J. E. ORI.

WHISTLE FOR CALLIOPES.

APPLICATION FILED DEC. 26, 1914.

1,213,402. Patented Jan. 23, 1917.

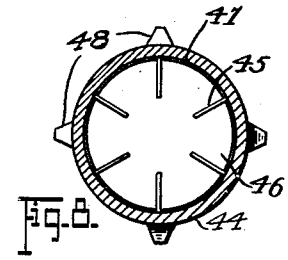
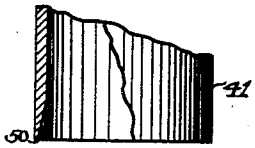


Fig. 8.



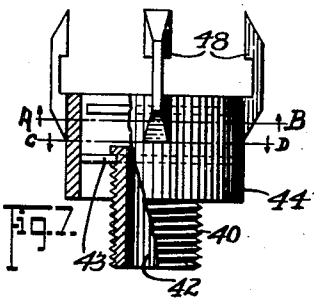
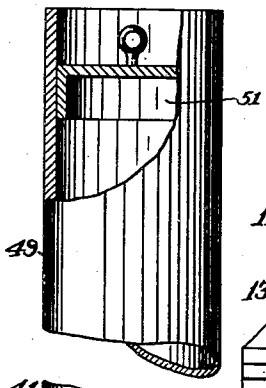


Fig. 7.



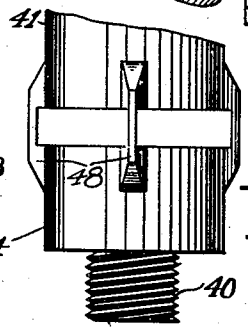


Fig. 2.

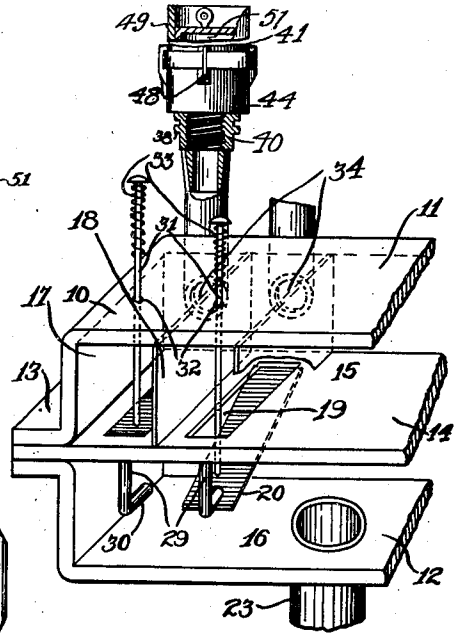


Fig. 1.

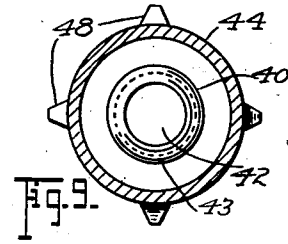


Fig. 9.

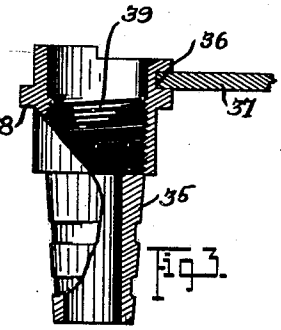


Fig. 3.

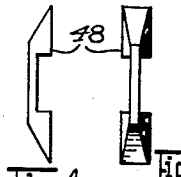


Fig. 4.

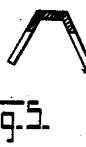


Fig. 5.

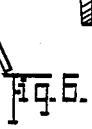


Fig. 6.

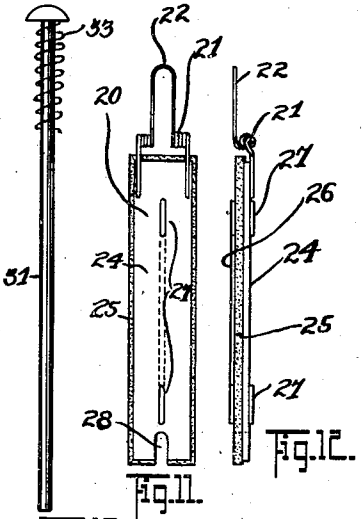


Fig. 10.
Fig. 11.
Fig. 12.

WITNESSES:

H. Nathorn

C. C. Richardson.

INVENTOR

Joseph E. Ori

BY

ATTORNEY

UNITED STATES PATENT OFFICE.

JOSEPH E. ORI, OF BLOOMFIELD, NEW JERSEY.

