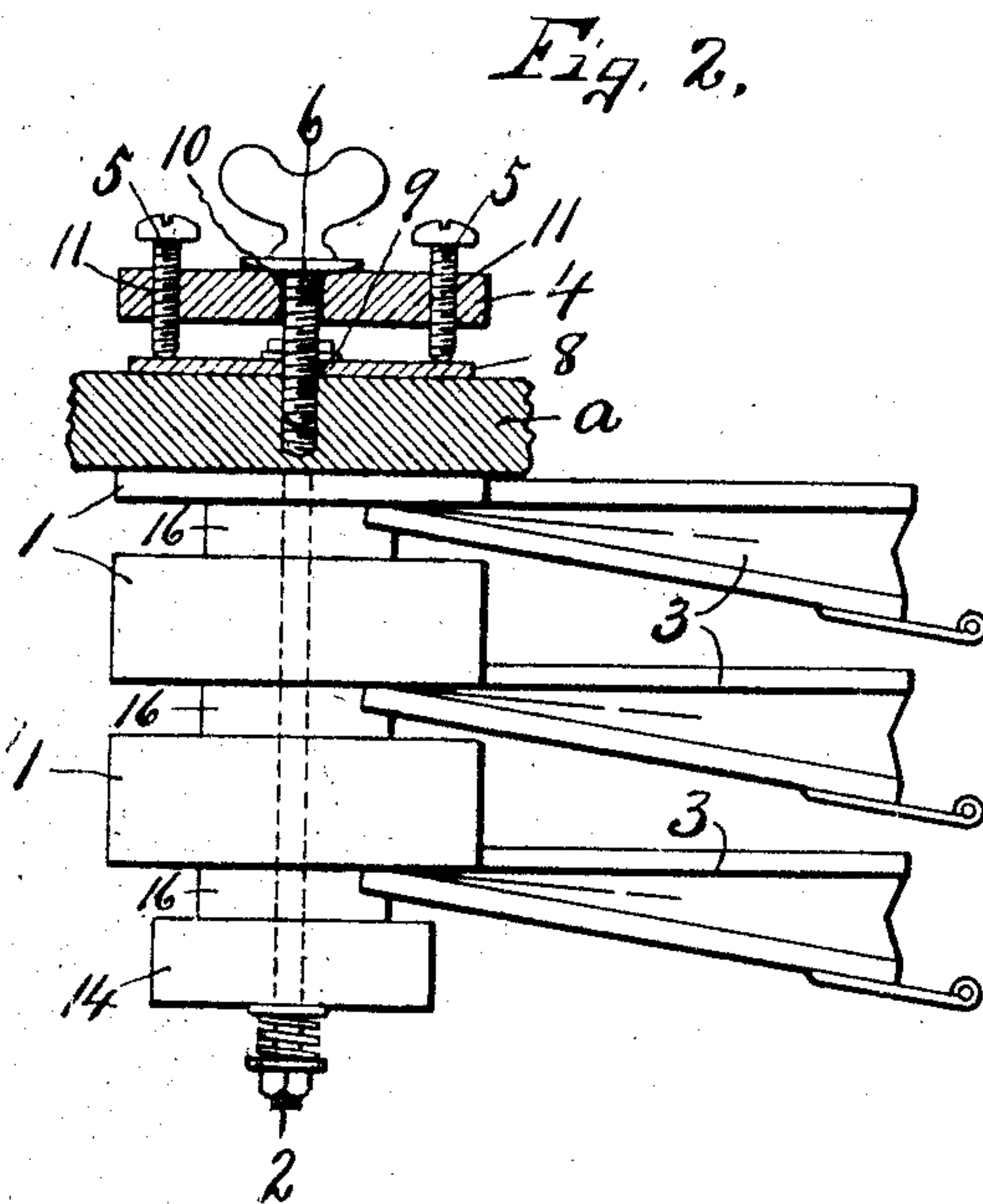
