

J. H. GARDNER.  
 VALVE FOR BRASS WIND MUSICAL INSTRUMENTS.  
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1,112,444.

Patented Oct. 6, 1914.

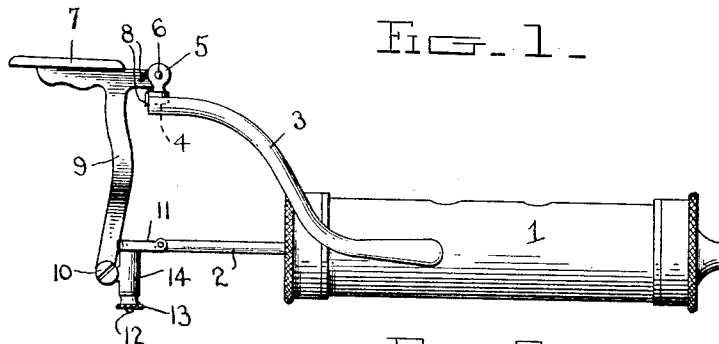


FIG. 1.

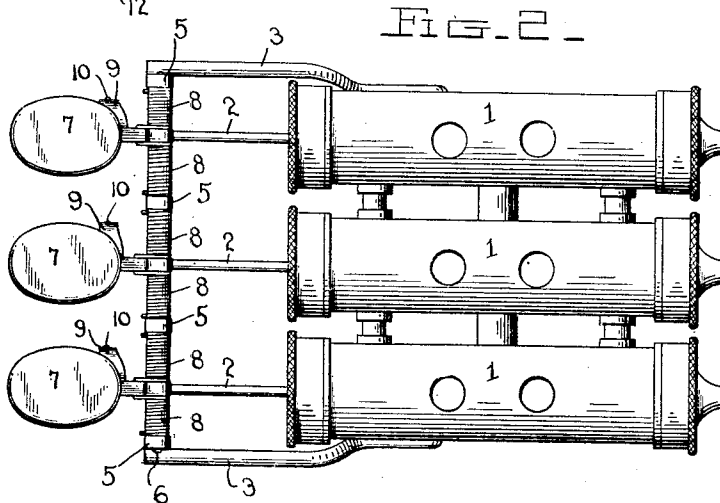


FIG. 2.

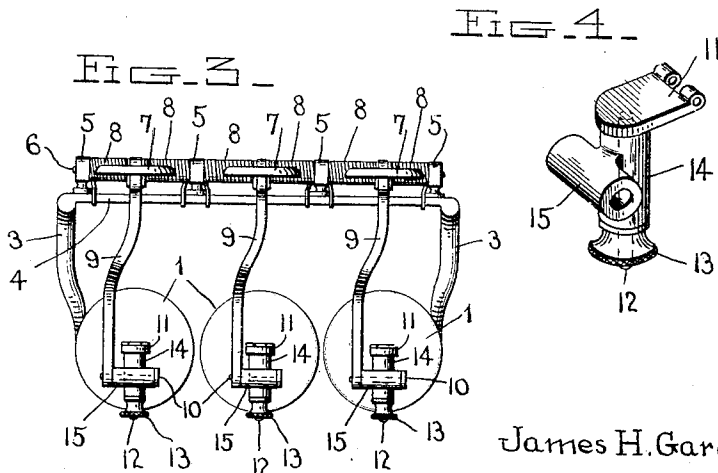


FIG. 3.

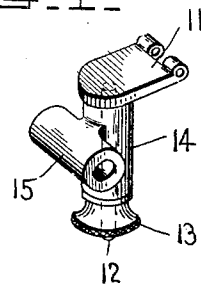


FIG. 4.

Witnesses  
 L. B. James  
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# UNITED STATES PATENT OFFICE.

JAMES H. GARDNER, OF ELKHART, INDIANA, ASSIGNOR TO C. G. CONN, OF ELKHART, INDIANA.

VALVE FOR BRASS WIND MUSICAL INSTRUMENTS.

1,112,444.

Specification of Letters Patent.

Patented Oct. 6, 1914.

Application filed November 6, 1913. Serial No. 799,631.

*To all whom it may concern:*

Be it known that I, JAMES H. GARDNER, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented certain new and useful Improvements in Valves for Brass Wind Musical Instruments, of which the following is a specification.

The object of my invention is to provide means for operating an ordinary piston valve for wind musical instruments by a rotary valve action, and with this and minor objects in view, my invention consists of the parts and combination of parts as will be hereinafter pointed out.

In the drawing:—Figure 1 is a side elevation of piston valve chambers for a musical instrument with my invention embodied. Fig. 2 is a top plan view of the same. Fig. 3 is a perspective view of the same. Fig. 4 is an enlarged detail perspective view.

The reference numeral 1 designates piston valve chambers in which the usual piston valves reciprocate, said valves having a valve stem 2 projecting through the end of the casing as is usual with the piston valve.

3 are arms projecting from the casing, one end of each of which is secured to the end casings, said arms supporting at their outer ends the rod 4 which is suitably secured thereto. Bearings 5 project upwardly from said rod, through which a stationary shaft 6 is mounted. Finger keys 7 are journaled on said shaft 6. 8 are springs coiled around said shaft on each side of the finger key, one end of each spring being anchored on the rod 4 while the other end is anchored on the finger key 7, whereby the key is returned to a normal position after it has been operated.

9 is an arm depending from the finger key, and provided at its lower end with a pin 10 on which is journaled or pivoted the link which in turn is pivoted to the stem 2 of the piston valve.

11 is the pivoted link above referred to which has a yoke head constructed to straddle the top of the piston valve stem 2 and is

pivoted to said stem. This link carries a pin 12 at right angles thereto on which is a small set screw 13.

14 is an elongated cylindrical journal journaled on the pin 12, and 15 is an elongated cylindrical journal journaled on the pin 12 of the depending arm 9 and integral with and at right angles to the elongated cylindrical journal 14, whereby the link 11 is pivotally connected with the stem 2 of the rectilinearly moving piston valve and with the depending arm of the finger key 7, whereby I am enabled to operate the ordinary piston valve of a musical instrument by a rotary valve action.

My invention may be used in connection with all band and orchestra instruments.

What I claim is:—

1. A cornet comprising a rectilinearly moving piston valve, and its casing, a stem extending from the piston outside of the casing, a finger key pivotally mounted on the casing, and a universal joint connecting the finger key with the said stem.

2. A cornet comprising a rectilinearly moving piston valve, and its casing, a stem extending from the piston outside the casing, a frame on the casing, a finger key pivotally mounted on said frame, an arm depending from said key and a universal joint connecting said arm and stem.

3. In a wind musical instrument, the combination of a series of rectilinearly moving pistons and their casings, a frame, the ends of which are secured to the end casings of said series, a stem extending from each piston outside its casing, a bell crank lever finger key pivotally mounted on said frame, one for each piston, and a universal joint connecting each bell crank lever with its respective piston stem.

The foregoing specification signed at Elkhart, Indiana, this 27th day of October, 1913.

JAMES H. GARDNER.

In presence of two witnesses:

PAULINE WILLIAMS,  
FANNIE KUHN.