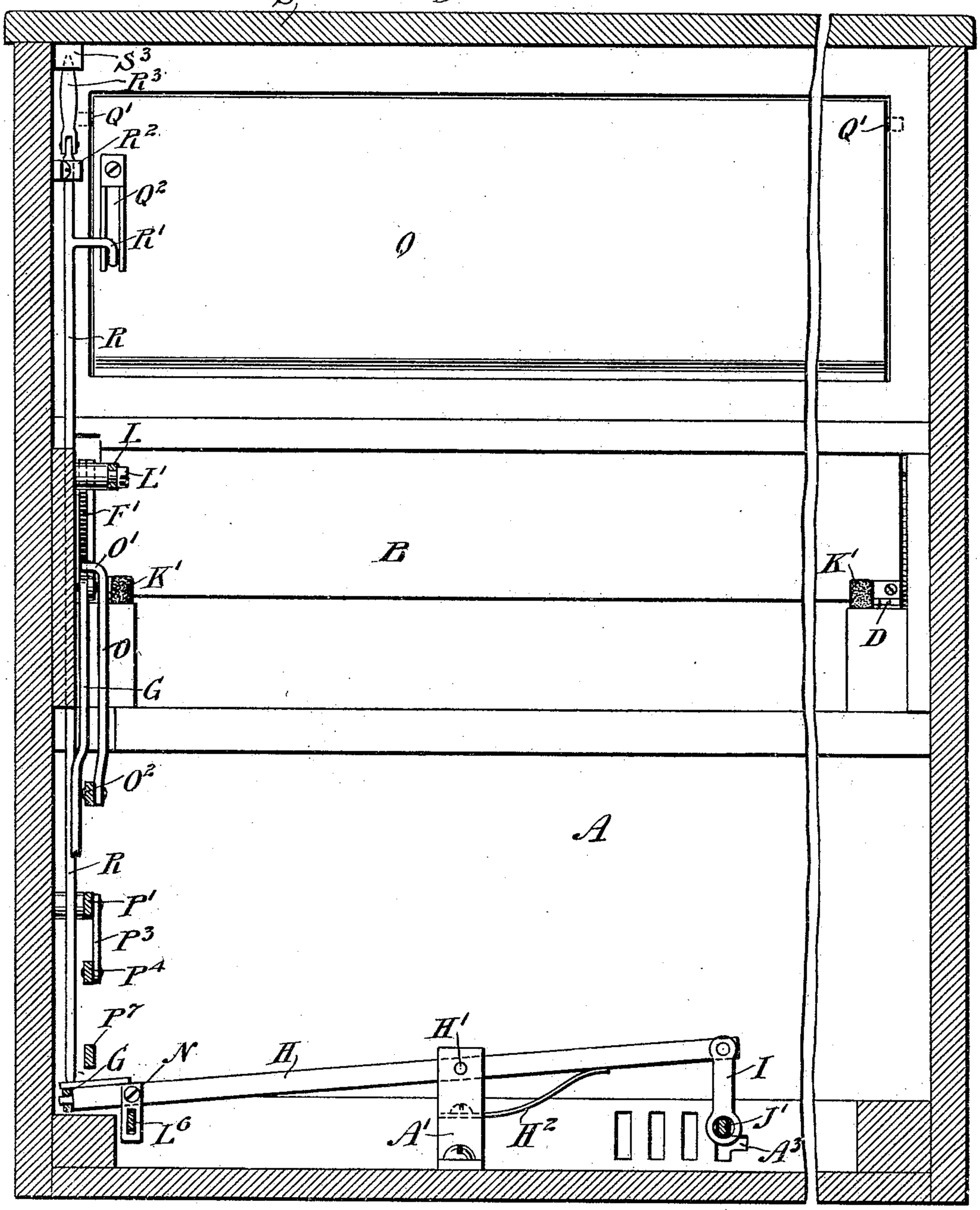
3 SHEETS—SHEET 3.

Fig. 3.



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FRANK RENEK, OF NEW YORK, N. Y.

PIANO-CASING.

951,620. Specification of Letters Patent. Patented Mar. 8, 1910.

Application filed August 5, 1909. Serial No. 511,315.

To all whom it may concern:

Be it known that I, FRANK RENEK, a citizen of the United States, and a resident of the city of New York, Astoria, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Piano-Casing, of which the following is a full, clear, and exact description.

