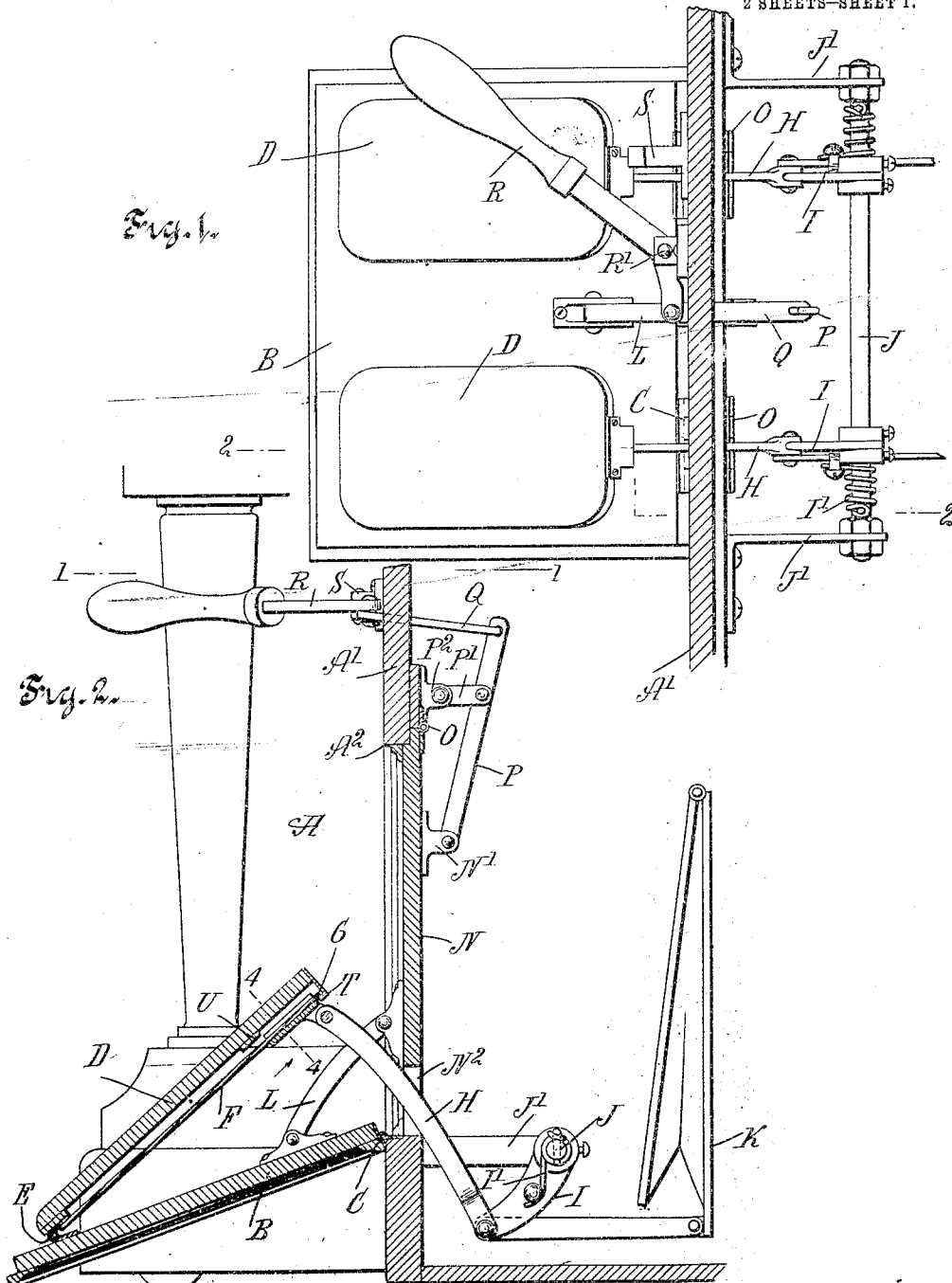


C. H. LADEW, Sr.
 PEDAL MECHANISM.
 APPLICATION FILED MAR. 2, 1912.

1,055,190.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.



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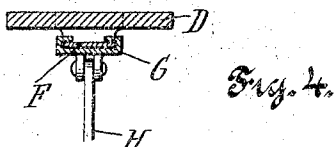


Fig. 4.

