P. WELIN.

COMBINATION PIANO.

APPLICATION FILED SEPT. 12, 1907.

1,059,094.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.

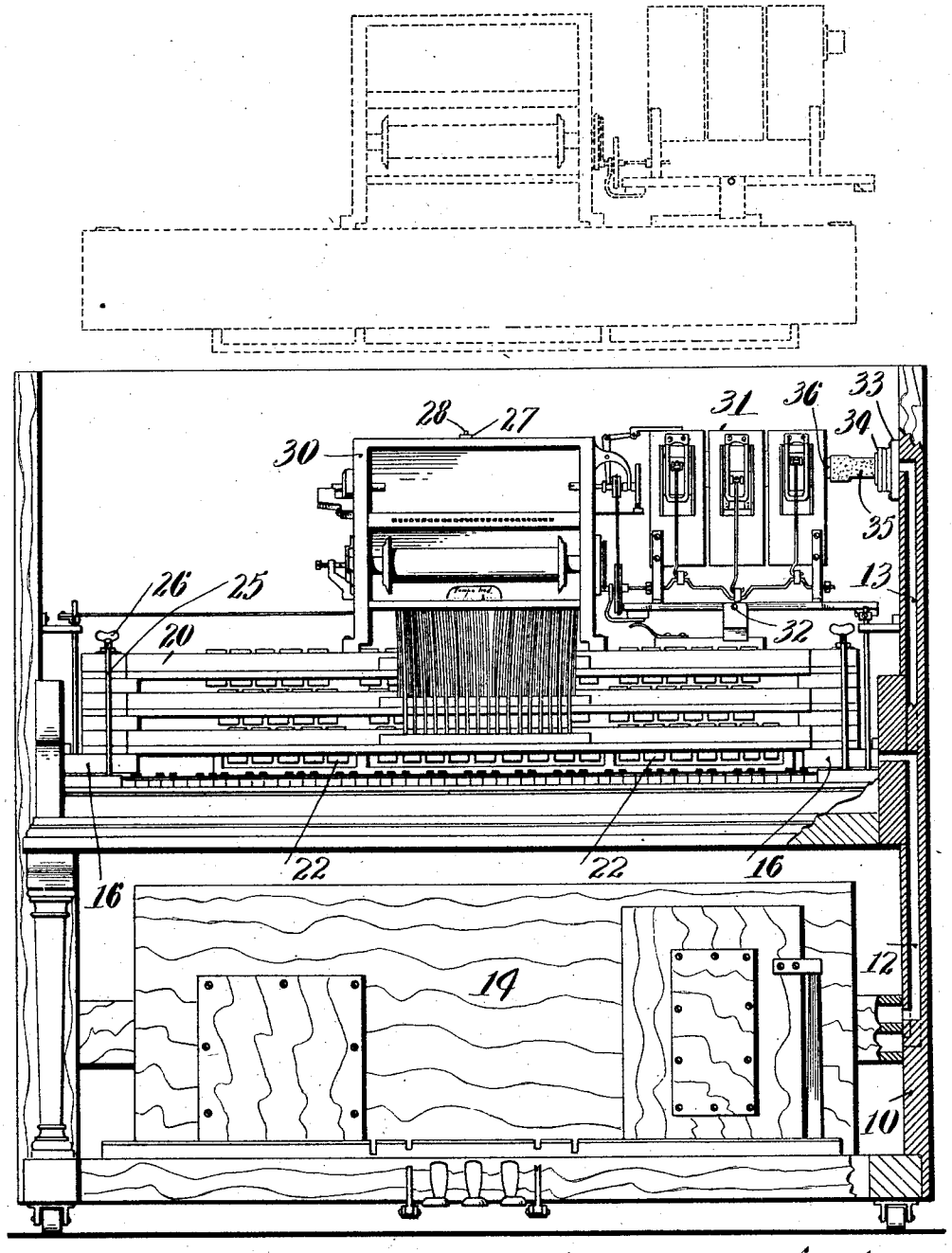

Fig. 1.