WHISTLE FOR CALLIOPES.

1,213,402. Specification of Letters Patent. Patented Jan. 23, 1917.

Original application filed September 6, 1913, Serial No. 788,478. Divided and this application filed December 26, 1914. Serial No. 879,193.

To all whom it may concern:

Be it known that I, JOSEPH E. ORI, a citizen of the United States, residing at Bloomfield, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Whistles for Calliopes, of which the following is a specification.

The present invention relates to improvements in whistles for pneumatic calliopes.

One object of the invention is the provision of a whistle which can be quickly applied to or detached from the valve casing by means of which the whistle is controlled.

Another object of the invention is the provision of a whistle including a plurality of detachable sections which can be quickly separated for the purpose of repairing, interchanging of whistles, or the like.

A further object of the invention is the provision of a whistle in which the tubular sections thereof are removably connected by means of brackets or the like which hold the adjacent ends of the said whistle sections in spaced relation.

Another object of the invention is the provision of a whistle for pneumatic calliopes or the like in which a removable plug is adjustably supported in one end thereof for the purpose of tuning the whistle or otherwise changing the tone thereof.

A further object of the invention is the provision of a whistle having a disk located in one end thereof for retarding the passage of air therethrough and deflecting said air against the beveled end of one of said sections for the purpose of producing a sound tone.

A still further object of the invention is to improve and simplify devices of this character, rendering them comparatively simple and inexpensive to manufacture, reliable and efficient in use, and readily operated, it being understood that various minor changes in the specific details of construction can be resorted to within the scope of the appended claims, without departing from the spirit or sacrificing any of the advantages of the invention.

With the above and other objects in view the present invention consists in the novel features of construction, formations, combinations and arrangements of parts to be hereinafter more particularly described, claimed and illustrated in the accompanying drawing forming a part of this application, in which—

Figure 1 is a perspective view of a valve casing including the valves for controlling the passage of air to the whistles. Fig. 2 is a fragmentary side elevation of one of the whistles removed. Fig. 3 is a similar view illustrating one of the connecting plugs. Figs. 4, 5 and 6 are detail views illustrating one of the brackets. Fig. 7 is a view partly in section showing two of the whistle sections separated. Fig. 8 is a horizontal sectional view taken through the whistle on the line A—B of Fig. 7. Fig. 9 is a similar view taken on the line C—D of Fig. 7. Fig. 10 is a detail view of one of the spring pressed actuating keys. Fig. 11 is a bottom plan view of one of the valves. Fig. 12 is an edge view of the valve shown in Fig. 11.

Referring to the accompanying drawing by similar characters of reference throughout the several views, the numeral 10 designates generally a valve casing for a calliope or the like, which consists of a pair of sections 11 and 12 preferably of rectangular dish shaped formation and having flanges 13 provided at the meeting edges thereof between which is disposed a horizontal partition 14 which divides the valve casing 11 into upper and lower compartments 15 and 16. The upper compartment 15 is divided into a plurality of supplemental air tight compartments 17 by means of the vertical partitions 18 which connect the upper side of the section 11 with the horizontal partition 14. These supplemental compartments 17 can be brought into communication with the lower compartment 16 through the rectangular openings 19 provided in the aforesaid partition 14.

Valves 20 are secured to the lower side of the partition 14 below each of the openings 19 by means of the spring hinges 21 which are formed with spring extensions 22 for engagement with the underside of the partition 14 whereby said valves 20 will be normally and yieldingly forced to their closing positions against the underside of the partition 14, consequently closing the openings 19 and preventing the admission of air which enters the compartment 16 through the supply pipe 23. Any approved form of valve 20 may be used which will

answer the purposes, but it is preferred that each valve consist of a rigid base or backing member 24 having a facing strip 25 of leather or other suitable flexible material which will engage the underside of the partition 14 at the edges of the openings 19. The facing strip 25 is secured to the backing 24 by means of a wire connecting member 26 which has its opposite ends extended through alining openings formed in the facing strip 25 and backing 24 and then bent upon themselves as shown at 27 to engage the adjacent portion of the backing, thereby firmly securing said facing strip 25 thereon.

The free ends of each of the valves 20 are provided with notches 28 which slidably engage the guide rods 29 and insure the proper position of said valves relative to the openings 19 when the valves are seated. The lower ends of these guide rods 29 are offset as at 30 to engage the underside of said valves for limiting the downward movement of the latter.

