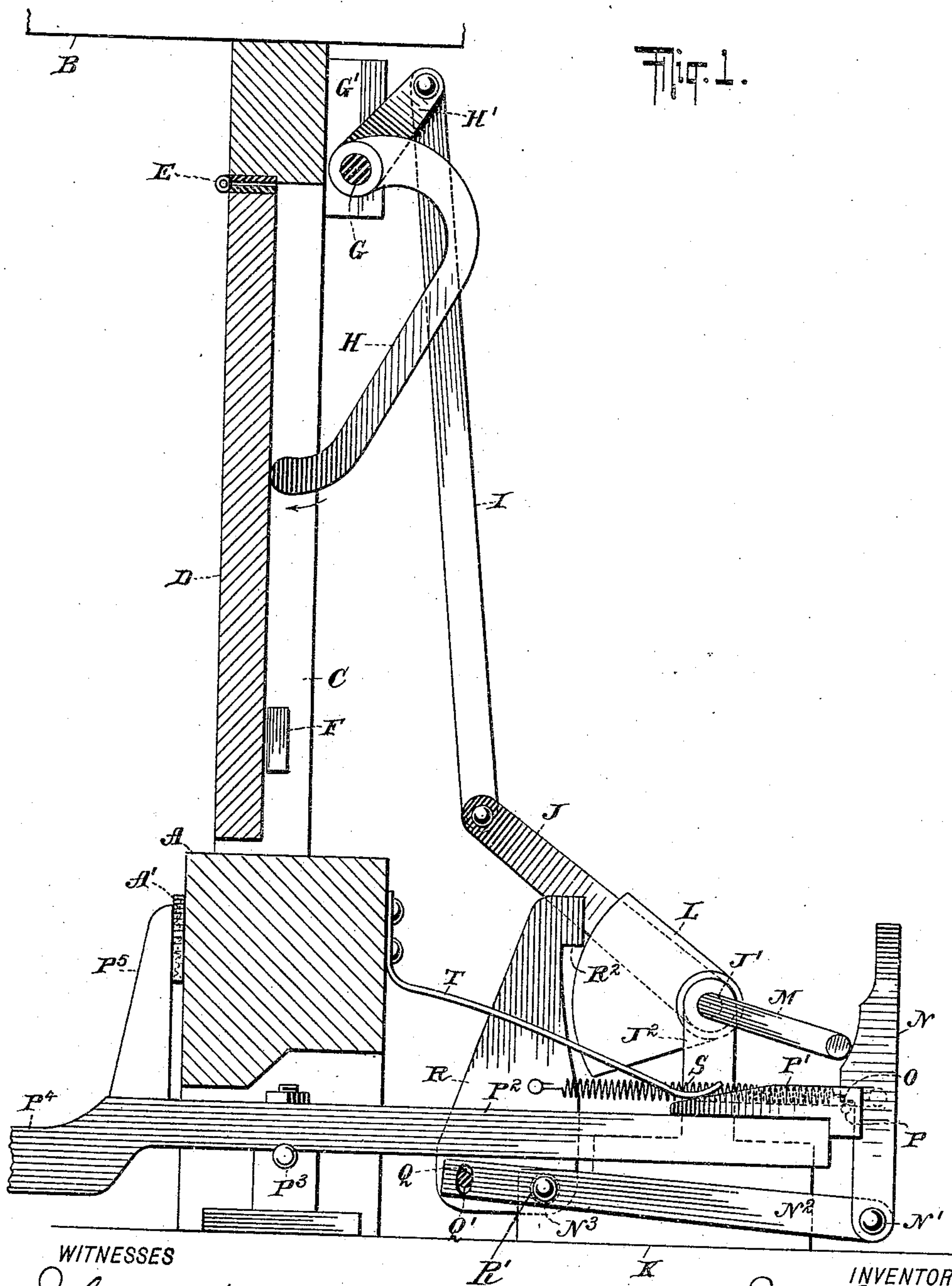


940,072.

7-1



WITNESSES

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 AUTOMATIC PIANO ATTACHMENT.
 APPLICATION FILED JUNE 16, 1907.

940,072.

Patented Nov. 16, 1909.

