

J. E. PRANTE.  
SELF PLAYING ORGAN AND PNEUMATIC ACTION THEREFOR.

APPLICATION FILED JULY 7, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

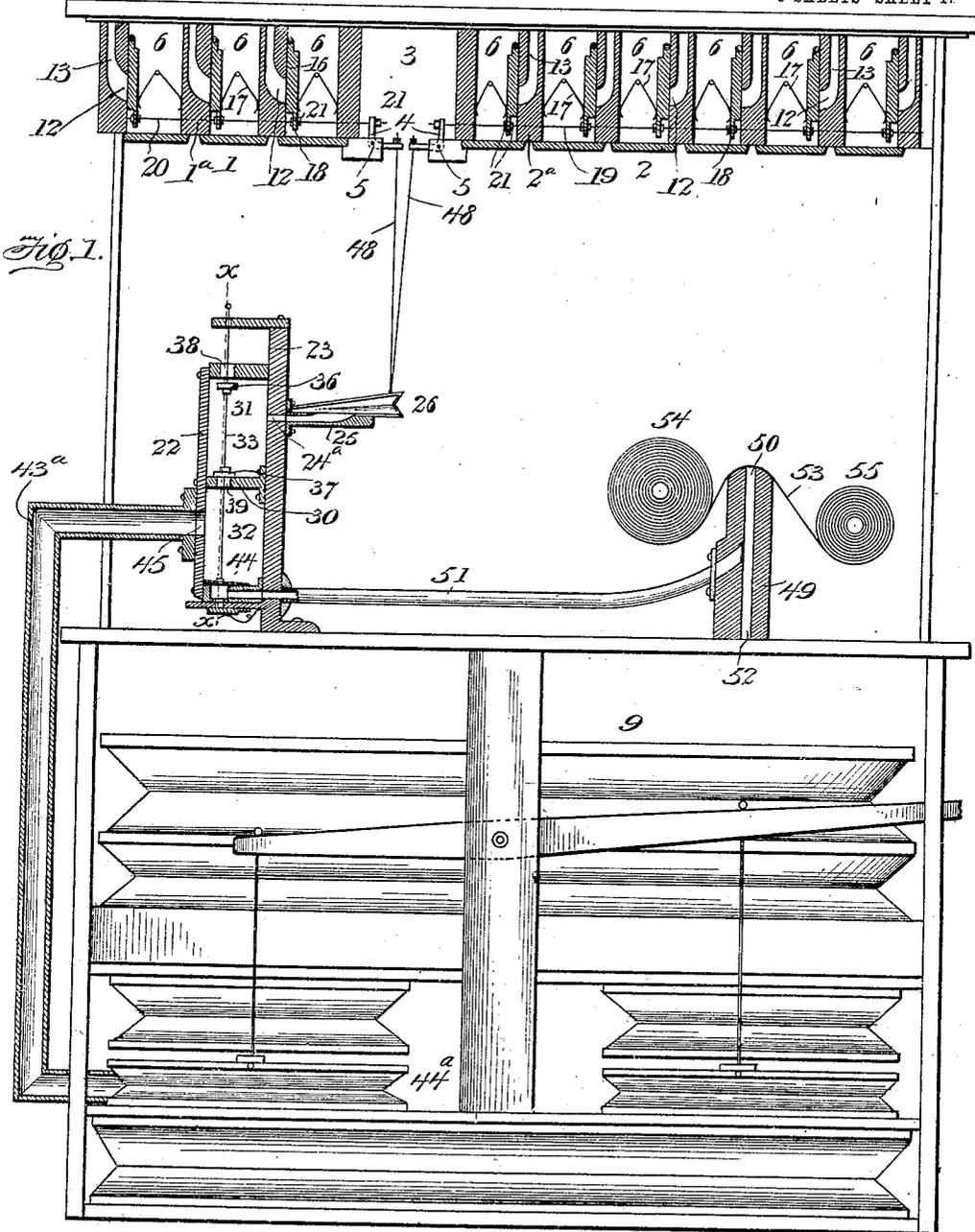


Fig. 1.

