

T. D. Paine,

Attachment for Cornets, &c.

N^o 5,919.

Patented Nov. 14, 1848.

Fig 1.

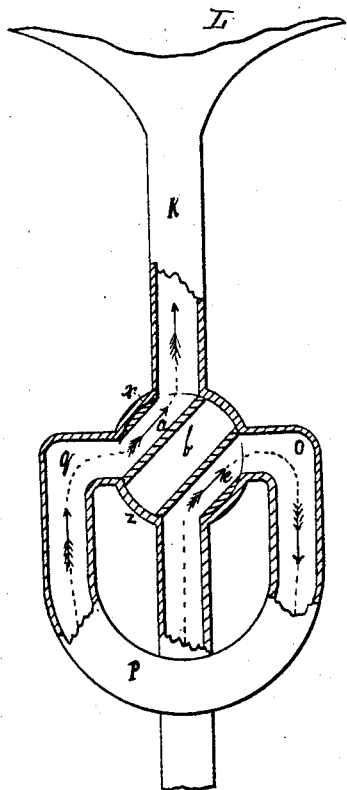


Fig 2.

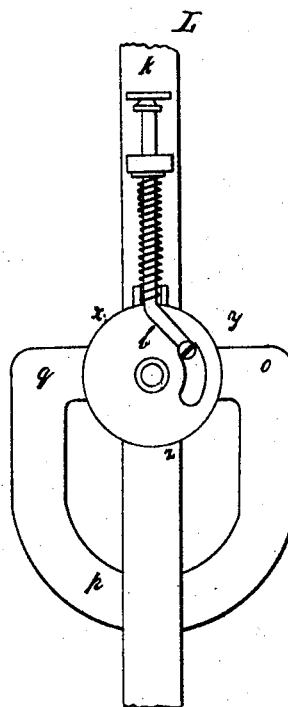
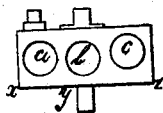


Fig 3.



UNITED STATES PATENT OFFICE.

THOS. D. PAINE, OF SMITHFIELD, RHODE ISLAND.

ROTARY-VALVE WIND MUSICAL INSTRUMENT.

Specification of Letters Patent No. 5,919, dated November 14, 1848.

To all whom it may concern:

Be it known that I, THOMAS D. PAINE, of Smithfield, in the county of Providence and State of Rhode Island, and Providence Plantations, have invented a new and useful Improvement in Rotary-Valved Metallic Musical Wind Instruments; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, of which—

Figure 1 is a top view of the instrument and connecting or forcing rod A. Fig. 2 shows the direction taken by the sound when the rod A Fig. 1 is pressed down, and Fig. 3 is a view of the roller and its three valve pipes *a*, *b*, *c*.

The improvement consists in the introduction and application of a third or center valve pipe *b*, Figs. 1, 2, 3 through the roller *x y z* Figs. 1, 2, 3, of the instrument, which said pipe may be round or oval, and is constructed as follows: I take the roller Fig. 3 common to all rotary valved musical wind instruments and insert in the center of the same a pipe *b* Fig. 3, horizontally through said roller. After inserting this third or center valve pipe *b*, I then insert the two pipes, *a* and *c* Fig. 3 in said roller which are common to all the rollers of said instruments. As many of said rollers containing said "third or center valve pipes *b*" as aforesaid can be attached to any one instrument as are necessary. The advantages of this "third or center valve pipe" consists in the shortness, quickness and ease of the action in throwing the wind and sound from the open instrument into the valve crook *o p q* Figs. 1 and 2 or crooks for producing the tones and semitones not produced by the common chords of the open instrument.

The operation of the improvement is as follows. When the instrument is open, that is when it is in a situation to give the common chords of the instrument in its natural key, the wind and sound passes through the "third or center valve pipe," *b*, Fig. 2, through the roller and thence through the main pipe *k* Fig. 1 to the bell L Fig. 2 of

the instrument, connecting rod A Fig. 1 or rods as in the rotary valve musical wind instruments now in use, are made to extend from one end of the roller or rollers to the fingers for the purpose by pressing upon A Fig. 1 of operating or turning the roller one eighth of a turn, instead of one quarter of a turn as is required in the instruments aforesaid now in use. When the roller is turned one eighth of a turn as aforesaid, it shuts off the "third or center valve pipe" as in *b* Fig. 2 from any communication with the valve crook *o, p, q*, Fig. 2 of the instrument or from the main pipe *k* Fig. 2 of the instrument and brings one end of the first valve pipe *c* Fig. 2 to match with the pipe leading from the mouth piece, and the other end of said valve pipe *c* Fig. 2 to match with the first end of the valve crook, at *o* Fig. 2, which leads from one side of the roller through one side of the cylinder in which the roller turns to the other side of the roller at *q* Fig. 2 and the first end of the second valve pipe *a* Fig. 2 to match with the other end *q* Fig. 2 of said valve crook, and the other end of said second valve pipe *a* Fig. 2 to match with the main pipe *k* Fig. 2 leading to the bell L Fig. 2 of the instrument, conveying the wind and sound from the mouth piece through the first valve pipe *c* Fig. 2 the valve crook, *o p q* Fig. 2 the second valve pipe *a* Fig. 2 and the main pipe *k* Fig. 2 to the bell L Fig. 2 of the instrument, and thus giving the intermediate tones and semitones between the common chords of the instrument by an action one half as long as is required in the rotary valve metallic musical wind instruments now in use.

What I claim as my invention and desire to secure by Letters Patent is—

The introduction, use and application of the "third or center valve pipe" through the roller or rollers of all rotary valved metallic musical wind instruments, the whole being combined and operating substantially as herein set forth.

THOMAS D. PAINE,

Witnesses:

GEORGE DARLING,
ALVAH VOSE.