2 SHEETS—SHEET 2.

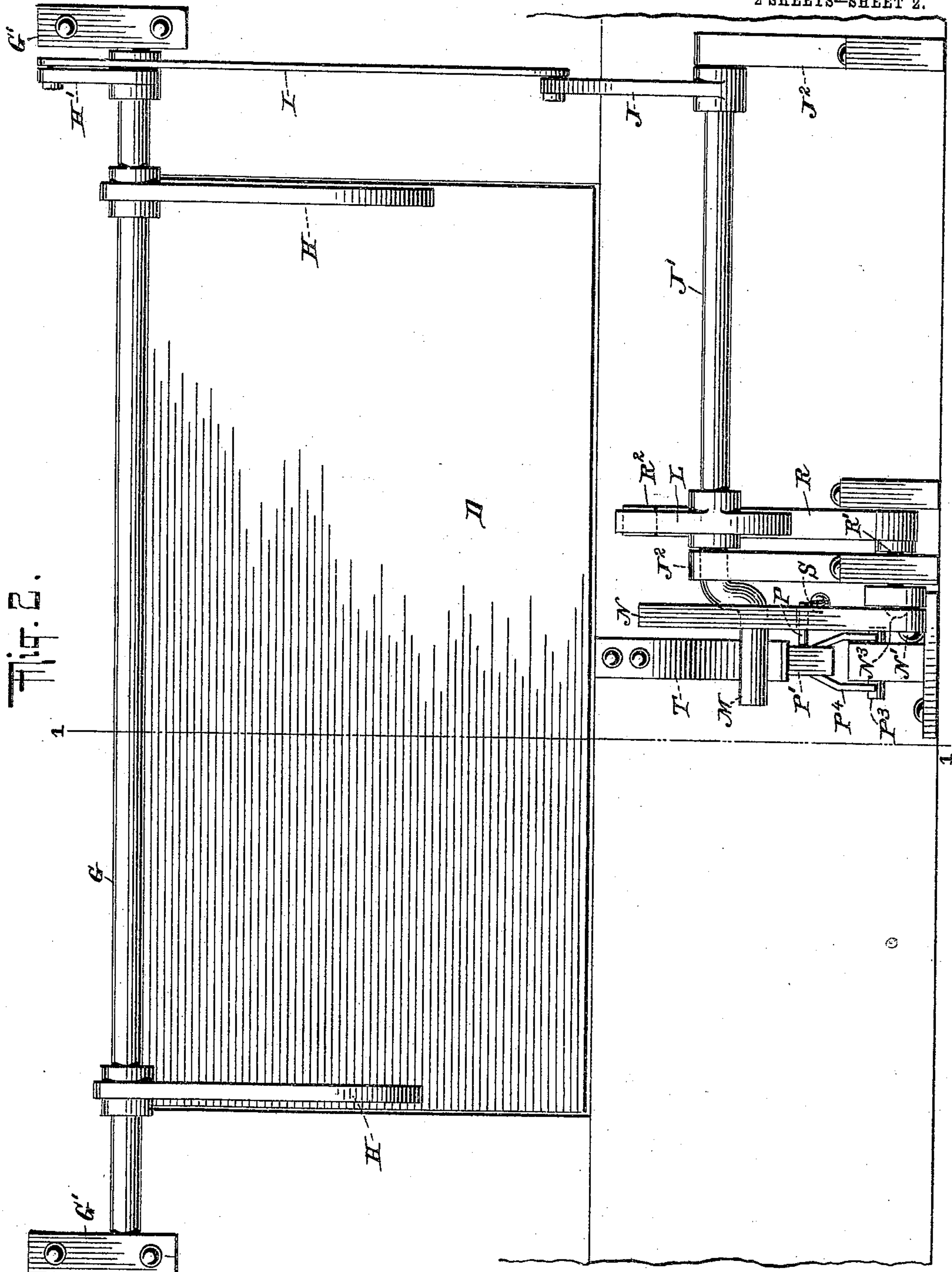


Fig. 2.

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JOSE SAMPERE, OF NEW YORK, N. Y., ASSIGNOR TO THE REGINA COMPANY, OF RAHWAY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

AUTOMATIC-PIANO ATTACHMENT.

940,072.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed June 15, 1907. Serial No. 379,113.

To all whom it may concern:

Be it known that I, JOSE SAMPERE, a subject of the King of Spain, and a resident of the borough of the Bronx, city, county, and State of New York, have invented certain new and useful Improvements in Automatic-Piano Attachments, of which the following is a specification.

My invention relates to automatic pianos and has for its object to provide instruments of this kind with an easily operated door for closing the opening after the pedals for operating the bellows have been folded into their inoperative position.

My invention will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

Reference is to be had to the accompanying drawings in which—

Figure 1 is a sectional view of a portion of a piano with my device applied thereto, on the line 1—1 of Fig. 2, and Fig. 2, is a rear elevation thereof.

A represents a portion of the lower casing of the piano and B is the keyboard thereof. The casing A is provided with an opening C through which the bellows operating pedals are folded into their operative or inoperative positions. A door D is pivoted at E and is adapted to close this opening C, a stop F being provided to limit the movement of said door.

G is a shaft which extends across the casing and is journaled near each end in bearings G¹. Fingers H are carried by this shaft to move therewith and have their free ends abutting against the inner surface of the door D. An arm H¹ is also secured to the shaft G and is connected by a link I with a lever J. This lever J is connected to move with a shaft J¹ journaled in bearings J², secured to the base board K of the piano. A cam L is also secured on the shaft J¹, the purpose of which will be more fully described hereinafter. The one end of the shaft J¹ is bent into the form of a crank M which in the position shown in Fig. 1 engages a swinging member N pivotally secured at N¹ to a lever N² pivoted at N³ to a stationary portion of the piano. The member N is provided with a projection O adapted to engage a pin P carried by the bearing block P¹ which is attached to the pedal lever P². This pedal lever P² is pivoted at P³ on a stationary portion of the

instrument and carries the pedal P⁴. The pedal arm is also provided with a projecting nose P⁵ which serves as a stop to limit the movement of the pedal and pedal lever and acts in conjunction with a pad A¹ of felt or similar material secured to the casing A. The lever N² is provided with a slot Q through which projects the shank of a bolt screw Q¹ which is secured to a locking member R which is pivoted at R¹ to a stationary portion of the instrument. The locking member R is provided with a projection R² which coöperates with the cam L in the manner to be more clearly brought out hereinafter. A spring S has its one end secured to the locking member R and its other end attached to the swinging member N and tends to draw these two members toward each other. A leaf spring T is secured to the casing A with its free end in engagement with the pedal lever P² and tends to throw the pedal into its normal position.