Inventor

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Witnesses  
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No. 733,917.

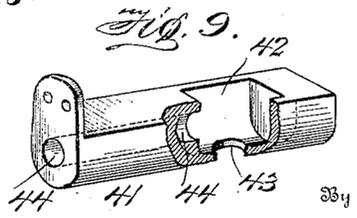
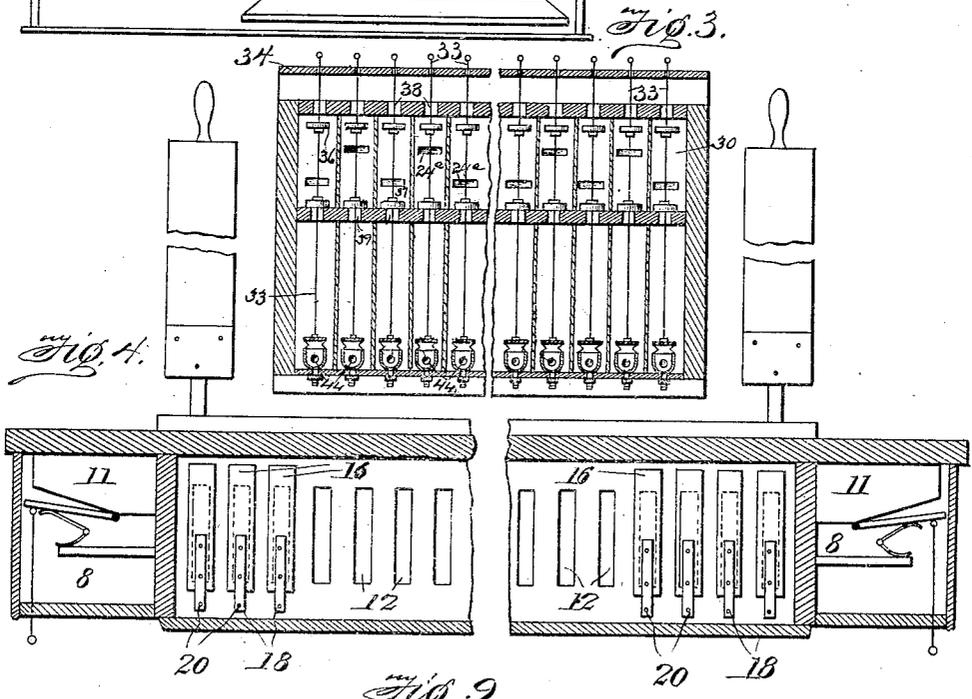
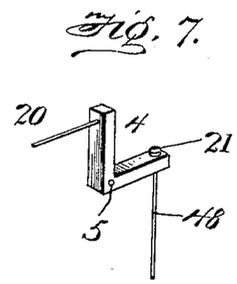
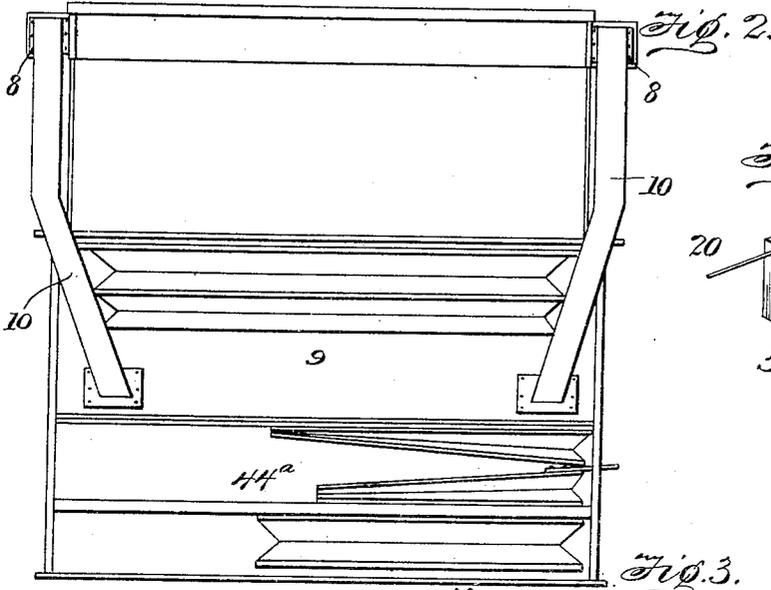
PATENTED JULY 14, 1903.