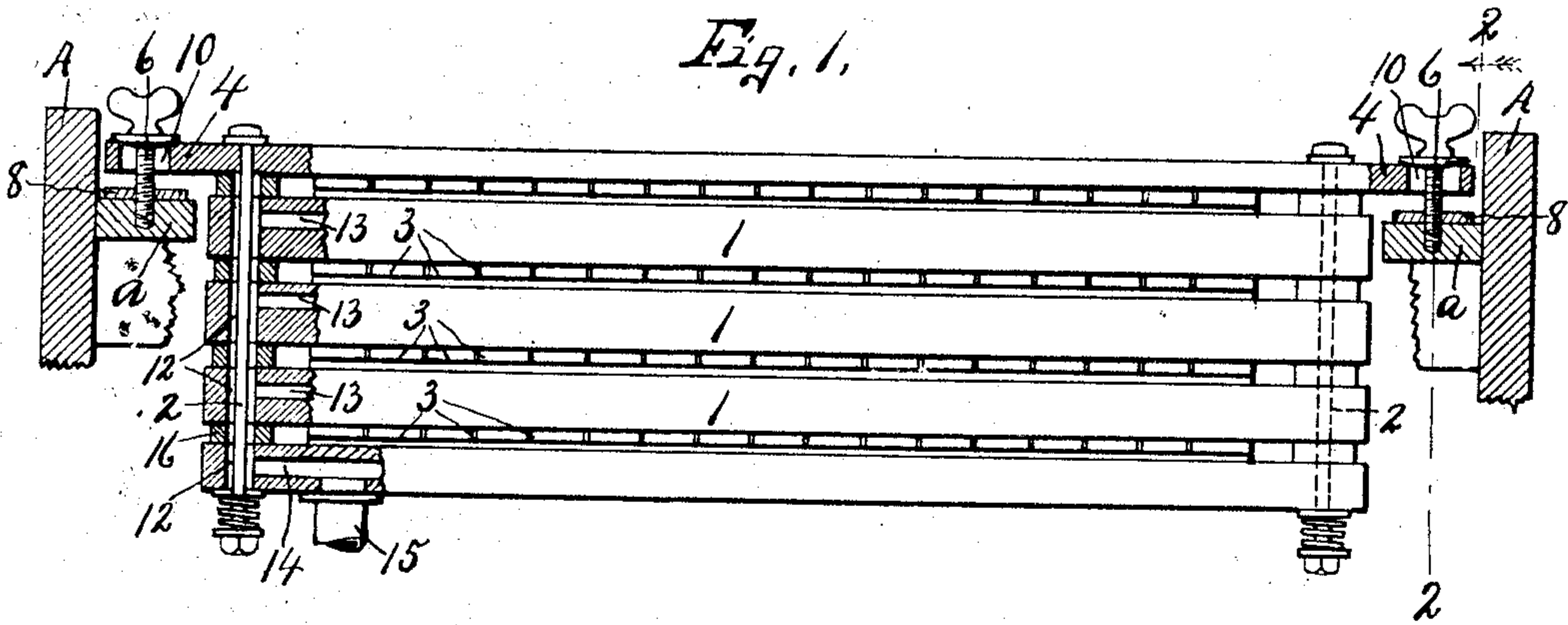


