W. R. CRIPPEN.

ACTION BRACKET AND WIND BOX FOR PLAYER PIANOS.

APPLICATION FILED JUNE 14, 1911.

1,025,183.

Patented May 7, 1912.

2 SHEETS—SHEET 1.

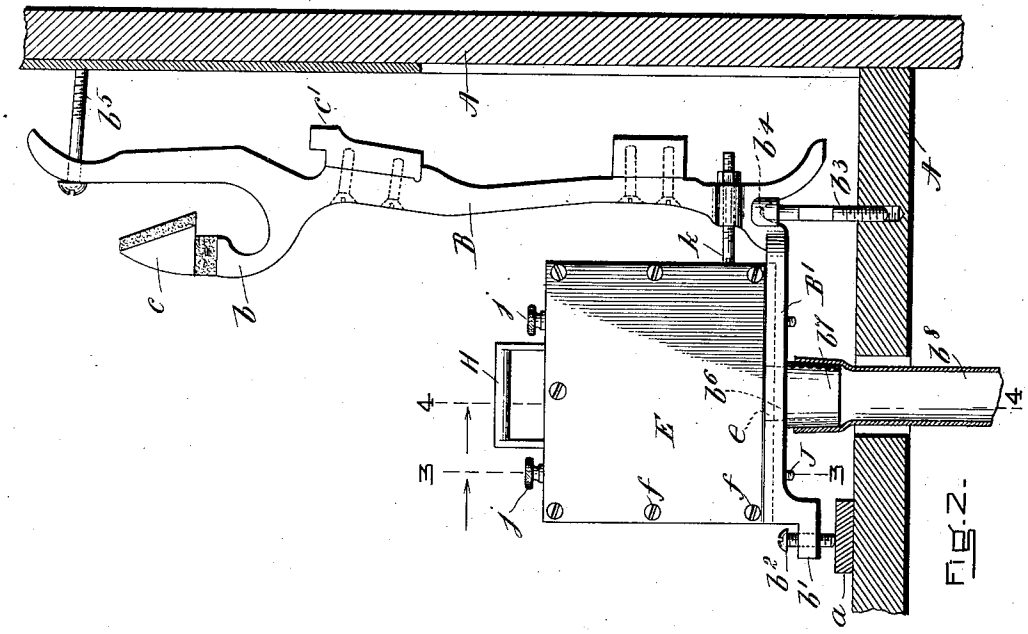

Fig. 2.

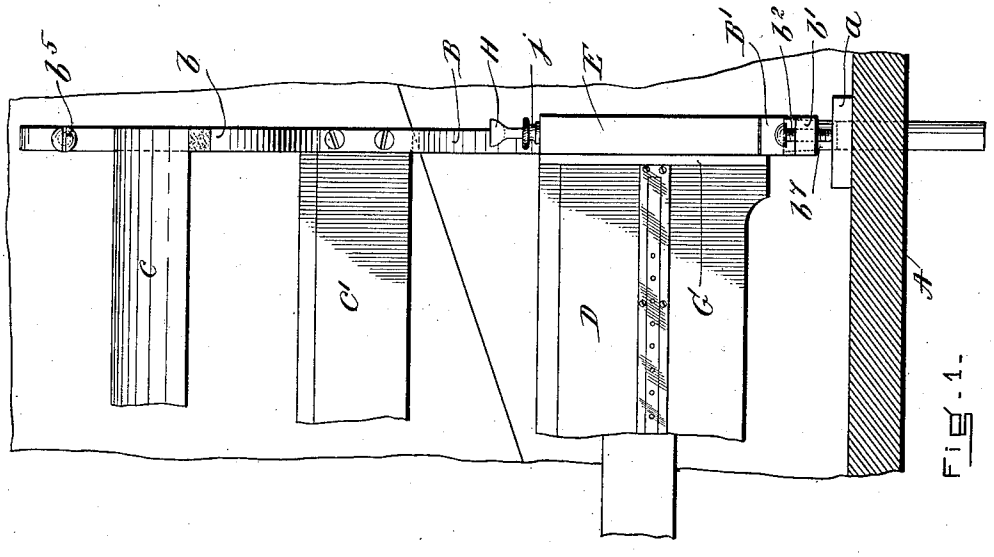

Fig. 1.

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Fig. 4.

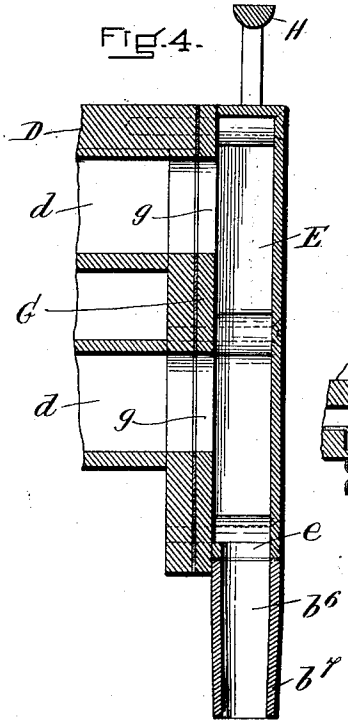


Fig. 3.

