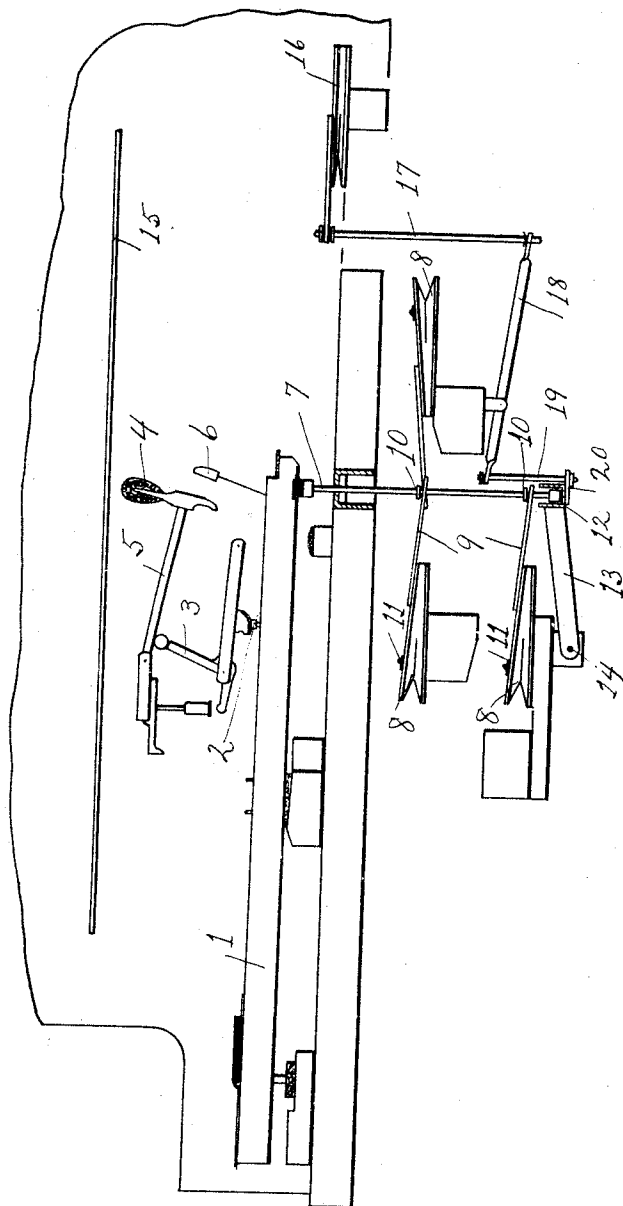


R. A. GALLY.
MUSIC PLAYER ACTION PIANISSIMO DEVICE.
APPLICATION FILED AUG. 14, 1917.

1,256,467.

Patented Feb. 12, 1918.
2 SHEETS—SHEET 2.

Fig. 2.



WITNESSES

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ROBERT A. GALLY, OF CINCINNATI, OHIO, ASSIGNOR TO THE BALDWIN COMPANY, OF CINCINNATI, OHIO.

MUSIC-PLAYER-ACTION PIANISSIMO DEVICE.

1,256,467.

Specification of Letters Patent. Patented Feb. 12, 1918.

Application filed August 14, 1917. Serial No. 186,228.

To all whom it may concern:

Be it known that I, ROBERT A. GALLY, a citizen of the United States, and residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Music-Player-Action Pianissimo Devices, of which the following is a specification.

It is very old in this art to move the hammers of a piano closer to the strings than the normal stroke distance by means of the hammer rail when it is desired to secure soft tones from the strokes of the hammers, which softer tones are aided by the shortened strokes, and various devices have been produced for taking up the lost motion of the action parts when the hammers are so moved to the shortened stroke distance, but no prior unitary means or means independent of the hammer rail have been known for taking up the lost motion of the strikers, stickers, etc., of a player action relative to and at the same time with the shortening of the hammer stroke distance. Such improvement is now set forth, particularly as to use in a player grand piano, although adaptable to upright pianos as well.

In the drawings Figure 1 is a view from the treble end of a grand piano with the case removed at that end to allow the showing of the keys and the principal parts of the piano action with the special pianissimo and lost motion devices, the parts being in position for the full stroke of the hammers; while Fig. 2 is a similar view of the principal parts when thrown to the short hammer stroke distance.

A key 1 is positioned in the usual relation to the various piano action parts which include a capstan 2, jack 3, and a hammer 4 having its shank 5 resting on the jack 3, while a back check 6 is carried by the rear end of the key 1 to catch and hold the hammer to close position at the end of a stroke, and between quickly repeated strokes, all which operate in the usual manner. The minor details of the action are not necessary to be shown, as they are well known, and would only complicate the drawing.

A sticker 7 is positioned under the key 1 and there are several rows of striker pneumatics 8 operatively connected to stickers 7 in any suitable manner, the detail herewith shown being that of the arrangement of player action striker pneumatics set forth

in applicant's separate application #184,355 filed August 3, 1917, and the application of H. E. Tower, #184,338 filed Aug. 3, 1917, wherein heel levers 9 are employed to actuate the stickers 7 by engaging with suitable units 10 or similar elements on the stickers 7. The broad right to the horizontal pneumatic and an extended heel lever actuating a vertical abstract is claimed in applicant's prior Patent #891,801, June 23, 1908, but has particular merit in the present use, aiding a perfect follow up of the pneumatics 8 to the rise of the stickers 7 when the said stickers 7 are raised by the pianissimo devices hereinafter described. An additional improvement of this follow up action of the striker pneumatics 8 is to add counterbalance weights 11 to the moving boards of the said pneumatics 7, thereby causing said boards to slightly drop and hold their levers 9 to close connection with the nuts 10 of the stickers 7 when the said stickers are raised by the pianissimo device lifter rail 12. These counterweights are a part of applicant's separate application #186,226, filed August 14, 1917.