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3 SHEETS—SHEET 2.



Witnesses  
*Fenton Stolt*  
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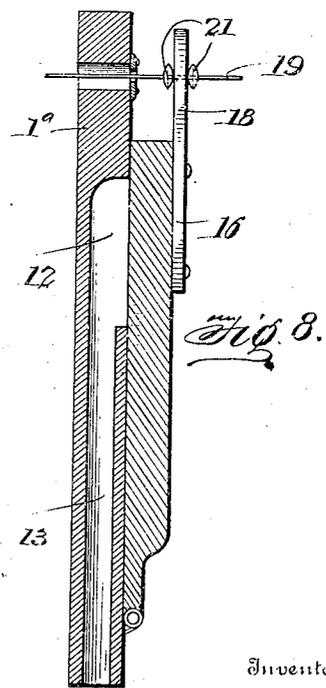
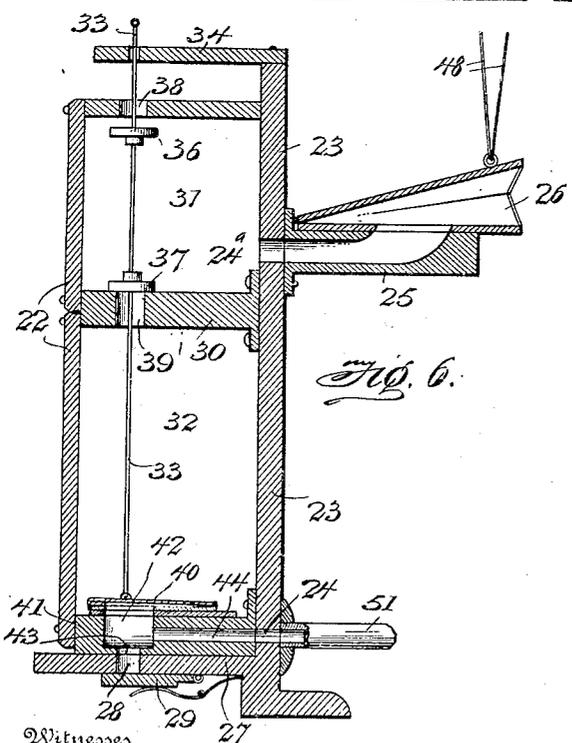
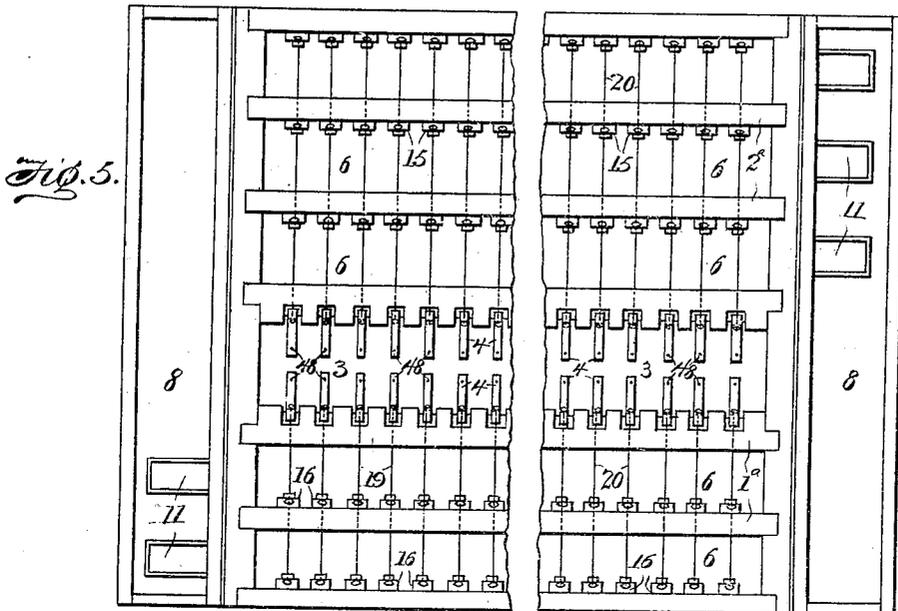
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3 SHEETS—SHEET 3.