Witnesses:
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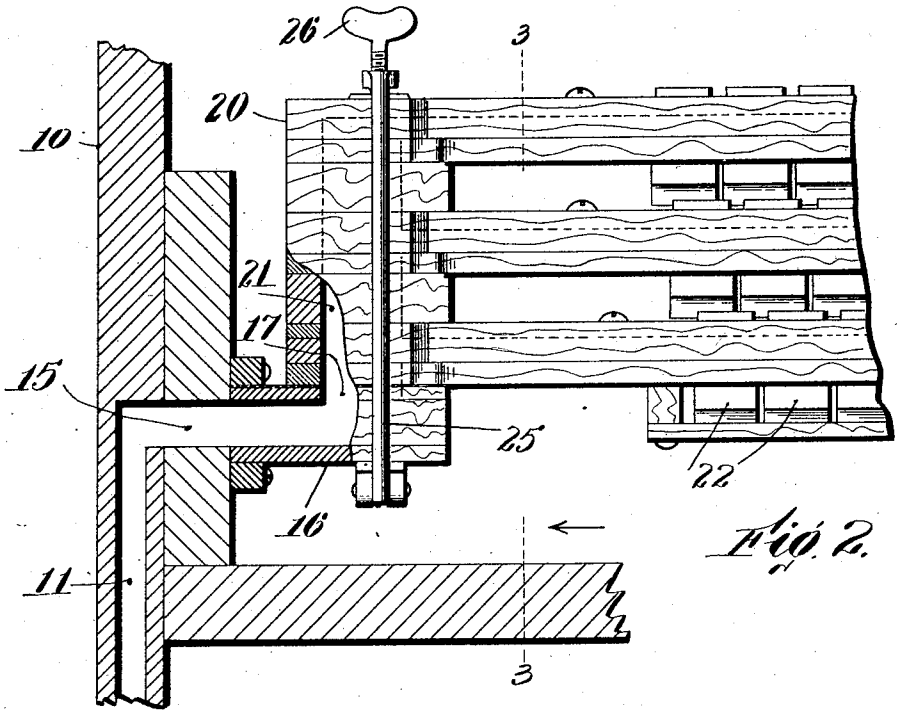

Fig. 2.

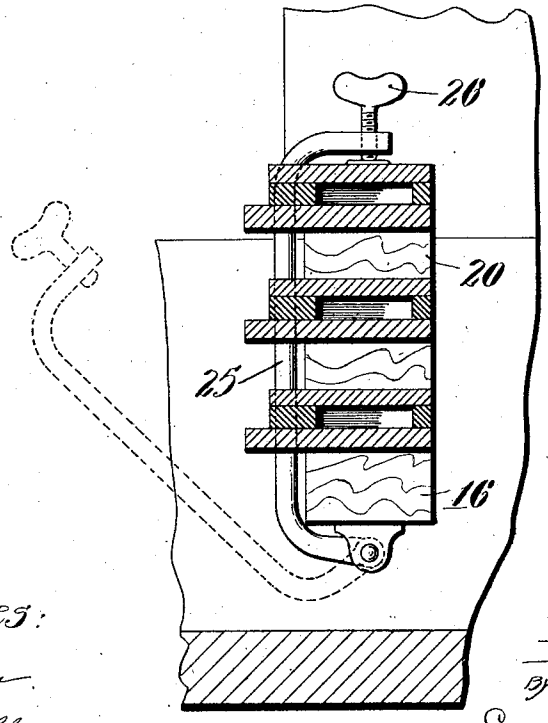

Fig. 3.

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UNITED STATES PATENT OFFICE.

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

COMBINATION-PIANO.

1,059,094. Specification of Letters Patent. Patented Apr. 15, 1913.

Application filed September 12, 1907. Serial No. 392,539.

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 Combination-Piano, of which the following is a specification.

This invention relates to that class of pneumatic musical instruments in which the playing devices are located within the casing, preferably so that the instrument may be played either manually or automatically, as desired.

The principal objects of the present invention are to provide a construction and combination of parts such that the necessary pneumatic playing devices may be contained within the casing in as small a space as possible and may be readily removed therefrom by detaching certain parts in a very simple way without interfering with the pneumatic connections and without necessitating any complicated adjustment of parts when they are replaced. This is accomplished in part by locating certain of the conducting channels for the air within the body of the walls of the casing itself and connecting them with the action in a simple and convenient manner as will be set forth hereinafter.

Further objects and advantages of the invention will be mentioned.

Reference is to be had to the accompanying drawings which show a preferred form of the invention and in which,

Figure 1 is a front view of a piano embodying the features of this invention, with the front panels removed, parts appearing in section to show the interior construction and certain parts being shown in dotted lines to indicate how they may be removed. Fig. 2 is a front elevation on enlarged scale of one end of the pneumatic action with parts in section, and Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

The casing 10 which is designed to contain the operating mechanism is provided in the form of instrument shown in the drawings with three channels 11, 12 and 13 in its end walls. Two of these channels 11 and 12 in the opposite end walls communicate with the wind-inducing or storing devices 14 which are located in the bottom part of the casing. They extend upwardly, as is indicated in Fig. 2, and terminate in horizontal channels 15. The casing is provided with a pair of projections 16 which are hollow and communicate with the channels 15. They are also provided with openings 17 in their upper surfaces which communicate, of course, with the interior of the projections.