Spring actuating keys 31 extend upwardly through openings 32 provided in the upper side of the section 11 of the valve casing 10 and are normally held in raised position by the springs 33. The lower ends of these keys 31 engage the upper sides of the valves 20 and obviously, upon the depression of these keys 31 against the tension of the springs 33 the valves 20 will be depressed to permit the passage of air contained within the compartment 16 through the desired opening 19 for a purpose to be later explained. It should be understood that the tension of the spring extensions 22 is slightly greater than the tension of the springs 33 in order that when the keys 31 are released the valves 20 will be automatically closed through the medium of the assistance of the extensions 22.

The upper side of the valve casing 10 is provided with a series of openings 34 which lead into the supplemental compartments 17, and disposed within these openings 34 are downwardly tapered grooved parallel plugs 35 which are positioned therein and sealed against leakage.

The upper ends of the plugs 35 are provided with grooves 36 for engagement with a supporting plate 37 which holds all of the plugs 35 against any undesired lateral movement which would serve to cause their displacement and the consequent leakage of air compartments 17. The upper end of each of the plugs 35 is enlarged at 38 and screw threaded as at 39 for engagement with the externally threaded nipples 40 which support the whistles 41 to be hereinafter described in detail.

The upper end of each nipple 40 is provided with a groove 42 in which is disposed a disk 43 which engages the inner surface of the lower tubular section 44 of the said whistle 41 and supports the latter. Each section 44 is provided with laterally extending projections 45 which support the upper disk 46, the latter being positioned slightly above the disk 43 and being slightly less in diameter than the inner diameter of the tubular section 44, providing a slight annular space 47 through which air issuing from the supplemental compartment 17 may pass.

Brackets 48 are attached in any preferred manner at intervals to the exterior of the sections 44 and are designed to be either removably or permanently secured by soldering or the like to the upper tubular sections 49 of the whistles. As clearly shown in Fig. 2, the brackets 48 support the sections 44 and 49 in slightly spaced relation, while the adjacent end of the section 49 is beveled as at 50 in order that the air in passing from the section 44 to the section 49 will contact therewith to give the proper sound.

An adjustable plug or cap 51 is disposed in the upper end of each of the tubular sections 49, to close the said upper end and also to provide a means whereby upon the adjustment of these caps or plugs 51 vertically within the sections 49 the tone of the whistle can be sharpened or deepened as desired to provide a means whereby the instrument can be tuned.

In use, a slight pressure upon either of the keys 31 will open its respective valve 20 thus permitting of the necessary passage of air from the compartment 16 to the desired supplemental compartment 17 which will then pass through the opening 34, and hollow plug 35, into the whistle 41, obviously sounding the same as desired.

In use the whistles are tuned to produce various notes so that upon the compression of the various keys 31 in the proper manner the proper tones will be sounded, thereby permitting the operator to play any desired air.

This application is a division of my former copending application, No. 788,478, filed Sept. 6, 1913.

Having thus fully described my invention what I claim as new and desire to protect by Letters Patent is:—

1. A whistle for calliopes comprising a pair of spaced sections, brackets connecting said sections, a disk disposed in one of said sections, a supporting nipple carried by the disk, a second disk disposed above the first disk, one of said sections having a sharpened end and a disk adjustable within one of said sections.

2. In a whistle such as described, a pair of spaced sections, one of said sections having a beveled end, brackets connecting said sections, a disk carried by one of said sections, a nipple engaging said disk and supporting said sections, projections extending

from one of said sections and a disk supported by the projections above the first-mentioned disk and in spaced relation to the inner walls of said section.

3. In a whistle such as described, a supporting plug, a nipple detachably connected with said supporting plug, a disk carried by the nipple, a whistle section engaging the disk whereby said section will be supported, projections extending from the whistle section, a disk carried by said projections and having its periphery spaced from the inner side of said section, brackets secured to said section, a second section carried by the brackets and held in spaced relation to the first section, said second section having a beveled lower end, and a disk adjustable in said second mentioned section.

4. A whistle for calliopes comprising a pair of spaced sections, brackets connecting said sections, a disk disposed in one of said sections, a supported nipple carried by the disk, a second disk disposed above the first disk, and means in one of said sections for varying the tone of the whistle.

5. A whistle for calliopes comprising a lower section, a supporting nipple carried thereby, a disk mounted above said supporting nipple, an upper section, brackets connecting said upper and lower sections, and means in the upper section for varying the tone of the whistle.

6. A whistle for calliopes comprising upper and lower sections connected together, a disk disposed in the lower section, a supporting nipple carried by the disk, a second disk disposed above the first disk, the upper section having a sharpened lower end and means in said upper section for varying the tone of the whistle.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH E. ORI.

Witnesses:
ERNST A. KERN,
CARL J. SHULTZ.