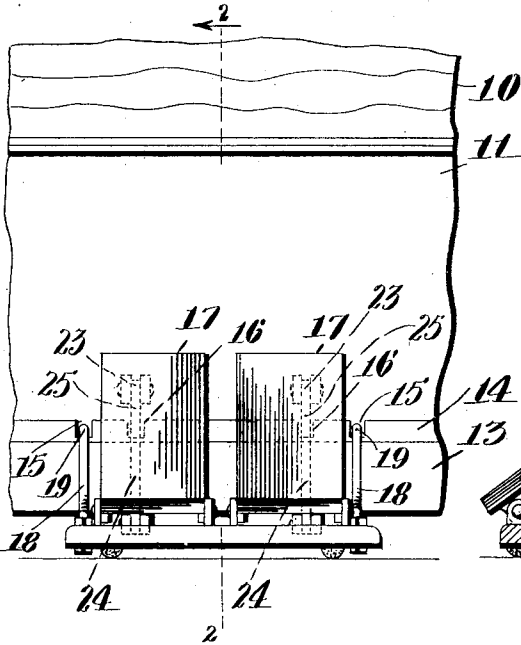


P. WELIN.  
 PEDAL MECHANISM FOR MUSICAL INSTRUMENTS.  
 APPLICATION FILED JULY 6, 1908.

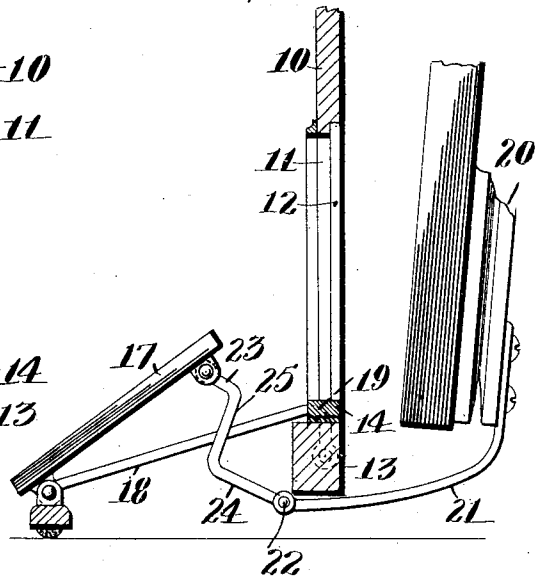
945,882.

Patented Jan. 11, 1910.

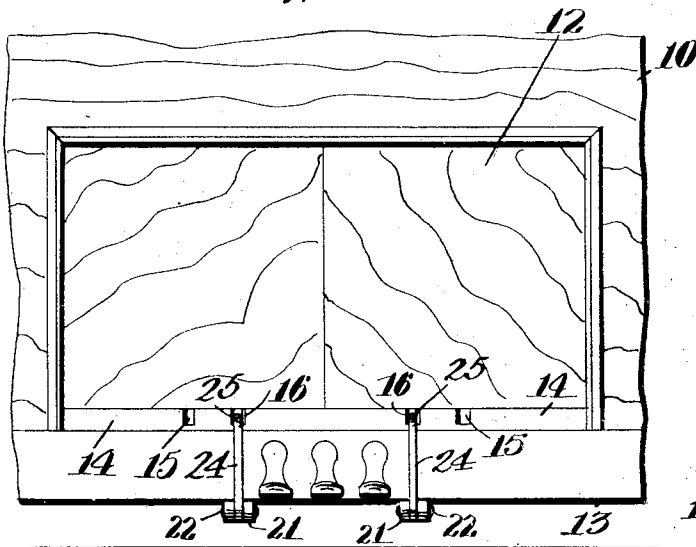
*Fig. 1*



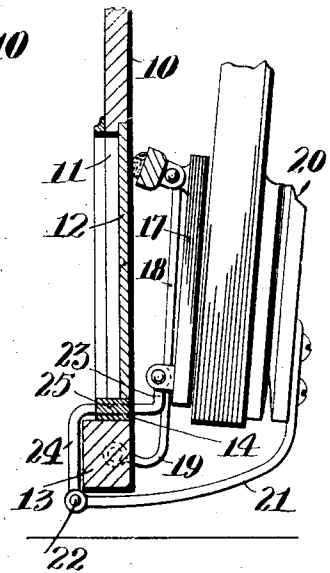
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses:*  
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 by Attorneys.  
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# UNITED STATES PATENT OFFICE.