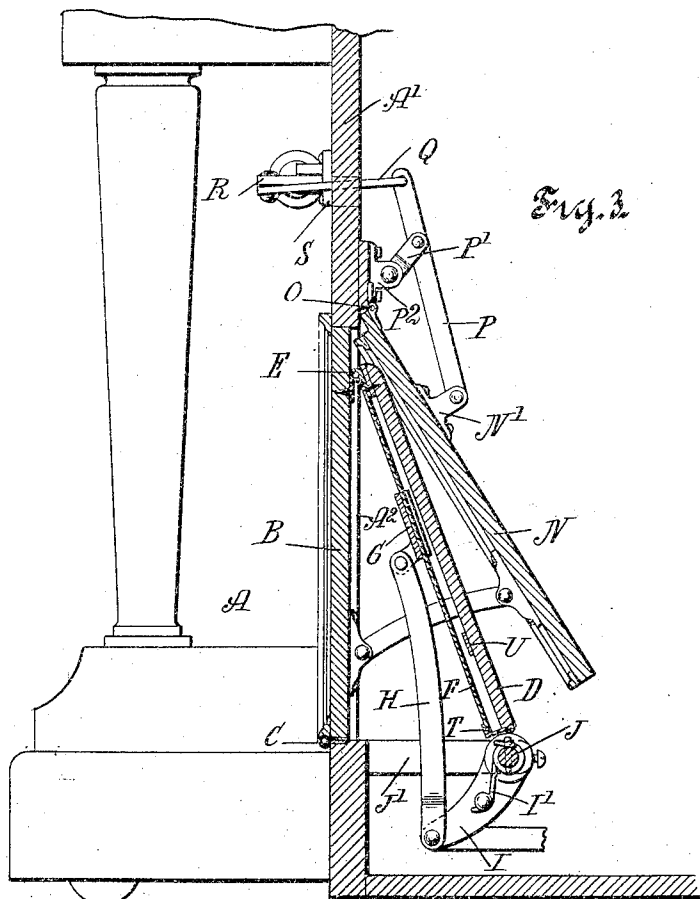


Fig. 3.

WITNESSES

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PEDAL MECHANISM.

1,055,190.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed March 2, 1912. Serial No. 681,032.

To all whom it may concern:

Be it known that I, CHARLES H. LADEW, Sr., a citizen of the United States, and a resident of the city of New York, borough
5 of the Bronx, in the county and State of New York, have invented a new and Improved Pedal Mechanism, of which the following is a full, clear, and exact description.

The invention relates to self-playing
10 pianos and similar musical instruments, and its object is to provide a new and improved pedal mechanism arranged to permit of conveniently folding it inside of the base of the instrument and at the same time closing the
15 pedal opening in the front of the base or to allow of swinging the pedal mechanism outward into extended position and at the same time close the pedal opening so that the base of the casing is closed and the interior
20 of the casing is protected against dust whether the pedal mechanism is in folded or in extended position. For the purpose mentioned use is made of a pedal mechanism connected with an outer and an inner door
25 for closing the pedal opening in the front of the casing when the pedal mechanism is in folded or extended position.

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 plan view of the pedal mechanism as applied and in extended position,
35 the front of the base being shown in section on the line 1—1 of Fig. 2; Fig. 2 is a transverse section of the same on the line 2—2 of Fig. 1; Fig. 3 is a similar view of the same showing the parts in folded position; and
40 Fig. 4 is a sectional elevation of one of the pedals, the section being on the line 4—4 of Fig. 2.

The casing A of a player piano or other similar musical instrument is provided in
45 the front A' of the base with a pedal opening A² adapted to be closed by an outer door B pivotally connected at its lower end by hinges C to the front A' at the bottom of the pedal opening A². Pedals D are connected
50 by hinges E to the rear face of the outer door B near the free end thereof so that when the door B is swung downward into the position shown in Figs. 1 and 2 then the pedals D can be readily engaged by the feet

of the player to actuate the same. The
55 pedals D are provided at their under sides with spring arms F forming guideways for slides G to slide on, the said slides G being connected by transverse links H to rock arms I fulcrumed on the rod J supported by brack-
60 ets J' attached to the front A' at the inner face thereof, as plainly indicated in the drawings. The rock arms I are pressed on by springs I' carried by the rod J to nor-
65 mally hold the pedal D in the raised position illustrated in Fig. 2, and the said rock arms I are connected in the usual manner with the bellows K for actuating the same on alternately pressing and releasing the
70 pedals D.

The outer door B is connected by a link L
75 with the free end of an inner door N connected at its upper end by hinges O to the inner face of the front A' so that the inner door N swings into a closed position when-
ever the outer door B swings into open position, as will be readily understood by reference to Figs. 1 and 2, and when the outer
80 door B is swung upward into a closed position the inner door N swings inward into an open position, as indicated in Fig. 3. Thus the pedal opening A² is closed whether the pedal mechanism is in an extended or in a folded position.

The back of the inner door N is provided
85 with a bracket N' connected with one end of an upwardly extending lever P connected by a link P' with a bracket P² attached to the inner face of the front A', and the upper end of the lever P is pivotally connected by
90 a link Q with a hand lever R fulcrumed at R' on the outer face of the front A' so that the said lever R is under the control of the player to enable the latter to impart a swing-
95 ing motion to the lever R with a view to impart a swinging motion to the lever P whereby the inner door N may be swung into an open position and in doing so cause an upward swinging movement of the outer
100 door B by the connection of the link L between the doors N and B. In a like manner the door N can be swung downward into a closed position on actuating the lever R in a reverse direction so as to swing the door
105 B downward into an open position as shown in Fig. 2. The lever R is adapted to be locked in position when the door B is closed and the door N is open by a catch S held on

the outer face of the front A', as plainly indicated in Fig. 1.

