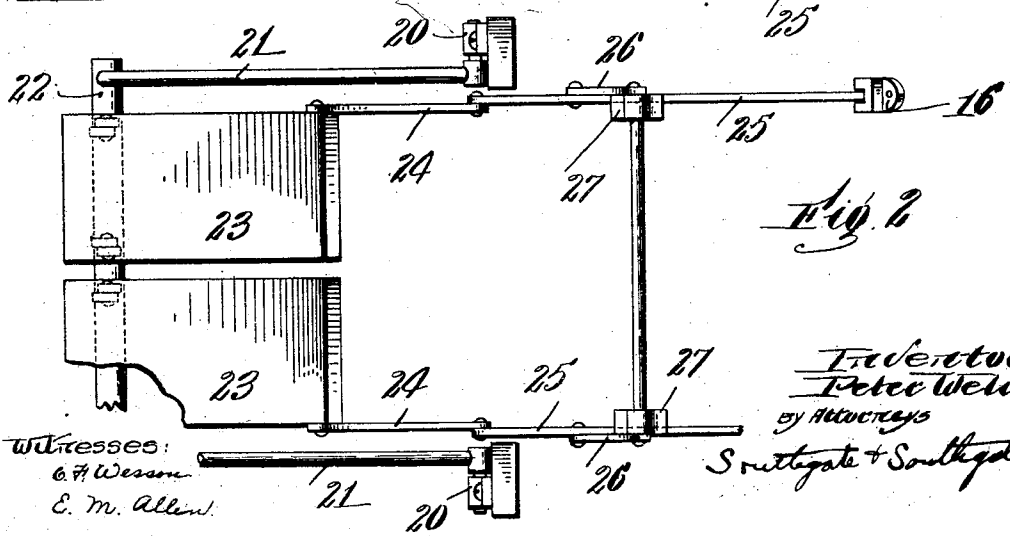
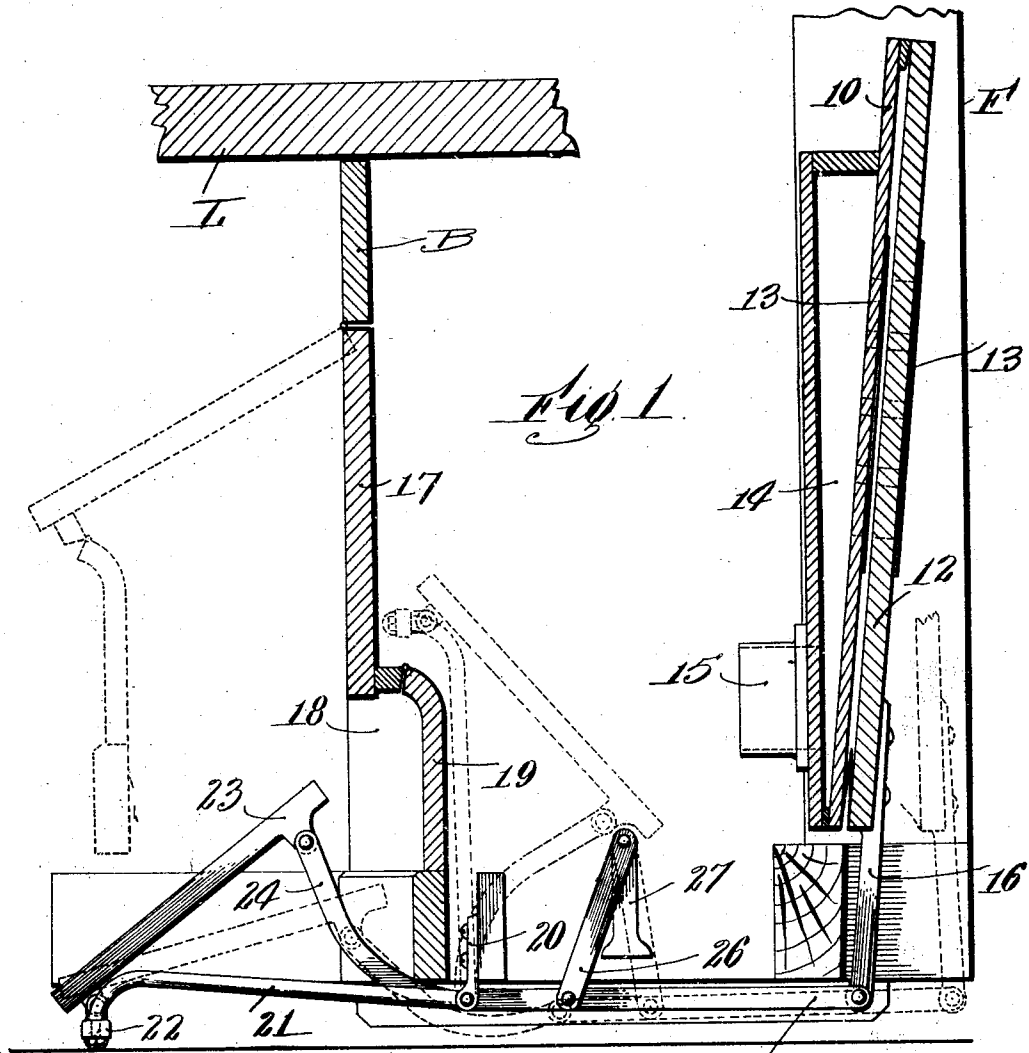