PETER WELIN, OF WORCESTER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS,  
TO KRELL AUTO-GRAND PIANO CO. OF AMERICA, OF CONNERSVILLE, INDIANA, A  
CORPORATION OF INDIANA.

## PEDAL MECHANISM FOR MUSICAL INSTRUMENTS.

945,882.

Specification of Letters Patent. Patented Jan. 11, 1910.

Original application filed September 12, 1907, Serial No. 392,540. Divided and this application filed July 6,  
1908. Serial No. 441,954.

*To all whom it may concern:*

Be it known that I, PETER WELIN, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Pedal Mechanism for Musical Instruments, of which the following is a specification.

This application is a division of my prior application on pedal operating mechanism for musical instrument cases, filed September 12, 1907, Serial No. 392,540.

This invention relates to pedal mechanism for musical instruments.

The principal objects of this invention are to provide a construction especially adapted for combination upright pianos, but capable of general use, that will be of such a nature that no large holes or perforations will show either when the pedals are folded in the instrument or when they are drawn out for automatic playing; to provide a construction in which this advantage is brought about chiefly by the fact that the links or arms constituting a part of the pedal connection fills the notches in the bottom rail or the molding thereof when out and the connecting links between the pedals and bellows fill the notches when the pedals are folded in the casing; and to provide a construction of this character in such form that it does not weaken the lower or pedal rail or complicate or increase the cost of the instrument.

Further objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings which show a practicable form in which the invention may be carried out and in which,

Figure 1 is a front elevation showing the pedals drawn out ready for automatic playing. Fig. 2 is a horizontal sectional view of the same on the line 2—2 of Fig. 1. Fig. 3 is a front elevation showing the device with the pedals folded within the casing, and Fig. 4 is a sectional view similar to Fig. 2 showing the parts with the pedals folded in.

The invention is shown as applied to a musical instrument casing 10 which is provided with a lower front opening 11 adapted to be closed by sliding panels 12. At the bottom of the opening is the usual lower or pedal rail 13 which is preferably provided with

a molding 14 at the top thereof having two sets of notches therein numbered 15 and 16 respectively. The pedals 17 for operating the instrument are each provided with a link or pair of links 18, pivoted to the lower or front part of the pedal and also pivoted inside the bottom rail below the top thereof. This link is provided with a bend or knee 19 whereby when the pedals are drawn out, as shown in Fig. 2, the link will extend along through the notches 15 and close them so that they will not be readily observed from the front.

For the purpose of operating the bellows 20, the latter is provided with an arm or link 21 which extends downwardly under the bottom rail and terminates in a pivot 22 located adjacent to the lower front edge of the bottom rail. The upper or free end of the pedal is connected with this pivot by means of a link 23 which is provided with two arms 24 and 25 making an angle with each other. When the pedal is out, as shown in Fig. 2, this link performs the usual functions of a pedal link but when the pedal is folded within the casing, as shown in Fig. 4, the conformation of the link to give it a shape similar to that of the outside and top of the bottom rail becomes important as this permits the arm 24 to extend up the vertical front side of the bottom rail and the arm 25 to extend inwardly through the notch 16, as indicated in Figs. 3 and 4. The slides 12 can then be closed over the notches without interfering with the pedal connections. In this position of the parts it will be seen that the notches 16 are substantially filled by the arms 25 and that the notches 15 are similarly filled by the bends 19 of the links 18 when the pedals are drawn out.

