R. A. GALLY.

MUSIC PLAYER CHESTS AND TUBES.

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1,101,691.

Patented June 30, 1914.

Fig. 1.

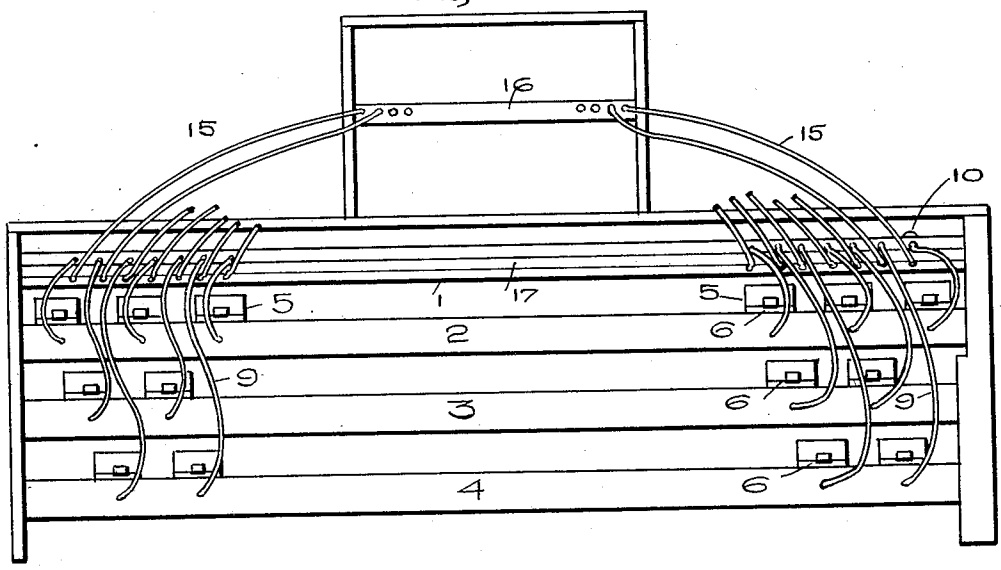


Fig. 2.

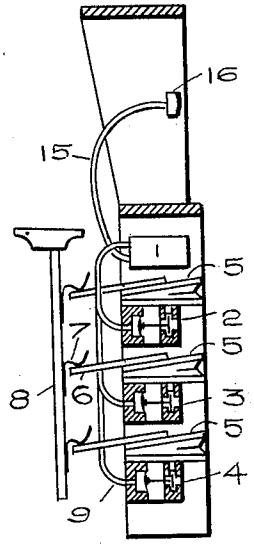
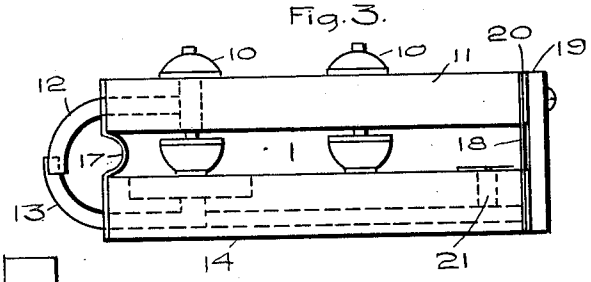


Fig. 3.



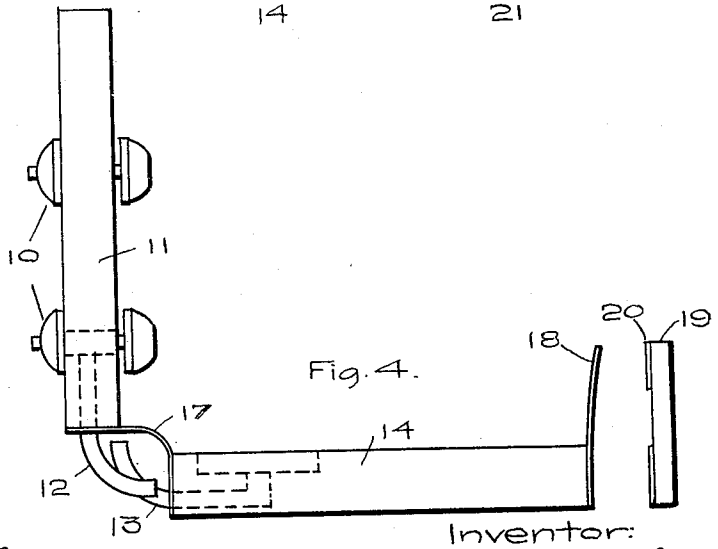


Fig. 4.

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UNITED STATES PATENT OFFICE.

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MUSIC-PLAYER CHESTS AND TUBES.

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To all whom it may concern:

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

The present invention shows a more compact form of tubing and chests and with easier access thereto than in prior structures.

In the drawings, Figure 1 is a rear view of a player action for the interior of a player piano, showing the tubes and chests and Fig. 2 is an end view of the same, both of about ⅛ scale; Fig. 3 is a full size view of the primary chest, and Fig. 4 the same chest thrown open.