No. 875,656.

PATENTED DEC. 31, 1907.

L. B. DOMAN.
SELF PLAYING MUSICAL INSTRUMENT
APPLICATION FILED MAR. 13, 1906.



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LEWIS B. DOMAN, OF ELBRIDGE, NEW YORK.

SELF-PLAYING MUSICAL INSTRUMENT.

No. 875,656.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed March 13, 1906. Serial No. 305,763.

To all whom it may concern:

Be it known that I, LEWIS B. DOMAN, of Elbridge, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Self-Playing Musical Instruments, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to improvements in pneumatic self-playing musical instruments in which a series of pneumatic-sound producing devices, representing individual notes, are adapted to be brought into co-active re-
15 lation with corresponding parts of the piano action for actuating the latter. In this class of musical instruments, it is customary to construct the several mechanisms for performing functions in different parts of the
20 factory, or by different manufacturers who make a specialty of manufacturing a specific mechanism. This is particularly true in the manufacture of what is commonly known as the "pneumatic actions" in which
25 the pneumatics are permanently associated with one or more wind chests or valve shelves containing a group of primary pneumatics and a corresponding number of valves for controlling the action of the sound-
30 producing pneumatics, and in order that the entire pneumatic action, as a unit, may be easily and quickly placed in operative position without the employment of especially
35 skilled labor, I have provided means for a limited adjustment of the action so as to bring the individual pneumatics into proper relation with the digital parts of the piano action with which such pneumatics co-act.

40 The essential object, therefore, of my present invention is to provide means whereby the entire pneumatic action may be removably secured in the piano or in a separate player, as the case may be, and adjusted longitudinally and transversely to bring the
45 sound producing pneumatics of the action into exact operative relation with the digital parts of the piano action with which such pneumatics co-act.

50 In the drawings—Figure 1 is a front elevation, partly in section, of a pneumatic action, and portions of the side pieces of the case, in which the action is supported. Fig.

2 is an enlarged sectional view taken on line 2—2, Fig. 1.

In order to demonstrate the practicability
55 of my invention, I have shown in section portions of the side-pieces—A—of a case of a piano or separate player, each of said side pieces being provided with an inwardly projecting ledge—a—for receiving and support-
60 ing a pneumatic action, comprising in this instance, a series of valve-shelves—1—which are clamped together by suitable bolts—2—and are each provided with a group
of pneumatics—3—communicating with
65 their respective valve shelves in any well known manner, not necessary to herein illustrate or describe.

As shown in the drawings, the valve-
70 shelves or wind-chests—1—and pneumatics—3—constitute a unitary structure forming an article of manufacture, having opposite longitudinal projecting arms—4—which preferably overhang the ledges—a—for receiving suitable adjusting screws—5—and
75 clamping screws—6—. Each of the ledges—a—is provided with a metal bearing plate—8—having a threaded aperture—9—for receiving the threaded end of the clamping
80 screw—6—which is passed through an elongated slot—10—in the adjacent arm—4—of the pneumatic action.

I preferably provide each supporting arm—4—of the pneumatic action with a pair of
adjusting screws—5—located at opposite
85 sides of the clamping screws—6—and engaged with threaded apertures—11—in the arms—4—, said adjusting screws—5—having their lower ends bearing upon the upper face of the bearing plate—8—so that
90 the entire pneumatic action is supported by the adjusting screws—5—resting upon the plates—8—and is held in this adjusted position by the clamping screws—6—.

95 It is now obvious that by supporting each end of the action upon a pair of adjusting screws resting upon the bearing plate—8—of the ledge—a—, the entire series of valve shelves and their pneumatics may be ad-
100 justed vertically, longitudinally and tilted transversely, or such action may be tilted slightly either longitudinally or transversely by manipulating the adjusting screws—5—so as to bring the operating parts of the pneu-

matics —3— into proper relation with the digital parts of the piano action with which they co-act, after which the entire pneumatic action may be securely clamped in its adjusted position by the clamping screws —6—.

The slots —10— through which the clamping bolts —6— pass are sufficiently large transversely and longitudinally to allow limited longitudinal adjustment, and also transverse tilting movement of the pneumatic action and at the same time the entire action may be easily removed by simply unscrewing the clamping screws —6— from engagement with the plates —8—, whereupon such action may be lifted from the supporting ledges —A—.

