

(No Model.)

H. F. KEYES.  
MOUTHPIECE FOR WIND INSTRUMENTS.

No. 578,567.

Patented Mar. 9, 1897.

Fig. 1

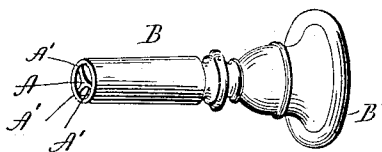


Fig. 2

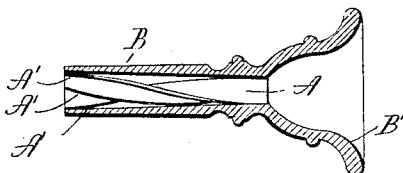
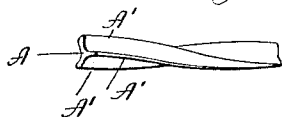


Fig. 3



Witnesses.

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Lillian D. Kellogg.

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Inventor.

By atty's Earle Keyman

# UNITED STATES PATENT OFFICE.

HENRY F. KEYES, OF NEW HAVEN, CONNECTICUT, ASSIGNOR OF ONE-HALF  
TO MARVIN SMITH, OF SAME PLACE.

## MOUTHPIECE FOR WIND INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 578,567, dated March 9, 1897.

Application filed August 3, 1896. Serial No. 601,426. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY F. KEYES, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Mouthpieces for Wind Instruments; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in perspective of a mouthpiece for wind instruments constructed in accordance with my invention; Fig. 2, a view thereof in central longitudinal section; Fig. 3, a detached perspective view of the web.

My invention relates to an improvement in mouthpieces for wind instruments of the trumpet type, as, for instance, the horn, the bugle, the cornet, the trombone, the tuba, the euphonium, and the serpent, the object being to increase their power and to enable the user to better control and color their tones.

With these ends in view my invention consists in a mouthpiece for wind instruments of the trumpet type, constructed with one or more spirally-arranged ribs or webs for imparting a spiral rotary movement to the column of air forced into the mouthpiece by the user.

My invention further consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown I employ a web A, having three spiral ribs A' A' A', the said web being as a whole straight and adapted in cross-section to fit within the stem B of the mouthpiece B', which, with its stem, may be of any approved construction and adapted to be used in conjunction with any of the instruments named or in any other wind instrument of the trumpet type. By the employment of such a web the column of air forced into the mouthpiece and hence into the instrument by the user is given a spiral rotary movement, whereby it acquires, as it were, coherence and carrying power, so that it is carried throughout the instrument with less friction and more effect than is the column of air ordinarily forced

into a wind instrument by the user. I thus secure increase of power in the instrument and more perfect control over the same as to the effects which may be produced by it, and particularly those of coloring the tones.

It is not necessary that I should employ a web constructed as shown and described, for, if desired, its place might be taken by one or more independently-formed webs located within the stem of the mouthpiece, or one or more webs might be formed integral with the inner wall of the mouthpiece by grooving the same or otherwise, my invention broadly comprehending the construction of the mouthpiece of a wind instrument of the trumpet type with ribs or webs arranged to give a spiral rotary movement to the column of air forced into the instrument by the user.

Instead of applying my invention to a removable mouthpiece it might be located within the mouth portion of an instrument with the same effect, and that alternative I consider as being comprehended by my invention. I would therefore have it understood that I do not wish to limit myself to the exact construction herein shown, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A mouthpiece for wind instruments of the trumpet type constructed with one or more spirally-arranged ribs or webs for imparting spiral rotary movement to the column of air forced into the mouthpiece by the user.

2. The combination with a mouthpiece for a wind instrument of the trumpet type, of an independently-formed stem adapted to be introduced into the said mouthpiece, and having one or more spirally-arranged ribs or webs for imparting spiral rotary movement to the column of air forced into the mouthpiece by the user.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

HENRY F. KEYES.

Witnesses:

WM. S. WELLS,  
JAMES BISHOP.