

C. E. PETERSON.  
 PNEUMATIC PIANO PLAYER.  
 APPLICATION FILED MAY 28, 1919.

1,346,246.

Patented July 13, 1920.

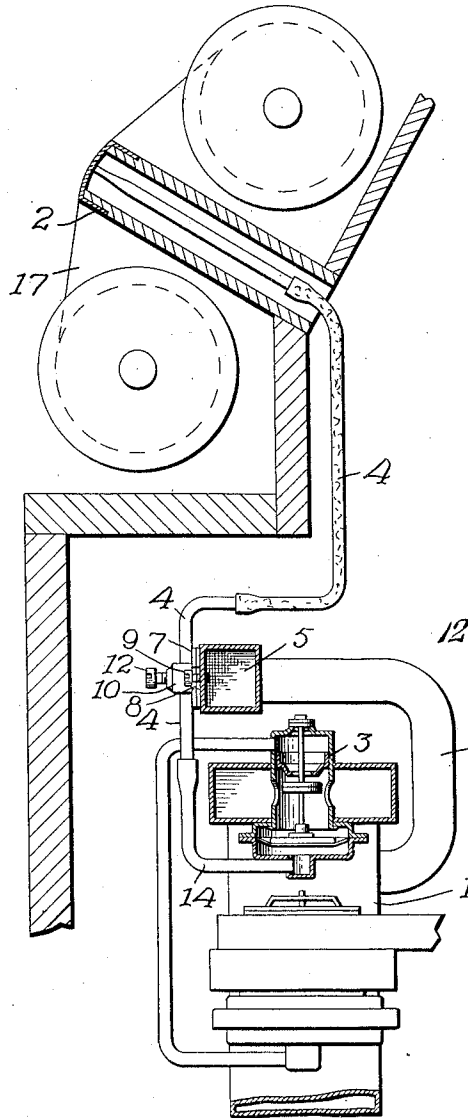


Fig. 1.

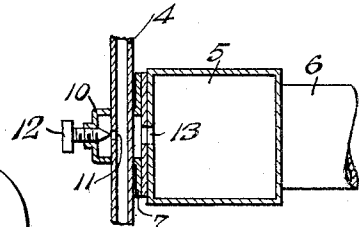


Fig. 4.

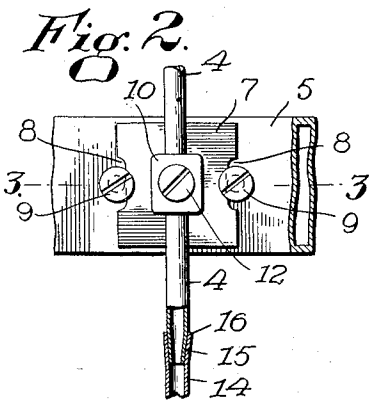


Fig. 2.

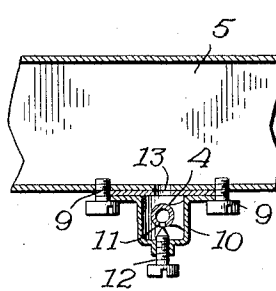


Fig. 3.

Inventor  
 C. E. Peterson  
 By Attorney  
 W. H. Kennedy

# UNITED STATES PATENT OFFICE.

CLAUS E. PETERSON, OF WORCESTER, MASSACHUSETTS.

PNEUMATIC PIANO-PLAYER.

1,346,246.

Specification of Letters Patent.

Patented July 13, 1920.

Application filed May 28, 1919. Serial No. 300,283.

*To all whom it may concern:*

Be it known that I, CLAUS E. PETERSON, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Pneumatic Piano-Players, of which the following, together with the accompanying drawings, is a specification.

My present invention relates particularly to a bleed device to be used in connection with pneumatic piano players, the construction of which is set forth in the accompanying specification, the novel features being pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 represents in side elevation, such portions of a pneumatic piano playing mechanism as are necessary to disclose the present invention.

Fig. 2 is a front view of the bleed device.

Fig. 3 is a sectional view of the same on the plane of the broken line 3—3, Fig. 2.

Fig. 4 is a vertical sectional view transverse to the vacuum tube and through the center of the bleed tube.

Similar reference characters refer to similar parts in the different figures.

Referring to the accompanying drawings, 1 denotes a pneumatic mechanism of any approved construction employed to actuate the player mechanism of a piano, in which 2 denotes a tracker bar from which pipes lead to the pneumatic valve actions, one of which is shown in sectional view at 3. My present invention relates to the construction of the bleed mechanism by which air is gradually exhausted from the pipe 4 leading from the tracker bar to the pneumatic valve mechanism 3. Bleeding the air from the pipe 4 is accomplished by means of a tube 5 supported in any convenient position between the tracker bar and the pneumatic valve mechanism. The tube 5 is connected by a tube 6 with an air exhausting mechanism, not shown, by which the vacuum is maintained in the tube 5. Attached to one side of the tube 5 is a plate 7 having elongated notches 8 upon each side which allows the plate 7 to be raised or lowered with reference to the attaching screws 9, 9, the heads of which overlap the plate 7. Mounted upon the plate 7 is a cap 10 through which the pipe 4 passes. Directly opposite the top of the cap 10 the pipe 4

is provided with a small opening 11 which is partially closed by the pointed tip of a screw 12 carried by the cap 10. The inside of the cap 10 communicates with the tube 5 by means of an opening 13. The pipe 4 is continued by a second pipe 14 to the pneumatic valve mechanism 3.

An air tight joint is made between the pipes 4 and 14 by slightly tapering the pipe 4, as shown at 15, Fig. 2, expanding the end of the pipe 4 to inclose the tapered end of pipe 14 and filling the space between them with solder. The connection between the pipes 4 and 14 may require an adjustment of the cap 10 on the tube 5 and this is provided for by the elongated notches 8. As the opening in the tracker bar becomes covered by the music sheet 17 the air in the tube 4 will bleed through opening 11 into the interior of the cap 10 and from the cap it will escape into the vacuum tube 5. The pointed tip of the screw 12 enables the effective opening 11 to be increased or diminished, thereby regulating the amount of bleed. By removing the screw 12 the opening 11 can be freed from dust which is liable to accumulate and injuriously limit the amount of bleed.

I claim—

1. In an apparatus of the class described, the combination with a tracker bar and a pneumatic action, of a pipe leading from the tracker bar to the pneumatic action and having an opening therein, a cap inclosing said opening, a tube inclosing a vacuum chamber and having an opening communicating with said cap, and means for attaching said cap to the side of said tube.

2. In an apparatus of the class described, the combination with a tracker bar and a pneumatic action, of a pipe leading from the tracker bar to the pneumatic action and having an opening therein, a tube inclosing a vacuum chamber, a cap attached to the outer side of said tube inclosing a chamber containing the opening in said pipe and communicating with said tube, and a pointed screw held by said cap in alinement with the opening in said pipe.

3. In an apparatus of the class described, the combination with a tracker bar and a pneumatic action, of a square bleed tube inclosing a vacuum chamber, a cap inclosing a chamber, a plate attached to said cap

having elongated notches in its opposite edges, screws held in said tube with their heads overlapping the notched edges of said plate, a pipe leading from the tracker bar to the pneumatic action, said pipe passing through said cap and having a bleed opening communicating with the chamber in said

cap, and a communication between said chamber and said tube.

Dated this 23rd day of May, 1919.

CLAUS E. PETERSON.

Witnesses:

NELLIE WHALEN,  
PENELOPE COMBERBACH.