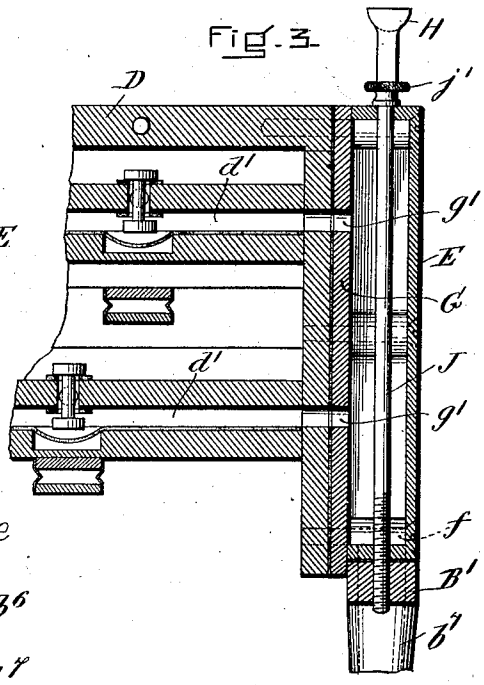


Fig. 5.

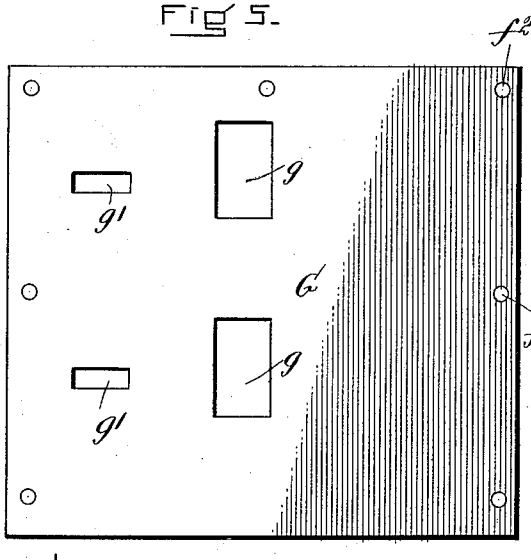
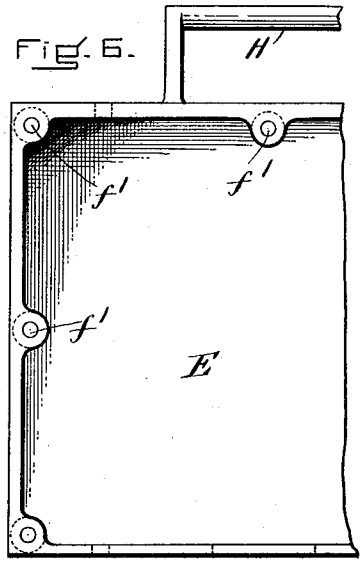


Fig. 6.



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UNITED STATES PATENT OFFICE.

WALTER R. CRIPPEN, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO VOSE & SONS PIANO COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

ACTION-BRACKET AND WIND-BOX FOR PLAYER-PIANOS.

1,025,183. Specification of Letters Patent. Patented May 7, 1912.

Application filed June 14, 1911. Serial No. 633,145.

To all whom it may concern:

Be it known that I, WALTER R. CRIPPEN, a citizen of the United States, and resident of Newton, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Action-Brackets and Wind-Boxes for Player-Pianos, of which the following is a specification.

This invention relates to pneumatic player pianos, and its object is to provide certain improvements in the brackets for supporting the pneumatic player action and the piano action in the casing, and also to provide a certain new and improved construction of wind boxes for supporting the pneumatic action on said action bracket, and furnishing wind ways between the pumping apparatus and the pneumatic action.

Heretofore, it has been the practice to mount the piano action and pneumatic action on separate brackets in the piano casing. If the piano was moved or jarred it was almost inevitable that the two actions should be jarred out of their proper relative adjustment. Furthermore, the pneumatic action has hitherto been mounted in the casing in such ways that it has required substantial dismantling of parts to remove the pneumatic action from the casing, and a corresponding assembling of parts to place the pneumatic action in the casing.

The principal objects of the present invention are to overcome these disadvantages and provide a single action bracket for both the piano action and the pneumatic action, so that their proper relative adjustment will be at all times assured; and to improve the devices for supporting the pneumatic action on the brackets and connecting the action with the pumping apparatus.