The body 20 of the pneumatic action consists of a plurality of plates and other devices secured together in such a way that said body may be removed as a whole from the casing. This body is provided with a pair of passages 21 in its ends which control the several striking pneumatics 22 in any desired manner as is well understood in the art, so that the wind-inducing or storing devices may supply the striking pneumatics and other parts of the action with the necessary degree of exhaustion, or pressure if it is desired. The passages 21 open downwardly and when the action is in position for registering with the openings 17, the action itself rests on the projections 16 at the ends. In order to securely hold the action in place, the projections 16 are provided with detachable securing means, shown in the form of a pair of clamps 25 which extend upwardly from the bottom of the projections 16 and over the top of the body of the action. At this point these clamps are provided with thumb screws 26 which bear on the top of the action to hold the same in position. A link 27 pivotally connected with the back of the casing engages a pin 28 connected with the action in any desired way and completes this positive arrangement for holding the action in position. These parts, obviously, are readily detachable and all that it is necessary to do in order to remove the action is to detach them and lift the casing out bodily. In replacing it, it is easily placed in position without any special form of registering device. The action also supports a tracker-box 30 and a motor 31, this being removable with the action. This motor is shown as of a form heretofore described and claimed by me in my co-pending application for patent on an improvement in paper winding mechanism for musical instruments, filed Feb. 24, 1903, and consequently is shown as movable about a pivot 32. The motor is designed to be connected with the channel 13 and in order that the motor may be removed with the action, a detachable connection is provided. Also as I prefer to use a movable motor, a

flexible connection is provided to accommodate the motions of the motor. When, however, it is desired to use a motor which is mounted in stationary position, the flexibility of the connection may be dispensed with. In the present case I have shown this connection as in the form of a plate 33 mounted over the end of the channel 13 and provided with a flexible connection 34 of rubber cloth on which is located an air tight tube 35 which may be of rubber or any other material, this tube being detachably connected with the projection 36 on the motor so as to conduct air from the motor to the channel 13.

It will be seen that by carrying out the invention in the manner set forth or in any other way within the scope of the claims, the above mentioned advantages are secured with a simple construction which is inexpensive and contains few elements likely to get out of order in practice.

While I have illustrated and described a particular form of the invention and the application thereof to an instrument of a certain type, I am aware that the same may be varied within wide limits by any person skilled in this art and that it may be applied to other types of other pneumatic musical instruments without departing from the scope of the invention as expressed in the claims. Therefore, I do not wish to be limited to the particular form shown, but

What I do claim is:—

1. In a piano, the combination of a casing provided with a hollow projection on the inside having an opening in its upper surface, said casing having a channel within its walls connected with the interior of said projection, and a pneumatic action removably mounted in the casing and having a passage therein detachably connected with said opening in the projection when the action is in place.

2. In a piano, the combination of a casing having channels in its end walls, hollow projections extending inwardly and covering the open ends of said channels, said projections having openings in their upper surfaces communicating with said channels, a pneumatic action comprising a body having passages therein terminating in two passages at its ends opening downwardly, said body being adapted to rest at its ends on said projections with said downwardly opening passages in registration with the openings in the tops of said projections, and means supported by said projections for holding said action in position in the casing.

3. In a piano, the combination of a casing having channels in its end walls, hollow projections covering the open ends of said channels, said projections having openings communicating with said channels, a pneumatic action comprising a body having passages therein terminating in two passages, said body being adapted to rest at its ends on said projections with said passages in registration with the openings in the projections, and clamps pivotally connected with the bottoms of said projections and adapted to extend upwardly therefrom and engage the top of said actions, said clamps being provided with thumb screws for clamping the action in position.

4. In a piano, the combination of a casing having channels in its end walls, hollow projections covering the open ends of said channels, said projections having openings in their surfaces communicating with said channels, a pneumatic action comprising a body having passages therein terminating in two passages at its ends, said body being adapted to rest at its ends on said projections with said passages in registration with the openings in said projections, a tracker-box, and a motor supported by said body and removable therewith from the casing.

5. In a musical instrument, the combination of a casing, projections on the inside thereof, an action adapted to removably rest on said projections, and clamps pivotally connected with the bottoms of said projections and adapted to extend upwardly therefrom and engage the top of said actions, said clamps being provided with thumb screws for clamping the action in position.

6. The combination with a removably mounted pneumatic action for a musical instrument of a clamp therefor pivoted below the bottom thereof and adapted to extend over the top of the action.

7. The combination with a removably mounted pneumatic action for a musical instrument of a clamp therefor pivoted below the bottom thereof and adapted to extend over the top of the action, said clamp having a thumb screw in its upper end for engaging the top of the action, the top of said clamp swinging forward to allow the action to be removed.

8. In a piano, the combination of a casing having a channel in the end wall thereof, a plate located over the end of said channel, a flexible member supported by said plate, a tube supported by said member, and a movable and removable motor mounted in said casing and detachably connected with said tube.

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

PETER WELIN.

Witnesses:
C. FORREST WESSON,
ALBERT E. FAY.