The invention relates to pianos, and its object is to provide a new and improved piano casing, having a mechanism for simultaneously opening or closing the front fall, the back fall, the panel and the top of the piano, on the operator pressing an auxiliary pedal.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a cross section of a piano casing provided with the improvement, the parts being in a closed position; Fig. 2 is a similar view of the same, showing the parts in open position; and Fig. 3 is a sectional rear face view of the same, on the line 3—3 of Fig. 1.

The piano casing A is provided with a back fall B, and a front fall C, of which the back fall B is connected by hinges D with the casing, and the front fall C is connected by hinges E with the back fall B to allow of swinging the front fall C against the back fall B, as plainly indicated in dotted lines in Fig. 1 and full lines in Fig. 2, the back fall B being adapted to swing from the closed position shown in Fig. 1 into the open position shown in Fig. 2.

The front fall C is pivotally connected at one end at C′ with a front link F, pivotally connected at its rear end with a rear link F′, the front link F having an elongated slot F^2 through which extends a pin B′ formed on one end of the back fall B, so that the link F has a sliding connection with the back fall B. The rear end of the rear link F′ is pivotally connected with the vertical arm of a bell crank lever G, fulcrumed at G′ on the piano casing A and pivotally connected with the end of a pedal lever H (see Fig. 3) fulcrumed at H′ on a bracket A′ forming part of the casing A. A spring H^2 presses the pedal lever H, which latter is connected by a link I with an auxiliary pedal J made in two sections, of which the front or foot section J′ is pivotally connected with the rear section J^2 fulcrumed on a bracket A^2 forming part of the casing A. The foot section J′ of the auxiliary pedal J extends in a T-shaped slot A^3 formed in the front of the casing A, as plainly indicated in the drawings. Now, when the pedal J is pressed by the operator at the time the back fall B and the front fall C are in the closed position shown in Fig. 1, then a swinging motion is given to the levers H and G of which the latter, by the links F′ and F, exerts a pull on the front fall C so as to swing the same upward against the back fall B, and a further downward pressure of the pedal J now causes the back fall B to swing back into an open position with the front fall C superimposed on the back fall B, as plainly indicated in Fig. 2. The back fall B when in closed position rests on a felt stop K and when in open position rests on a felt stop K′, both stops K and K′ being attached to the piano casing A.

In order to prevent the back fall B from swinging into open position prior to folding the front fall C onto the back fall B, as above described, use is made of a latch L, in the form of a lever fulcrumed at L′ on the piano casing and adapted to abut with its free end against the rear face of the back fall B (see Fig. 1) at the time the back fall is in closed position. The latch L is pivotally connected by a link L^2 with a lever L^3, fulcrumed at L^4 on the piano casing, and connected by a link L^5 with a bell crank lever L^6 fulcrumed at L^7 on the piano casing, the bell crank lever extending into a stirrup N attached to the pedal lever H, as plainly indicated in Fig. 3. Now, when the pedal J is pressed and a swinging motion is given to the lever H, then the bell crank lever L^6 is actuated and by the link L^5, lever L^3, and link L^2, imparts a swinging motion to the latch L, so as to move the latter out of engagement with the rear face of the back fall B at the time the front fall C has been folded onto the back fall B. When the front fall C has been folded onto the back fall B, then the links F and F′ stand in the position indicated in dotted lines in Fig. 1, and in order to swing the links downward so that the back fall B swings into rearmost or open position, use is made of a

rod O, having an angular extension O′ reaching over the rear link F′. The rod O is pivotally connected with an arm O^2, fulcrumed at O^3 on the casing A. The arm O^2 is pivotally connected by a link P with an arm P′, fulcrumed at P^2 on the casing A and pivotally connected by a link P^3 with an arm P^4 fulcrumed at P^5 on the casing A. The arm P^4 is pivotally connected by a link P^6 with a lever P^7, fulcrumed at P^8 on the casing and adapted to be engaged by the pedal lever H at the time the latter has been actuated sufficiently to swing the front fall C up onto the back fall B, as indicated in dotted lines in Fig. 1. When this takes place, the lever H engages the lever P^7 to impart a swinging motion to the same, whereby the rod O is pulled downward by the series of levers and arms P^6, P^4, P^3, P′, P and O^2, above described, so that the rod O exerts a downward pressure on the link F to swing the back fall B rearward into the open position indicated in dotted lines in Fig. 2.