It is understood that the link Q previously mentioned extends through a small opening in the front A' and the link H of the pedal mechanism extends through the pedal opening A² and also through slots N² formed in the free end of the inner door N at the time the latter is in closed position.

The spring arms F forming the guideways for the slides G are limited by stops T held on the free ends of the pedals D, and stop lugs U are arranged on the under sides of the pedals D a distance from the free ends of the spring arms F so as to hold the slides G against sliding movement on the arms F when alternately pressing and releasing the pedals D for actuating the bellows K.

It is understood that when a pedal D is pressed then the pedal D moves toward the free end of the spring arm F as the latter is held against movement by the resistance of the link H until the pedal D engages the slide G, and then the further downward swinging movement of the pedal carries the slide G along so as to cause the link H to actuate the rock arm I and consequently the bellows K. When the player releases the pressure on the pedal D the spring arm F returns to normal position against the stop T.

From the foregoing it will be seen that during the actuating of the pedal D the corresponding slide G is held against sliding movement on the arm F owing to the slide G abutting against the stop U, but when the operator swings the lever R inward into closed position and causes the door B to swing upward then the slide G slides down the spring arm F so as to allow the pedal to swing into a folded position on closing the door B and opening the door N.

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

1. In combination with a casing having a pedal opening, a pedal mechanism and connected outer and inner doors, of which the outer door is connected with the said pedal mechanism and is adapted to close the said pedal opening on folding the pedal mechanism inside the casing, and the said inner door is adapted to close the said pedal opening at the time the pedal mechanism is in extended position.

2. In combination with a casing having a pedal opening, a pedal mechanism and connected outer and inner doors, of which the outer door is connected with the said pedal mechanism and is adapted to close the said pedal opening on folding the pedal mechanism inside the casing, and the said inner door is adapted to close the said pedal opening at the time the pedal mechanism is in

extended position, and manually-controlled means connected with one of the said doors for moving the doors into open or closed position and the pedal mechanism into extended or folded position.

3. In combination with a casing having a pedal opening, a pedal mechanism and connected outer and inner doors, of which the outer door is connected with the said pedal mechanism and is adapted to close the said pedal opening on folding the pedal mechanism inside the casing, and the said inner door is adapted to close the said pedal opening at the time the pedal mechanism is in extended position, a hand lever fulcrumed on the front of the said casing, a lever fulcrumed on the inside of the casing and connected with the inner door, and a link connecting the said levers with each other.

4. A pedal mechanism, comprising an outer swing door, pedals fulcrumed on the said door and provided with guideways, slides in the said guideways, rocking levers adapted to be connected with a bellows, links connecting the said rocking levers with the said slides, an inner swing door, a link connecting the doors with each other, and manually-controlled means connected with the said inner door.

5. A pedal mechanism, comprising an outer swing door, pedals fulcrumed on the said door and provided with guideways, slides in the said guideways, rocking levers adapted to be connected with a bellows, links connecting the said rocking levers with the said slides, an inner swing door pivoted at its upper end, a link connecting the said doors with each other, a door lever pivotally connected at one end with the said inner door, a hand lever under the control of the operator, and a link connecting the other end of the said door lever with the said hand lever.

6. A pedal mechanism, comprising a swing door, pedals fulcrumed at one end on the said door, spring arms secured at one end to the underside of the pedals at the fulcrumed end of the latter, the said spring arms forming guideways, slides on the said guideways, stops on the free ends of the pedals, the said stops extending beneath the free ends of said spring arms and normally engaged thereby, rock arms adapted to be connected with a bellows, links connecting the rock arms with the said slides, and means for holding the slides against movement on the guideways.

7. A pedal mechanism, comprising a swing door, pedals fulcrumed on the said door and provided on the under side with spring arms forming guideways, slides on the said guideways, limiting stops on the pedals for the free ends of the said spring arms, limiting stops on the pedals for engagement by the said slides, rock arms

adapted to be connected with a bellows, and links connecting the rock arms with the said slides.

8. The combination with a casing having
5 a pedal opening in its front, of a pedal mechanism comprising an outer swing door hinged at its lower end to the front at the bottom of the pedal opening, pedals fulcrumed on the said door and provided on
10 the underside with guideways, slides on the said guideways, rock arms adapted to be connected with a bellows, links connecting the rock arms with the slides, an inner

swing door hinged at its upper end to the inner face of the front at the top of the pedal opening, a link connection between the free end of said inner door and the outer door, and operating means connected with the inner door. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 20

CHARLES HENRY LADEW, Sr.

Witnesses:

J. EDW. CARRIGAN,

CHAS. H. LA DEW, Jr.