A primary chest 1 controls three secondary chests 2, 3, and 4, to which secondary chests striker pneumatics 5 are attached. Striker fingers 6 are affixed to said striker pneumatics, and extended to the rear where they engage with lugs 7 or other suitable means on the piano action 8. Tubes 9 connect the valve device of each striker pneumatic 5 to its corresponding primary valve 10 of the upper board 11 of the primary chest 1, passing between fingers 6. Each tube 9 is attached to a nipple 12 in upper board 11, leading to its primary valve 10, and these nipples 12 of the upper board 11 are bent downward and diagonally between the lower row of nipples 13 in pouch board 14 of the primary chest 1. These nipples 13 of lower row are bent upwardly and diagonally between nipples 12 of the upper row. From lower nipples 13 connection is made by tubes 15 rising to tracker bar 16. The nipples 13 are slanted from each end of the series inwardly toward the tracker bar 16, and the nipples 12 are correspondingly slanted between them, the change of slants being made at such intermediate point of the whole series as best suits the easy and safe lines and curves of tubes 9 and 15. To aid the easy and safe lines and curves of tubes 9, the centers for the primary nipples and valves are set out of vertical alinement with those of the striker pneumatics 5 and the entry holes of tubes 9 thereto, preferably having the primary centers nearer to the middle of scale from each end than the centers of the striker pneumatics 6 and their tube entries, as shown by primary chest 1 in Fig. 1. The centers of nipples 12 and 13 are preferably placed one directly above the other so that the holes therefor will be on the longitudinal scale of centers corresponding with the valve holes and pouches of the primary chest, making easy laying out and boring, and very close spacing.

To have the two primary boards 11 and 14 sealed across their rear edges, and yet be able to open the boards when interior access is required, the seal 17 is made loose between the opposite edges of the boards, being curved in when the boards are held together in closed working position, thus allowing enough freedom to separate the boards sufficiently to clear nipples 12 and 13 from the opposed boards and each other when the boards are opened back like a hinge or book as in Fig. 4. The front seal 18 is attached at its lower part to the edge of pouch board 14, but is left free from upper board 11, so that it can be readily turned down for access to inside of the primary chest 1 when the binding cover 19 is unscrewed and removed. When cover 19 is screwed in place the packing leather 20 serves to squeeze the seal 18 smoothly to upper board 11, while the attached lower edge of seal 18 reduces by one-half the amount of air joint that a cap without seal would require, such lower edge attachment of the seal taking the place of a packed and screwed joint of a cap on said lower edge, which latter would require screws into pouch board 14 which has very little space between its various holes 21.

Various modifications may be made without departing from,—

What I claim as my invention

1. A player action having a primary chest comprising an upper and a lower horizontal board one above the other, and a row of bent nipples in the edge of each board at one side of said chest, the corresponding nipples at their entry into each board being vertically alined one to the other, each of the bent nipples of the upper row extending downwardly and diagonally between its related lower nipple and the next nipple of the lower row, and the bent nipples of the lower row extending upwardly and diagonally between the nipples of the upper row.

2. A player action having a primary chest comprising an upper and a lower horizontal board one above the other, and a row of bent nipples in the edge of each board

at one side of said chest, the corresponding nipples at their entry into each board being vertically alined one to the other, each of the bent nipples of the upper row extending downwardly and diagonally between its related lower nipple and the next nipple of the lower row, and the bent nipples of the lower row extending upwardly and diagonally between the nipples of the upper row, and continuing tubes attached to said nipples and extending above and below the primary chest, the ends of the upper and lower tubes on the nipples extending past each other in alternated overlapped diagonal arrangement.

3. In a player action: a primary chest having a lower row of nipples extending upwardly and diagonally between an adjacent upper row of nipples, and an upper row of nipples extended downwardly and diagonally between the lower row of nipples, said lower and upper nipples being each vertically one above another for the one valve action, secondary pneumatics below said primary chest, a tube from each said secondary pneumatic to its corresponding downwardly extending nipple of the upper row, and a tube from each upwardly extending nipple of the lower row to the tracker bar, the nipples of the primary-chest positioned nearer to the middle of said action than the entry position of the tubes to the corresponding secondary pneumatics.

4. A player action chest having two boards faced oppositely and having a space between the boards at one side of said chest at the edges of said boards, bent nipples in the said edge of said board, the nipples of each board extending toward the other board, and adjacent to the edges in their outer bent parts, and a flexible seal from said edge of one board to the said edge of the other board, said seal being of greater extent from one edge to the other than a straight line from edge to edge when said boards are in normal relative position.

5. A player action chest having two boards faced oppositely in parallel planes and having a space between the boards at one side of said chest at the edges of said boards, and a flexible seal from said edge of one board to the similar edge of the other board, said seal being of greater extent from one edge to the other than a straight line from edge to edge when said boards are in normal relative position.

6. A player action chest having two boards faced oppositely and having a space between the boards at one side of said chest at the edges of said boards, a flexible seal adhesively attached to one of said edges and normally extending across the similar edge of the opposite board and the space between but free of adhesion to the other board, and a removable binding cover attached over said flexible seal.

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