P. WELIN.
 PEDAL MECHANISM FOR MUSICAL INSTRUMENTS.
 APPLICATION FILED MAY 1, 1906.

961,824.

Patented June 21, 1910.



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UNITED STATES PATENT OFFICE.

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

PEDAL MECHANISM FOR MUSICAL INSTRUMENTS.

961,824.

Specification of Letters Patent. Patented June 21, 1910.

Original application filed July 20, 1904, Serial No. 217,347. Divided and this application filed May 1, 1906. Serial No. 314,657.

To all whom it may concern:

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

This invention relates to that class of automatic playing attachments which are housed within the casing of the pianos to which they are applied, this application being a division of my prior Patent No. 825,784 granted July 10, 1906.

The especial object of this invention is to combine the pedals and their connection to the feeding appliances with the piano casing in a strong, compact and convenient arrangement which will permit said parts to be entirely inclosed when the piano is to be played manually, and while at the same time said parts will occupy comparatively little room within the casing itself.

Reference is to be had to the accompanying drawings showing a preferred embodiment of my invention in which—

In the accompanying two sheets of drawings, Figure 1 is a sectional view of sufficient parts of a piano casing to illustrate the application of my invention thereto, and Fig. 2 is a plan of a portion of the same.

In equipping a piano case with power supplying attachments and controlling levers for actuating and controlling the automatic playing, I have shown vertical feeders which are arranged between the rear posts or uprights and preferably in the panel between the two center posts of a piano casing. The air reservoir or collapsible storer from which the air is exhausted by the feeders is also shown in the space between two of the uprights or posts of the piano casing.

The feeders are operated from folding treadles and these folding treadles are preferably arranged so that the pivots of the operating links are normally in line with the pivots of the supporting frame and this construction is adopted so that the pedals may be turned back into the piano casing without shifting or straining any of the parts; that is to say, the pedals occupy the same relative angular position with respect to their supporting frame when turned back into the

piano casing as when swung forward in position to be operated.

Referring to the accompanying drawings and in detail, a piano casing equipped according to this invention is provided with feeders F.

As shown most clearly in Fig. 1, each of the feeders F comprises a stationary board 10 with the swinging board 12 pivoted thereto. The boards 10 and 12 are provided with the usual valves 13 and both feeders will exhaust air from the air channel 14. Extending in from the air channel 14 is a pipe or passage 15 which may be connected, for example by a piece of flexible hose with the storer (not shown). By means of this construction it will be seen that I am enabled to use comparatively large feeders or bellows and that by arranging these feeders vertically in a piano between the posts and the piano casing, the feeders will leave the lower part of the casing below the piano keys entirely unobstructed. The piano casing comprises the key-board ledge or board L, extending down from which is a front board B, having a swinging out front section which comprises an upper panel 17 hinged to the front board and provided with an arch or alcove 18 having a supplemental panel or board 19 hinged so that by raising the panels 17 and 19 the pedals can be folded back into the casing as hereinafter described. Supports or fulcrum members 20 are shown as mounted immediately behind and extending below the front rail or wall of the piano casing and extending from the supports 20 is a frame comprising arms or links 21 which are connected by a front piece 22. Extending up from the front piece 22 and pivotally connected therewith are the pedals or foot pieces 23. Near its upper end, each of the pedals 23 is connected to an operating link 24 which is connected with one of the feeders by a swinging link 25 which is pivoted at its rear end to an arm 16 extending down from a movable board 12 of one of the feeders. The swinging link 25 is supported by a link 26 from a support 27. In this construction, it will be noted that the axes of the pivots of the side arms 21 are in line with the axes of the pivotal connections of the links 24 with the swinging links 25 when the pedals are in normal position and I re-

gard this as a desirable arrangement, because by means of this construction, the pedals may be folded back into the inside of the piano case, as shown by dotted lines, without changing the relative angular relation of the pedals 23 with respect to the side arms 21.