Witnesses  
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# UNITED STATES PATENT OFFICE.

JOSEPH E. PRANTE, OF CHILlicothe, OHIO, ASSIGNOR OF TWO-THIRDS TO  
JOHN M. PATRIDGE AND HENRY HOLBERG, OF WELLSTON, OHIO.

## SELF-PLAYING ORGAN AND PNEUMATIC-ACTION THEREFOR.

**SPECIFICATION** forming part of Letters Patent No. 733,917, dated July 14, 1903.

Application filed July 7, 1902. Serial No. 114,557. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH E. PRANTE, a citizen of the United States, residing at Chillicothe, in the county of Ross and State of Ohio, have invented certain new and useful Improvements in Self-Playing Organs and Pneumatic-Actions Therefor, of which the following is a specification.

This invention relates to the class of self-operating musical instruments, particularly pneumatic-organs; and the object of the invention is to provide an improved pneumatic-action for pipe-organs, and especially to devise a novel and peculiar construction, arrangement, and combination of the parts thereof.

A further object of the invention is to provide improved means for separating the wind-chest into individual chest with back and front compartments, whereby the bass and treble chests are made separate and distinct, and to provide such connections between the compartments and the pneumatics that an automatic operation is effected.

A still further object of the invention is to provide novel means for adjusting the pipe-valves whereby they admit air direct to the pipes, an automatic pneumatic valve-lift having a dust-receptacle, and an improved tracker-board having downwardly-projecting dust-receiving cells.

Various other special features in the actuating mechanism are employed to produce many improved results, which will be more particularly set forth in the specification and pointed out in the claims to follow.

In the accompanying drawings, forming part of this application, Figure 1 is a cross-section without the casing with the pipes removed. Fig. 2 is a rear view of the several bellows and air connections to the wind-chests. Fig. 3 is a section on the rim X X, Fig. 1, partly broken away. Fig. 4 is a longitudinal section of one of the air-chambers or individual wind-chests, partly broken away and showing only part of the cell-valves. Fig. 5 is an inverted plan view of the wind-chests, partly broken away. Fig. 6 is a detail vertical section of one of the pneumatics.

Fig. 7 is a perspective view of one of the bell-crank levers with its rods in position, partly broken away. Fig. 8 is a detail cross-section of one of the air-cells and its valves. Fig. 9 is a perspective view of one of the pneumatic dust-chambers.

The same numeral references denote the same parts throughout the several views of the drawings.

The general appearance of my organ is substantially the same as those of ordinary make when viewed from the exterior, the casing and ornamentation may be of any desired effect, and the pipes are of the usual construction and connection to the air-cells. The music-paper rolls or cylinders are of the usual type and location, and the size, shape, and material of the several parts may be such as are most suitable for producing the best results. The bass wind-chest 1 and the treble wind-chest 2 are separated by an interval or space 3, in which space are operated bell-crank levers 4, pivoted or fulcrumed at 5.

The bass and treble wind-chests 1 and 2, respectively, are divided by partitions 1<sup>a</sup> and 2<sup>a</sup> into a series of air-chambers 6, which are supplied with air from boxes 8, the latter being connected to the feed-bellows 9 by air-flues 10. Air is admitted to the chambers 6 by independent valves 11 of the boxes 8. Air-cells 12 lead the air from the chambers 6 by way of throats 13 in the partitions 1<sup>a</sup> and 2<sup>a</sup> to the music-pipes. The air to these cells is controlled by valves 15 and 16, having closing-springs 17 and pendants 18. Each set or line of the treble-valves 15 is connected and operated together by tracker rods or wires 19, and the bass-valves 16 are likewise connected and operated together by similar trackers 20. These trackers 19 and 20 extend through and are secured to the pendants 18 and to the bell-crank levers by adjusting-buttons 21.