The piano casing is also provided with a panel Q, pivoted near its upper end at Q′ on the piano casing A, so as to swing from the closed position shown in full lines in Fig. 1, to the open position shown in dotted lines in Fig. 1 and full lines in Fig. 2. For the purpose mentioned the back of the panel Q is provided with an incline Q^2, engaged by an angular arm R′ of a rod R, mounted to slide at its upper end in a bearing R^2, attached to the piano casing, the lower end of the rod R resting on the pedal lever H, as plainly indicated in Fig. 3. Now, when the pedal J is pressed and a swinging motion is given to the pedal H, then the rod R is pushed upward and in doing so its arm R′ acts on the incline Q^2 to swing the panel Q from the closed position into the open position indicated in Fig. 2. The front portion S of the top of the piano casing is connected by hinges S′ with the rear S^2 of the casing top, as plainly indicated in the drawings, and on the under side of the front top portion S is arranged a socket S^3, adapted to be engaged by a pivot extension R^3, held on the upper end of the rod R. Thus, when the rod R is lifted, the front top portion S is lifted into open position at the time the panel Q swings forward and the front fall C and the back fall B are moved into open position, as previously explained. The pedal J after being depressed may be locked in the horizontal portion of the slot A^3, so as to hold the movable parts of the casing—that is, the back fall B, the front fall C, the panel Q and the top S—in either the open or closed position. It will be understood that for closing the movable parts referred to, it is necessary only to unlock the pedal J and to again depress and release the same when the several parts will be returned to closed position, that is the back fall B will be swung forward, the front fall C swung outward and downward, the panel A swung inward and the top S swung downward.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A piano casing having a pivoted front fall, a pivoted back fall, a pivoted frame, and a pivoted top, a pedal, and means for operating all of the said parts from the pedal.

2. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall, a pedal, and means between the said pedal and the said front fall to swing the same and with it the back fall into open or closed position.

3. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall, a pedal, and means between the said pedal and the said front fall to initially fold the said front fall onto the said back fall and to then fold both into a rear folded position.

4. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall, a pedal, and means between the said pedal and the said front fall to initially swing the said front fall upward onto the said back fall and to then swing the back fall with the front fall superimposed thereon into a rear folded position.

5. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall, a pedal, means between the said pedal and the said front fall to swing the latter onto or off the said back fall and to swing the latter into open or closed position, and a stop controlled by the said pedal for holding the back fall against movement while the front fall is folded onto the back fall.

6. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall and adapted to fold onto the top thereof, a pedal, a pedal lever connected with the said pedal, a bell crank lever pivotally connected with the said pedal lever, and a pair of links pivotally connected with each other, the front link being connected with the said bell crank lever, and the rear link being connected with the said front fall.

7. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall and adapted to fold onto the top thereof, a pedal, a pedal lever connected with the said pedal, a bell crank lever pivotally connected with the said pedal lever, and a pair of links pivotally connected with each other, the front link being connected with the said bell crank lever, and the rear link being connected with the said front fall and having a sliding connection with the said back fall.

8. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall and adapted to fold onto the top thereof, a pedal, a pedal lever connected with the said pedal, a bell crank lever pivotally connected with the said pedal lever, a pair of links pivotally connected with each other, the front link being connected with the said bell crank lever, and the rear link being connected with the said front fall, a lever mechanism connected with the said rear link, and a connection between the said lever mechanism and the said pedal lever.

9. A piano casing provided with a pivoted back fall, a front fall pivoted on the said back fall and adapted to fold onto the top thereof, a pedal, a pedal lever connected with the said pedal, a bell crank lever pivotally connected with the said pedal lever, a pair of links pivotally connected with each other, the front link being connected with the said bell crank lever, and the rear link being connected with the said front fall, a lever mechanism connected with the said rear link, a connection between the said lever mechanism and the said pedal lever, a pivoted latch for engagement with the said back fall, and means for operating the said pivoted latch from the said pedal lever.

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

FRANK RENEK.

Witnesses:

ROBERT W. HARDIE,

JOHN P. DAVIS.