In the accompanying drawings which illustrate the invention,—Figure 1 is a front view of my improved action bracket, showing portions of the piano casing, and portions of the piano action and of the pneumatic player action; Fig. 2 is a side view of the parts shown in Fig. 1; Fig. 3 is a sectional view, enlarged, through my new wind box and the end of the player action on line 3—3 of Fig. 2; Fig. 4 is a sectional view, enlarged, on line 4—4 of Fig. 2; Fig. 5 is an elevation of the end plate between the player action and the wind box; and Fig. 6 is an interior elevation of the wind box, partly broken away.

Referring to the drawings, A represents the casing of an upright piano, the horizontal part of the casing A (Figs. 1 and 2) constituting the usual key-bed of the instrument. My new action bracket in the form herein shown, consists of an upright arm B, and a horizontal arm B′, cast in a single piece of metal so that the two arms are very rigid. The upright arm B is made with a branch b, and carries the piano action, which may be of usual construction, and of which only cross bars c and c' of the frame are shown. The horizontal arm B′ carries the pneumatic player action of which the casing is shown at D. The bracket is supported at its forward end by an adjustable screw b^2 which passes through the dropped portion or foot b' of the arm B′, and bears on a block a resting on the piano casing. At its rear part the bracket is supported by a screw b^3, the top of which extends into a socket b^4 in the bottom of the bracket. A screw b^5 holds the upper arm B of the bracket in position.

In the horizontal arm B′ of the bracket is a wind way or aperture b^6, which extends through a downwardly projecting tubular boss b^7. A pipe b^8 connects the wind way b^6 with the pumping apparatus (not shown).

Screwed to the end of the pneumatic action D is the action wind box E, which is of metal and is of the same general contour as the end of the action casing D, and of the same breadth as the lower arm B′ of the bracket. The lower wall of the wind box E is provided with a wind aperture e which registers with the wind way b^6 in the action bracket.

Between the wind box E and the pneumatic action D, is the plate G, which forms the inner wall or cover of said box and is provided with wind ways or openings g to the primary wind ways d of the pneumatic action, and openings g' to the secondary wind ways d' of the pneumatic action. The wind box E and plate G are securely fastened to the pneumatic action D by screws f extending through screw holes f' and f^2 in said wind box and plate. It will be understood that there is a similar bracket and similar wind box at each end of the pneumatic action. A handle H on the top of

each wind box E affords a convenient means for handling the pneumatic action and wind boxes, so that they may be applied to and removed from the action bracket as a single part. The wind boxes E rest on the horizontal parts of the action brackets at each end of the piano, and support the pneumatic action between them. A pair of long screws J passing through the wind box and into the bracket B′ secure the wind box in place. Screws J may be provided with knurled heads *j′* by which the screws may be manipulated by hand, so that the wind boxes and pneumatic action may be readily connected and disconnected.

To faciltate the easy and accurate adjustment of the wind boxes E on the bracket arms B′, the plate G extends downwardly to form a flange projecting over the side of bracket arm B′ as best shown in Figs. 1 and 3. This flange guides and holds the wind box against lateral movement, and an adjustable screw *k* mounted in the upright member B of the bracket serves as a stop against rearward movement of the action box. The pneumatic action and wind boxes therefore are merely set on the bracket arms B′ and shoved back until stopped by screws *k*, which may be correctly adjusted once for all, and the screws J are then set and hold the pneumatic action firmly in place.

With the foregoing device it will be seen that the same, rigid, integral action bracket supports both the piano action and the pneumatic action, and when once the two are brought to their proper relative adjustment, they will remain in adjustment, and no jarring of the instrument will throw them out of adjustment, as results when the pneumatic action and the piano action are carried by separate brackets. Furthermore, if the pneumatic action has to be removed for repair or cleaning, this may be done by simply unscrewing the screws J and lifting the whole structure out bodily by handles H; and when the pneumatic action is replaced it will automatically and necessarily come into the same position as before with relation to the piano action, without requiring further adjustment.

I claim:

1. In a pneumatic player piano, a piano action, a pneumatic player action, and a unitary action bracket supporting both of said actions and holding the same rigidly in their proper relative adjustment, said bracket being provided with a wind way therethrough communicating with the wind ways of the pneumatic action.

2. In a pneumatic player piano, a piano action, a pneumatic player action, and a unitary action bracket having an upright arm supporting said piano action, and a horizontal arm supporting said pneumatic action, said arms adapted to hold said actions rigidly in their proper relative adjustment, and said horizontal arm provided with a wind way communicating with the wind ways of the penumatic action.

3. In a pneumatic player piano, a piano action, a pneumatic player action, and a unitary action bracket having an upright arm supporting said piano action, and a horizontal arm supporting said pneumatic action, said arms adapted to hold said actions rigidly in their proper relative adjustment, said horizontal arm provided with a wind way communicating with the wind ways of the pneumatic action, and a tubular boss extending downwardly from said wind way through the horizontal arm, adapted to be connected with a suction pipe.

Signed by me at Boston, Massachusetts this 5th day of June, 1911.

WALTER R. CRIPPEN.

Witnesses:

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CHARLES D. WOODBERRY.