

UNITED STATES PATENT OFFICE.

HERSCHEL E. TOWER, OF CINCINNATI, OHIO, ASSIGNOR TO THE BALDWIN COMPANY,
OF CINCINNATI, OHIO.

PIANO-PLAYING PNEUMATIC ACTION.

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To all whom it may concern:

Be it known that I, HERSCHEL E. TOWER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Piano-Playing Pneumatic Actions, of which the following is a specification.

The object of my invention is to frame the shelves of the player action in such a manner as to make it solid, with very few packing joints and yet be easily taken apart in case of repair.

In the drawing Figure 1 is an end view of the player action without any seal on it, showing the ends of the shelves and how the blocks are fastened on to these shelves, also how the different units are held together by the bolts. Figure 2 is a front view of the player action framing. Figure 3 is a top view of the middle shelf taken along line A-B of Figure 2.

In building the player action it is always preferable to have as few packing joints as possible and these made up to withstand the shrinking and swelling of the wood caused by atmospheric conditions. It is also desirable to have the parts so joined as to be easy to take apart for repairs.

In the drawings the shelf boards 1 are held properly spaced from the shelf boards 2 by the blocks 3 at one end and the shelf blocks 4 at the other end. The shelves 1 and 2 are notched in at each end, so far from the first note in the shelf, to make the assembly uniform and always of a standard length so the blocks 3 and 4 cannot slide when being glued on.

The blocks 3, each have a service hole 5, so that when the shelves are stacked one on top of the other there will be a continuous air passage down through the action and through the base block 6. In assembling the different shelves together the middle shelf is placed on top of the bottom shelf and held in place by bolts 7, which bolts 7 slip in through slots 8 in the blocks 3 and 4 and the top shelf is joined to the middle shelf in the same way. In this way there are only two small pieces of wood to shrink and swell to cause leaks through the pack joints 9 whereas, if the screws were run through the two blocks 3 or 4 and through the shelves 1 or 2 and down into the complete shelf be-

low there would be so much wood that there would be trouble from loose joints under different atmospheric changes.

By having the bolts 7 slip into slots 8 of the blocks 3 and 4 it will be very easy to take any complete shelf out by itself for any repairs that may be needed to any of the different valves or pouches contained in the shelves.

Although ordinary wood screws can be made to run through the bottom blocks 3 or 4 of any shelf into the top blocks 3 or 4 of another shelf it is not as preferable as the bolt or a clamp, and yet it will come under what I claim as my invention.

What I claim as my invention is:

1. In a piano playing pneumatic action, a plurality of shelf units, each said shelf unit having spacing blocks on top and bottom, and each said unit joined together by binding means through the bottom spacing block of one unit and the top spacing block of another unit.

2. In a piano playing pneumatic action, a plurality of shelf units, each said shelf unit having spacing blocks on top and bottom, said spacing blocks having slots therein, and each said unit joined together by binding means through the bottom spacing block of one unit and the top spacing block of another unit.

3. In a piano playing pneumatic action, a plurality of shelf units, each said shelf unit having spacing blocks on top and bottom, said spacing blocks being of a greater dimension across said units than the shelf boards of said units, and each said unit joined together by binding means through the bottom spacing block of one unit and the top spacing block of another unit.

4. In a piano playing pneumatic action, a plurality of shelf units, each said shelf unit having spacing blocks on top and bottom, said spacing blocks having slots therein, and each said unit joined together by binding means through the bottom spacing block of one unit and the top spacing block of another unit, said binding means being located in said slots in said spacing blocks.

HERSCHEL E. TOWER.

Witnesses:

PAUL J. HENGGE,
NORMA HARRIS.