

A. J. HOBART.
VALVE FOR PNEUMATIC PIANO ACTIONS AND SIMILAR DEVICES.
APPLICATION FILED MAY 16, 1910.

985,033.

Patented Feb. 21, 1911.

Fig. 1.

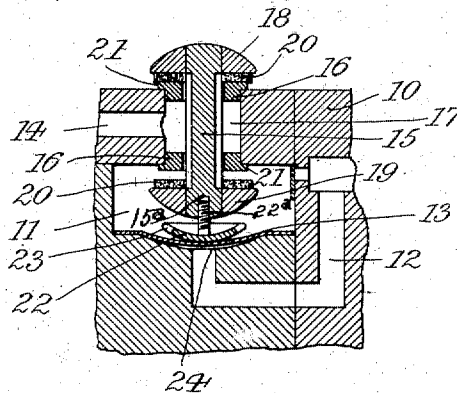


Fig. 2.

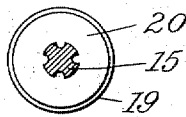


Fig. 3.

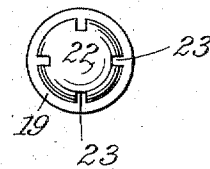
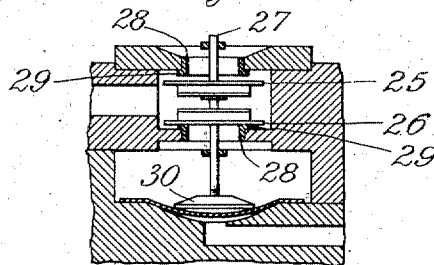


Fig. 4.



WITNESSES

Katherine Koch
Daniel Holmgren

INVENTOR

Adam J. Hobart,

BY

Brisson & Zumpfer
ATTORNEYS

UNITED STATES PATENT OFFICE.

ADAM J. HOBART, OF ST. JOHNSVILLE, NEW YORK, ASSIGNOR TO F. ENGELHARDT & SONS, OF ST. JOHNSVILLE, NEW YORK.

VALVE FOR PNEUMATIC PIANO-ACTIONS AND SIMILAR DEVICES.

985,033.

Specification of Letters Patent. Patented Feb. 21, 1911.

Original application filed January 31, 1910, Serial No. 541,019. Divided and this application filed May 16, 1910. Serial No. 561,568.

To all whom it may concern:

Be it known that I, ADAM J. HOBART, a citizen of the United States, residing at St. Johnsville, county of Montgomery, State of New York, have invented new and useful Improvements in Valves for Pneumatic Piano-Actions and Similar Devices, of which the following is a specification.

This invention relates to a valve of novel construction for the pneumatic actions of pianos and similar musical instruments, the present application being a division of a prior application filed by me January 31st, 1910 under Serial Number 541,019.

The valve is of simple construction, effects an air tight closure and is not apt to stick to its seat, so that leakage is avoided and a free play of the valve is insured.

In the accompanying drawing: Figure 1 is a longitudinal section of my improved valve and cooperating parts, Fig. 2 a cross section of the valve, Fig. 3 a bottom view thereof, and Fig. 4 a longitudinal section of a modification.

In Fig. 1 the invention is shown to be applied to a primary valve fitted in a valve box 10 having vacuum chamber 11 from which the air is permanently withdrawn. A duct 12 communicates with the tracker bar and when air is admitted into said duct through a perforation of the music sheet, a diaphragm 13 arranged intermediate vacuum chamber 11 and duct 12 is raised to correspondingly lift the primary valve and thus admit air to a duct 14.

The primary valve consists of a longitudinally fluted stem 15 guided in a pair of bushings 16 fitted into a corresponding bore 17 of block 10, said stem being fitted at its ends into valve-disks 18, 19 cushioned as at 20. Bushings 16 are preferably provided with flanges 21, the outer diameters of which are smaller than those of cushions 20, so that the edges of the latter extend beyond those of the former. In this way the frequently, more or less, rough rims of the cushions do not contact with the valve seats, so that undue leakage is avoided. At its

lower end, stem 15 is provided with a threaded axial socket 15^a into which is fitted the screw stem 22^a of a convex button 22. The latter is provided with peripheral notches 23 for engagement with a suitable gripping tool, so that by turning the button, its distance from valve-disk 19 may be adjusted. Button 22 rests upon diaphragm 13 secured to the bottom of chamber 11. Below button 22, block 10 is provided with a shallow recess 24 that permits a slight sagging of the diaphragm.

When the invention is applied to a secondary valve, the valve disks 25, 26 in lieu of being secured to the ends of valve stem 27 are set back some distance from said ends as illustrated in Fig. 4. The bushings 28 are provided with flanges 29 the outer diameter of which is less than that of the valve disks as already described in relation to Fig. 1. The button 30 is tapped for the engagement with the lower threaded end of valve stem 27 so that in this way the button may be readily adjusted.

I claim:

1. A device of the character described, comprising an axially fluted valve stem having a threaded axial socket, a pair of cushioned disks secured to the ends of said stem, and a notched button in screw threaded engagement with the stem socket.

2. A device of the character described comprising a perforated valve box having a vacuum chamber and an air duct, a pair of flanged bushings fitted into the box perforations, an axially fluted stem movable in the bushings, cushioned disks secured to the stem and adapted to engage the bushing-flanges, a diaphragm arranged within the valve box intermediate vacuum chamber and air duct, and a notched button in screw threaded engagement with the stem socket and resting upon the diaphragm.

ADAM J. HOBART.

Witnesses:

W. L. ENGELHARDT
GEORGE H. HALL.