The controlling levers are preferably arranged underneath the piano keys and are ordinarily concealed from view so that when the pedals are folded back into the piano case, both the controlling levers and pedals may be concealed so that there will be no indication on the exterior of the piano that the piano is provided with automatic playing attachments.

I am aware that changes may be made in applying my invention to piano cases of different styles and proportions. I do not wish, therefore, to be limited to the construction I have herein shown and described, but

What I do claim and desire to secure by Letters-Patent is:—

1. The combination of a piano casing and feeding appliances with a pivoted supporting frame, pedals normally extending up therefrom, operating links extending down from the upper ends of the pedals, said operating links having pivotal connections to the feeding appliances at their lower ends substantially in line with the pivots of the frame when the pedals are in one position, whereby the relative position of the pedals and side parts of the frame will not be changed when the pedals are swung back inside of the piano case, the path of the pedal and its support being unobstructed, whereby they may be swung to an upright position without changing their relative positions.

2. The combination of a piano casing, feeders therein, arms extending down therefrom, pedals at the front of the casing, a frame supporting the pedals, operating links extending down from the upper ends of the pedals, and swinging links connected to said arms extending down from the feeders and to the pedal links at opposite ends respectively, together with supporting arms pivoted at intermediate points of the connecting links so that said connecting links will move substantially horizontally.

3. In a musical instrument, the combination with a feeder, of a pivoted frame, a pedal movably mounted thereon, an operating link connected with the pedal, and having a pivotal connection at its end at a point in line with the pivot of the frame when the pedal is in normal position, said pivotal connection being connected with the feeder, the path of the pedal and its support being unobstructed whereby they may be swung to an upright position without changing their relative positions.

4. In a musical instrument, the combination with a feeder, of a pivoted frame, pedals movably mounted thereon, an operating link for each pedal having a connection with the feeder including a pivot, the axes of said pivots of said links being in alinement with the axes of the pivots of said frame in one position of the pedals the path of the pedal and its support being unobstructed, whereby they may be swung to an upright position without changing their relative positions.

5. In a musical instrument, the combination of a pivoted frame, a pedal movably mounted thereon, an operating link, a swinging link, and a pivotal connection between the operating link and swinging link in line with the pivot of said frame in one position of the pedal.

6. The combination of a piano casing having a swinging out front section, comprising a panel hinged to the piano casing, and a supplemental panel hinged to the lower end thereof, with pedals movable to a position behind the supplemental panel, pedals and links connected with the pedals movable substantially horizontally under the supplemental panel when in its lowest position.

7. A piano casing having a swinging out front section, comprising a panel pivotally connected with the main portion of the casing, and a supplemental panel movably connected with the first mentioned panel, pedals and links connected with the pedals movable substantially horizontally under the supplemental panel when in its lowest position.

8. The combination with a piano casing having a swinging out front section comprising a pivoted panel and a supplemental panel movably connected with the first mentioned panel, and pedals foldable within the casing, said supplemental panel occupying the same position when the pedals are in operative position as when they are folded within the casing.

9. The combination with a pedal, of a fulcrum member therefor, a link secured to said fulcrum member and pivoted at its opposite end to permit of folding the pedal, and mechanism operated by said pedal, including a pair of members pivotally connected to each other, their pivot being normally in substantial alinement with the pivot of said link the path of the pedal and its support being unobstructed, whereby they may be swung to an upright position without changing their relative positions.

10. The combination with a casing and a pedal, of a fulcrum member therefor extending down below the bottom of the front of the casing, a link connected at one end with said fulcrum member and normally projecting forward under the front of the casing and pivoted at its opposite end to the pedal to permit of folding the pedal within the

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casing, and mechanism operated by said pedal including a pair of members pivotally connected with each other, their pivot being normally in substantial alinement with the pivot between said link and the fulcrum member.

11. The combination with a casing and a pedal, of a fulcrum member therefor extending down below the bottom of the front of the casing, a link connected at one end with said fulcrum member and normally projecting forward under the front of the casing and at its opposite end pivotally connected with the pedal to permit of folding the pedal within the casing, and mechanism operated by said pedal including a pair of members pivotally connected with each other, their pivot being normally in substantial alinement with the pivot between said link and fulcrum member, and a swinging support for said pair of members.

12. The combination with a casing and a

pedal, of a fulcrum member therefor extending down below the bottom of the front of the casing, a link connected at its rear end with said fulcrum member and normally projecting forward under the front of the casing and pivoted at its opposite end to the pedal to permit of folding the pedal within the casing, and mechanism operated by said pedal including a pair of members pivotally connected with each other, their pivot being normally in substantial alinement with the pivot between said link and the fulcrum member and a support for said pair of members located substantially midway between the front and back of the casing.

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

PETER WELIN.

Witnesses:

EDWIN B. PFAU,
ROBT. S. HUNTER.