In operation assuming the parts to be in the position shown in Fig. 1 and it is desired to open the door D, the pedal P⁴ is depressed by the foot of the player. This results in swinging the pedal lever P² on its pivot P³ and raising the end thereof which carries the block P¹. This block P¹ engages and raises the crank M and partially rotates the shaft J¹ in its bearings thus swinging the lever J downwardly. This downward movement of the lever J also causes the arm H¹ to be moved in a downward direction through the medium of the link I. The shaft G is thus rotated and the fingers H are moved in the direction indicated by the arrow in Fig. 1 and the door D is swung on its hinges E into the open position. The door D is limited in this outward movement by the keyboard B of the piano and is thus limited to an inclined open position. The purpose of this will be explained hereinafter. During the rotation of the shaft J¹, as just described, the cam L is also moved with it, until when the door D has reached its final open position the upper edge of said cam L will be engaged by the projection R² of the locking member R. The door D is thus maintained in its open position. During the movement of the pedal lever P² to open the door the pin P on the block P¹ has raised the swinging member N and swings the lever N² on its pivot N³. This movement, however, owing to the slot Q has had

no effect on the locking lever R and leaves the said lever R free to be drawn to the right in Fig. 1 by the spring S so that the projection R² may engage the cam L at the proper time. The bolt Q¹ is now at the upper portion of the slot Q. As the pedal lever P² raises the crank M, this crank will move the member N to the right in Fig. 1 and disengage the projection O from the pin P so that the lever N² is free to continue to move to produce the results just explained. As soon as pressure is removed from the pedal P⁴ it is returned to its normal position by the spring T and the lever N is drawn to the left in Fig. 1 by the spring S thus again bringing the projection O of said lever N over the pin P. If it is now desired to close the door the pedal P⁴ is again depressed, whereupon the swinging lever N will be raised through the medium of the pin P and projection O. This will cause the lever N² to be swung on its pivot N³ and owing to the fact that the bolt Q¹ is in the upper portion of the slot Q will cause the locking member R to be moved on its pivot R¹ to the left in Fig. 1. The cam L will thus be released from the restraint of the projection R² and the weight of the door D will cause it to close and to return the mechanism to its normal position. As before stated the extreme open position is an inclined one so that the moment the cam L and the projection R² are disengaged the said door will commence to drop.

I have found it convenient to use the usual middle pedal for operating my device thus doing away with the necessity for stooping on the part of the player.

What I claim is:

1. The combination of a casing having an opening in one of its walls, a movable door arranged to close said opening, mechanism for moving said door to an open position, means for locking said mechanism to hold the door in its open position and means for operating said door moving mechanism to open the door and for releasing said locking means.

2. The combination of a casing having an opening in one of its walls, a movable door arranged to close said opening, mechanism arranged to move said door to an open position, a device for operating said mechanism and means for automatically returning said device to normal position without affecting the door-opening mechanism.

3. The combination of a casing having an

opening in one of its walls, a movable door arranged to close said opening, mechanism for moving said door to an open position, means for operating said door opening mechanism said means being capable of a movement relative to said mechanism and a spring for returning said means to its normal position.

4. The combination of a casing provided with an opening in one of its walls, a door arranged to close said opening, mechanism for moving said door to leave the opening free, means for locking said door in its open position and a depressible pedal adapted to operate said door moving mechanism, said pedal being arranged to release the locking means to permit the door to return to its initial position to again close said opening.

5. The combination of a casing provided with an opening in one of its walls, a door arranged to close said opening, a cam mounted on a stationary part of the casing, connections from said cam to said door, a pedal for operating said cam to cause said door to open, a locking member arranged to engage said cam after it has been operated by the pedal to maintain the door in its open position, and means connected with said locking member and arranged to be operated by the pedal to release said cam and permit the door to close.

6. The combination of a casing having an opening in one of the walls, a door arranged to close said opening, a cam mounted on a stationary part of the casing, a lever connected with said cam, a finger pivotally mounted on said casing and having its free end in engagement with said door, a connection from said finger to said lever, a pedal arranged to operate said cam and said finger to open the door, a pivoted locking member arranged to engage said cam after it has been operated by the pedal to maintain the door in its open position and means connected with said locking member and arranged to be engaged by said pedal to swing the locking member out of engagement with the cam and permit the door to resume its closed position.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses this 12th day of June, 1907.

JOSE SAMPERE.

Witnesses:

JOHN A. KEHLENBECK,
FRED A. KLEIN.