It will be seen that the links or pedal connections are so proportioned and located that when the pedals are drawn out of the casing for automatic playing, the panels slide over the pedal connections in contact with the top of the molding on the bottom rail so that the inner portions of the connections are entirely concealed by the panels. Moreover, when the pedals are folded into the casing, as indicated in Fig. 4, the links which connect them with the bellows extend upwardly over the bottom rail and through the notches 16 so that the panels may slide

over them in the same way as has been described in connection with the other links so that practically everything is concealed. All this is accomplished without materially  
5 weakening the bottom or pedal rail and it adds greatly to the appearance of the instrument, and gives a strong, compact and convenient construction.

While I have illustrated and described  
10 one form in which the invention may be carried out, I am aware that it may be modified in many ways by a person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to all the  
15 details of construction shown, but—

What I do claim is:—

1. The combination with the bottom or pedal rail of a musical instrument casing,  
20 of pedal connections extending outwardly under said rail and folding back over the rail when the pedals are turned back into the casing.

2. The combination with the bottom or  
25 pedal rail of a musical instrument casing, of pedal connections extending outwardly under said rail and folding back over the rail when the pedals are turned back into the casing, said connections each comprising  
30 two pivotally connected links, the outer end of one of them terminating just outside the bottom of the rail, and the other extending upwardly therefrom and having a formation similar to that of the front and top  
35 of the rail, whereby when the pedals are withdrawn into the casing it will lie vertically along the surface of the rail.

3. The combination with the bottom or pedal rail of a musical instrument casing  
40 having a molding on top provided with a notch, of pedal connections comprising a link adapted to fold back over the rail when the pedals are withdrawn into the casing and having two arms, one adapted to lie  
45 vertically along the front of the rail and the other at substantially right angles thereto adapted to lie in said notch when the pedals are withdrawn into the casing.

4. The combination with the bottom or  
50 pedal rail of a musical instrument casing, of pedal connections extending outwardly under said rail and folding back over the rail when the pedals are turned back into the casing, said rail having a molding provided with a horizontal notch, and said connections comprising a link connected with  
55 the bellows and having a shape conforming to the front and top of the rail, and adapted to extend through said notch when the  
60 pedals are folded within the casing.

5. The combination with the bottom or pedal rail of a musical instrument casing

having a notch at the top thereof, of pedal connections comprising a link adapted to  
65 fold back over the rail when the pedals are withdrawn into the casing and having two arms, one adapted to lie vertically along the front of the rail and the other at substantially right angles thereto adapted to lie in  
70 said notch when the pedals are withdrawn into the casing, a second link pivoted to the inside of the rail and shaped to extend over the top thereof when the pedals are drawn out into operative position.

6. The combination with a musical instrument casing having a panel in the front  
75 thereof, and a bottom or pedal rail provided with two sets of notches at the top thereof, of pedals and pedal connections, said pedal connections comprising two sets of links,  
80 those of one set pivoted outside the casing near the bottom of the lower rail and having a shape conforming to that of the outer and top surfaces of the lower rail, and connected with the top of the pedals, and those  
85 of the other set connected with the bottom of the pedals and pivoted inside the rail and extending upwardly around the rail through one of the sets of notches when the pedals are not in operative position, the first named  
90 set of links extending through the other set of notches when the pedals are folded within the casing.

7. The combination with a piano casing having a lower opening and a bottom or  
95 pedal rail, of pedals and pedal connections comprising a set of links connected with the bottom of the pedals and pivoted to the inside of said rail and extending upwardly over the top thereof when the pedals are  
100 drawn out, and a second set of links movably pivoted near the front of the bottom of the rail and connected with the tops of the pedals, and having a shape conforming substantially to that of the front and top of the rail.  
105

8. The combination with a piano case, of a front board therefor, a panel mounted to  
110 slide on said front board, said case comprising a lower front rail under said panel and along which the panel is adapted to slide and having notches, and a pedal mechanism comprising links adapted to rest on the  
upper surface of said rail and pass through the notches therein when the pedals are  
115 folded within the casing and when they are extended outwardly for playing, in such position that the panel slides over the links.

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses.

PETER WELIN.

Witnesses:

CHARLES F. VANCE,  
EDWIN B. PFAU.