The pneumatic-action, of which there is one for each air-chamber, located at the rear of the latter, and all being alike only one will be herein described in detail. It consists of a casing having a back 22, a front 23, having air-ducts 24 and 24<sup>a</sup>, and a hollow air-stem 25,

supporting and communicating with a bellows 26, a bottom 27, having a dust-discharge aperture 28, controlled by a spring-valve 29, a partition 30, dividing the casing into upper and lower air-cylinders 31 and 32, respectively, a valve stem or rod 33, working through a hanger 34, upon which are secured valves 36 and 37, working in said separate air-chambers to open and close valveways 38 and 39, and a bellows 40, connected to and operating the valve stem or rod 33. Secured within the pneumatic-casing and upon the bottom thereof is a block 41, having communication with the bellows 40 through a dust receptacle or chamber 42, having a bottom opening 43 in communication with the discharge-aperture 28, and an air-channel 44, reaching from the chamber 42 to the air-duct 24. An air-pipe 43<sup>a</sup> carries air to a vacuum-bellows 44<sup>a</sup> through an opening 45 in the back 22 of the casing from the cylinder 32 to operate the bellows 40 and bellows 26.

The connection between the pneumatic-action and the valve-trackers consists of bell-crank levers 4, pivoted or fulcrumed at 5, and through one arm of which is adjustably attached trackers 19 and 20 by the buttons 21. To the other lever-arm is secured a connecting-rod 48, attached to the bellows 26, so that the latter works one line of each of the set of valves 15 and 16.

The tracker-board 49 has air-ducts 50, to which are connected air-pipes 51 in communication with the air-ducts 24 of the pneumatics, and the tracker-board is provided with dust-cells 52 below the point of connection between said pipes and the board to collect dust or foreign matter instead of having it enter the said pipes. Should such matter escape into the pipes, the same will be collected in the dust-chamber 42, whence it is removed through the valves 29. The perforated music-paper 53 is operated in the usual manner over the tracker-board by the rollers 54 and 55.

The operation is as follows: Supposing all the tracker-board ducts 50 to be closed by the non-perforated portion of the paper and all the bellows 40 are closed, which closes valves 37 and opens valves 36 and bellows 26, when a perforation of the music-paper passes over

a duct in the tracker-board the air passes through a pipe 51, opening a bellows 40, which lifts the valve-stem and opens valves 37, simultaneously closing valve 36. This action closes the bellows 26 and pulls the connecting-rods 48 downwardly and operates the bell-crank levers to work the trackers and open the valves 15 and 16.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a pneumatic for organs having a casing, of a block secured in the casing in communication with the pneumatic and having a dust-chamber, an air-channel extending from the chamber through the block, and a dust-discharge opening from the bottom of the chamber.

2. The combination, with the pneumatic having a casing, a hollow stem projecting from the casing, a pneumatic secured on the said stem in communication with the latter, and a spring-valve hinged to the bottom of the casing, of a block secured within the casing and having a dust-chamber discharging through the valve, and an air-channel leading from said chamber through the casing, a pneumatic secured on the block in communication with the dust-chamber, and the rod having valves and attached to the latter pneumatic.

3. The combination, with the wind-chests divided into a series of air-chambers and separated by an interval or space, bell-crank levers fulcrumed to the chest-casings and operated in said space, the partitions of said chambers having a cell and a throat leading therefrom, spring-controlled valves hinged to the partitions, and tracker-rods connecting the valves with the bell-crank levers, of the pneumatics having hollow stem projections, bellows held by the projections and in communication therewith, and the rods connecting the bellows with the bell-crank levers.

In witness whereof I hereunto set my hand in the presence of two witnesses.

JOSEPH E. PRANTE.

Witnesses:

E. B. BINGHAM,  
J. M. PATRIDGE.