The pianissimo device as herein set forth comprises a lifter rail 12 on which the set of stickers 7 are supported as their lower ends rest on the said lifter rail 12. The lifter rail 12 is swung on suitable arms or swing levers 13 pivoted by pivots 14 so that the said lifter rail 12 may be swung up or down and thereby raise or lower all the stickers 7 and the keys 1 and the piano action parts 2, 3, 4, 5, 6, so that when the rail 12 is swung upward the hammers 4 are brought close to the piano strings 15 for the shorter stroke and softer tone from the blow of the hammer on the string. As all the player action strikers 7 are then raised to close contact with and support, raise and level the rear of the keys 1, no lost motion is had from playing a note from a striker pneumatic 8, especially if the striker pneumatics 8 and their heel levers 9 are self leveling to the nuts 10 and stickers 7, particularly when the counterbalance weights 11 are added to the pneumatics 8, such counterbalance weights being the subject of claim in applicant's separate application #186,226 filed Aug. 14, 1917.

The lifter rail 12 may be operated by any manual or foot control, but is more useful when actuated by suitable expression pneu-

matics 16, of which there may be one, two
 or more accordingly as the scale of the ex-
 pression is single or divided. Any manner
 of connections may be employed from the
 5 said expression pneumatics 16 to the lifter
 rail 12, as by a sticker 17, reverse lever 18,
 pull rod 19 and the extension 20 on the rail
 12. The expression pneumatic 16 is shown
 conveniently placed in the space to the rear
 10 of the keyboard and above the same, being
 then well hidden by the usual case rim.

Many modifications may be made and yet
 be subject to,—

What I claim as my invention, which is:—

15 1. Hammers and movable members of a
 piano action, and several vertical stickers
 each disposed immediately beneath a verti-
 cally movable part of one said movable
 member; striker pneumatics and connections
 20 therefrom directly to the said stickers; and
 a single rail directly under the lower end
 of and supporting all the said single stick-
 ers, said rail adapted to be raised and low-
 ered together with the said stickers, ham-
 25 mers and vertically movable parts support-
 ed thereby and raised and lowered there-
 with; and means to raise and lower the said
 rail.

2. Manual keys and action parts there-
 30 with; vertical stickers disposed immediately
 beneath the ends of the said keys; striker
 pneumatics and connections therefrom to
 the said stickers; and a rail directly under
 and supporting all the said stickers, said
 35 rail adapted to be raised and lowered to-
 gether with the said stickers and keys sup-
 ported thereby and raised and lowered there-
 with, and swing levers to which the
 said rail is attached and on which it is
 40 adapted to swing in a vertical direction;
 and means to swing said swing levers and
 raise and lower said rail thereby.

3. Manual keys and action parts there-
 with; vertical stickers disposed immediately
 45 beneath the ends of the said keys; striker
 pneumatics and connections therefrom to
 the said stickers; and a rail directly under
 and supporting all the said stickers, said
 rail adapted to be raised and lowered to-
 50 gether with the said stickers and keys sup-

ported thereby and raised and lowered
 therewith; and means to raise and lower the
 said rail.

4. Manual keys and action parts support-
 ed thereon; vertical stickers disposed imme- 55
 diately beneath the ends of said keys;
 striker pneumatics and connections there-
 from to the said stickers; and a rail directly
 under and supporting all the said stickers,
 said rail adapted to be raised and lowered 60
 together with the said stickers and keys
 supported thereby and raised and lowered
 therewith; and means to raise and lower the
 said rail.

5. Manual keys and action parts there- 65
 with; vertical stickers disposed immediately
 beneath the ends of the said keys; striker
 pneumatics and connections therefrom to
 the said stickers; and a rail directly under
 and supporting all the said stickers, said 70
 rail adapted to be raised and lowered to-
 gether with the said stickers and keys sup-
 ported thereby and raised and lowered there-
 with, and swing levers to which the said
 rail is attached and on which it is adapted 75
 to swing in a vertical direction; and means
 to swing said swing levers and raise and
 lower said rail thereby.

6. Manual keys and action parts there-
 with; vertical stickers disposed immediately 80
 beneath the ends of the said keys; horizontal
 striker pneumatics having moving boards
 each hinged at one end of its pneumatic,
 and levers fixed to said moving boards and
 extended beyond the said hinges and the 85
 extended ends of the said levers engaging
 the said stickers; and a rail directly under
 and supporting all the said stickers, said
 rail adapted to be raised and lowered to-
 gether with the said stickers and keys sup- 90
 ported thereby and raised and lowered there-
 with; the said moving boards and levers
 adapted to follow up close connection with
 the said stickers as the said stickers are so
 raised and lowered; and means to raise and 95
 lower the said rail.

ROBT. A. GALLY.

Witnesses:

PAUL J. HENGGE,
 JOE BEYER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
 Washington, D. C."