In placing the pneumatic action in operative position it is simply necessary to bring the arms —4— over the ledges —a— so that the slots —10— register with the threaded apertures —9—, and the lower ends of the adjusting screws —5— rest upon the top face of the bearing plate —8—, after which the clamps —6— are screwed into the apertures —9— to hold the action approximately in its proper position, whereupon the entire action may be moved lengthwise a limited distance to bring the pneumatics —3— into proper longitudinal adjustment with reference to the parts upon which they co-act, and by manipulating the screws —5— the entire action may be tilted transversely so as to bring the pneumatics —3— into the desired vertical position with reference to the parts acted upon thereby, and when said pneumatics are brought to the desired position the entire pneumatic action may be clamped in place by the clamping screws —6— which are formed with suitable shoulders bearing upon the top faces of the arms —4—. These arms —4— are rigidly attached to the pneumatic action, preferably by the bolts —2— by which the valve shelves are secured together, and the pneumatics —3— are also secured to the shelves in any desired manner, not necessary to herein specifically illustrate or describe.

I preferably employ a series of separable valve shelves —1— arranged one above the other, and provided with registering windways —12— at one end communicating with exhaust chambers 13— and connected to a chamber 14—, which in turn, is connected by a conduit —15— to any suitable wind-inducing device not shown. Each shelf contains a group of primary pneumatics and a corresponding number of valves similar to those set forth in my application Serial No. 109,692, May 31, 1902, but not necessary to herein illustrate and describe. The separable shelves —1— are held apart by intervening spacing blocks —16— having aper-

tures or wind-ways receiving the bolts —2—. The exact manner of clamping the valve shelves together is, however, immaterial in my present application.

What I claim:

1. In a self-playing musical instrument, a pneumatic action comprising a series of pneumatics and a support therefor, and means for adjusting said pneumatics longitudinally and tilting them transversely.

2. In a self-playing musical instrument, the combination with a case, of a pneumatic action mounted in the case, means for tilting the action transversely, and additional means for holding it in its adjusted position.

3. In a self-playing musical instrument, a pneumatic action comprising a valve shelf and a series of pneumatics rigidly secured thereto, longitudinally projecting arms rigidly secured to the shelf, supporting ledges for said arms, adjusting screws engaging said ledges and arms, and means for clamping the arms to the ledges.

4. In a self-playing musical instrument, in combination with opposite end ledges of a piano case, arms overhanging said ledges, and means for adjusting said arms vertically, a series of separable valve shelves arranged one above the other below said arms and provided with registering wind ports, and clamping bolts passed through the arms and through the opposite ends of the shelves for securing said shelves together and to said arms.

5. In a self-playing musical instrument, a pneumatic action comprising a wind chest or valve-shelf, and a series of pneumatics rigidly secured thereto, supporting ledges at the ends of the action, a pair of adjusting screws on each end of the action resting upon said ledges, and means for clamping the action to said ledges.

6. In a self-playing musical instrument, a pneumatic action comprising a wind chest or valve-shelf, and a series of pneumatics rigidly mounted thereon, said action being tiltable longitudinally and transversely, and means for securing the action in its adjusted position.

7. In a self-playing musical instrument, in combination with a piano case a series of separable valve shelves supported one above the other and provided with registering wind ports, separate clamping devices passed through the opposite ends of said shelves for clamping them together, supports on said case at the ends of the shelves and adjustable connections between the opposite ends of said shelves and said supports whereby the shelves may be adjusted vertically and tilted transversely relatively to the supports.

8. In a self-playing musical instrument, in combination with a piano case a series of

separable valve shelves arranged one above
the other and provided with registering wind
ports, supporting ledges on the case at the
opposite ends of said shelves, means for
5 clamping said shelves together and separate
connections between the opposite ends of
the shelves and said supports including sepa-
rate adjusting devices whereby the shelves

may be adjusted vertically and tilted trans-
versely.

In witness whereof I have hereunto set my
hand this 1st day of March 1906.

LEWIS B. DOMAN.

Witnesses:

NETTIE A. BIBBENS,
M. E. ELLIOTT.