(No Model.)

C. H. VAN ALLEN.

MOUTH PIECE FOR CORNETS.

No. 463,084. Patented Nov. 10, 1891.

FIG. 1.

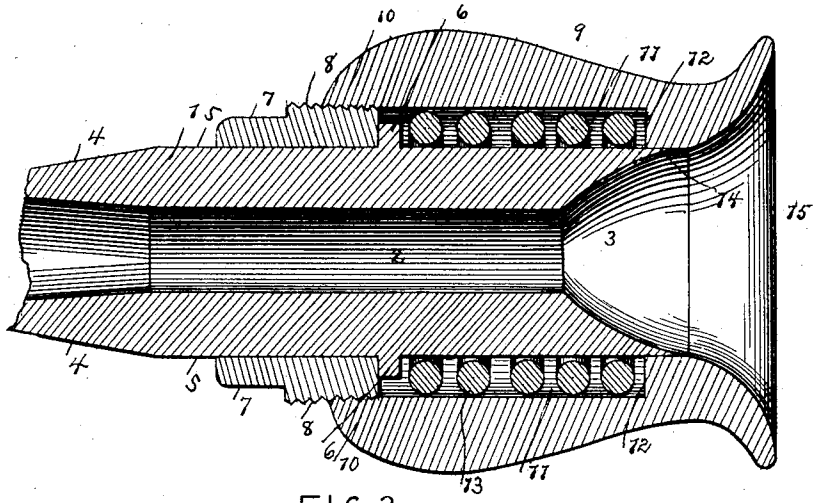


FIG. 2.

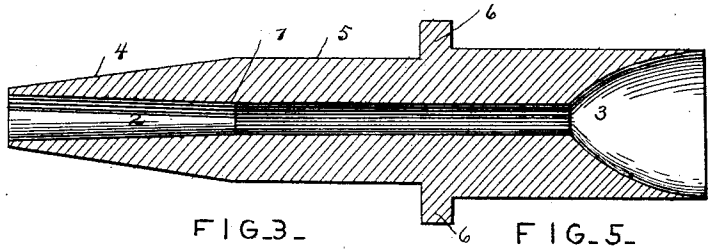


FIG. 3.

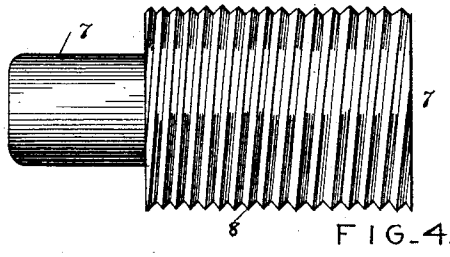


FIG. 5.

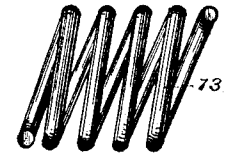
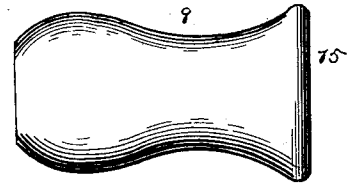


FIG. 4.



Witnesses:
B. S. Otis
W. S. Dodd

Inventor
Charles H. Van Allen.

By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

CHARLES H. VAN ALLEN, OF HALSEY, OREGON.

MOUTH-PIECE FOR CORNETS.

SPECIFICATION forming part of Letters Patent No. 463,084, dated November 10, 1891.

Application filed October 17, 1890. Serial No. 368,505. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. VAN ALLEN, a citizen of the United States, residing at Halsey, in the county of Lynn and State of Oregon, have invented a new and useful Adjustable Automatic Mouth-Piece for Cornet or other Brass-Band Instruments, of which the following is a specification.

This invention relates to improvements in movable mouth-pieces for wind-instruments, whereby the pitch of the tone rendered by the instrument may be raised or lowered by increasing or decreasing the size of the air-cup.

The objects of my invention are to provide in a mouth-piece of the above construction for an automatic and easy adjustment of the mouth-piece by the pressure of the lips of the operator and without removal of the same from the mouth-piece to provide for an adjustment to adapt the instrument to the player so as to operate as light or as hard as desired, and withal to provide a mouth-piece embodying the above advantages and of a cheap and simple construction.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claim.

Referring to the drawings, Figure 1 is a vertical longitudinal section of a mouth-piece constructed in accordance with my invention. Fig. 2 is a detail of the stem in section. Fig. 3 is a detail of the nut. Fig. 4 is a similar view of the mouth piece or sleeve. Fig. 5 is a similar view of the spring.

Like numerals of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ the usual stem 1, having the central bore or air-passage 2 terminating at its front in the flared mouth or cup 3. The rear portion of the stem externally is beveled, as at 4, in the usual manner, and in front of the same the bearing-surface 5 is formed, which terminates in an annular flange 6, projecting from the periphery or surface of the stem. In rear of the shoulder or flange 6 there is mounted upon the bearing-surface 5 a cylindrical board, nut, or collar 7, the exterior of which is provided with screw-threads 8.

9 denotes the mouth-piece proper, and the same is of such bore as to adapt it to inclose the stem and nut 7, into the threads of which latter screw-threads 10, formed in the bore of the mouth-piece at the rear end thereof, engage. The mouth-piece is provided slightly in rear of its front end with an annular recess or enlarged bore 11, which terminates short of the front end of the mouth-piece in a shoulder 12. A coiled spring 13 surrounds the stem 1 between the shoulder 12 of the mouth-piece and the flange or shoulder 6 of the stem. Beyond the shoulder 12 the stem is straight for a portion of its length, forming a bearing-surface 14, against which rides the external surface of the stem near its front end, and beyond said surface the mouth-piece is given the usual flaring or bell form 15. It will be observed that the flaring of the mouth-piece combines with that of the stem to constitute and form the usual air-cup. Now by pressing the mouth-piece to the rear against the tension of the spring 13 it will be obvious that the length of the air-cup is decreased, and thus the column of air being reduced the tone is raised in pitch. By releasing the mouth-piece from pressure of the lips the spring 13 automatically returns the parts to their normal positions. When pressed upon by the lips, the bearing-surface 14 of the mouth-piece rides upon the exterior surface of the stem and the sleeve or nut 7 is moved upon the bearing-surface 5. By operating either the nut or sleeve 7 or the mouth-piece 9 so as to force the nut farther into the mouth-piece, or withdraw the same from the mouth-piece, it will be obvious that more or less pressure will be required to operate the mouth-piece, and thus the same adapted for different persons for operating.

From the above construction it will be obvious that I succeed in providing a mouth-piece of cheap and simple construction that may be adjusted for different operators and which will permit of a decreasing of the depth of the air-cup without undue pressure of the lips or a removal of the lips from the same.

Having described my invention, what I claim is—

The herein-described mouth-piece for wind-instruments, consisting of the stem 1, having the bearing-surface 5 at about the external center of the same, terminating at the front

end of said surface in an annular flange 6 and having its bore 2 flared at its front end, as at 3, the nut 7, mounted for sliding upon the bearing-surface 5 of the stem and provided with the external screw-threads 8, the mouth-piece 9, receiving the front end of the stem and nut and having its rear end threaded upon the nut, said mouth-piece being provided between its ends with an annular recess 11 and in front of the same with an internal annular bearing 14, beyond which it is flared, and the spiral spring 13, encircling the stem 1 and interposed between the flange of the stem and the front end of the recess 11, substantially as specified.

CHARLES H. VAN ALLEN.

Witnesses:
WILLIAM C. REID,
SAMUEL UMSTEAD.