(No Model.)

F. R. SKIDMORE.

MOUTHPIECE.

No. 583,421. Patented May 25, 1897.

Fig. 1.

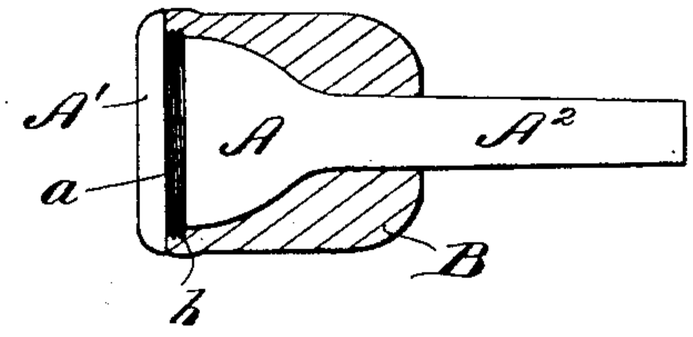


Fig. 2.

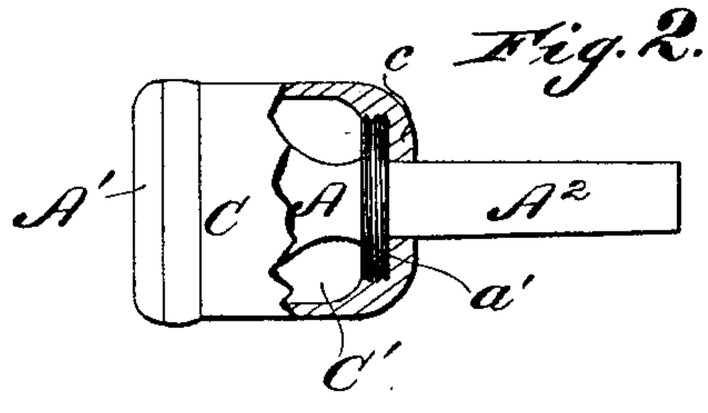


Fig. 3.

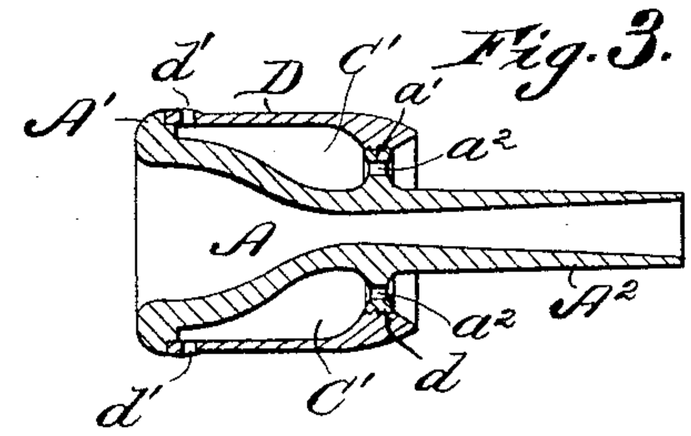
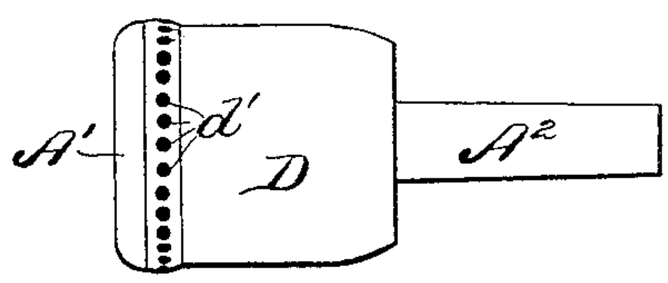


Fig. 4.



WITNESSES

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MOUTHPIECE.

SPECIFICATION forming part of Letters Patent No. 583,421, dated May 25, 1897.

Application filed March 25, 1896. Serial No. 584,733. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK R. SKIDMORE, a citizen of the United States, residing at Milwaukee, county of Milwaukee, State of Wisconsin, have invented a certain new and useful Improvement in Mouthpieces; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to new and useful improvements in the construction of mouthpieces for wind instruments, and relates more particularly to an improved form of mouthpiece for cornets and other kinds of horns.

The object of my invention is to provide an improved form of mouthpiece of such a construction as to be capable of preventing undue heating of the mouthpiece when in use. It is a well-known fact that when in use the mouthpieces of cornets and other horns often become heated to an uncomfortable temperature, so as to materially interfere with the proper use of the instrument by the player. It is a common practice for musicians to remove the mouthpieces from the instruments and place them upon ice or in a cool locality just before using the instruments in order to in a measure counteract the tendency of the mouthpieces to heat while in use.

My improvement is designed to overcome this difficulty and to keep the mouthpieces sufficiently cool while in use to enable the musician to use them satisfactorily and without discomfort to himself.

In the accompanying drawings, illustrating my invention, Figure 1 is a side elevation of a mouthpiece constructed in accordance with my invention and showing the non-conducting covering or shell in section. Fig. 2 is a view, partly in section and partly in elevation, illustrating a somewhat different form of construction. Fig. 3 is a sectional view of still another form of my improved mouthpiece. Fig. 4 is a side elevation of the same.

My invention consists, primarily, in placing upon the outside of the mouthpiece a covering or shell of suitable non-conducting material, and in practice I may, if desired, construct the same as shown in Fig. 1, in which the outer part of the mouthpiece A is provided with a screw-thread *a* for engagement with an interior screw-thread *b*, formed within the covering B of non-conducting material.

In the particular form of construction shown in Fig. 1 the non-conducting cover B is shaped upon its interior so as to conform to and fit over the exterior of the bell of the mouthpiece, and said non-conducting cover extends forward to and abuts against the rim or flange A′ thereof, being preferably made flush with said rim upon the outside. In practice the screw-thread *a* may be made adjacent to the rim or flange A′ or adjacent to the shank A^2 of the mouthpiece.

In some instances it may be desirable to construct the non-conducting cover or shell so as to leave a considerable air-space between its inner surface and the outer surface of the mouthpiece, and for this purpose I may construct the mouthpiece and said cover or shell as indicated in Fig. 2, in which an annular flange *a′* is formed upon the outside of the mouthpiece and provided with a screw-thread, as shown, the non-conducting cover or shell C being made of such shape as to extend forwardly over the bell of the mouthpiece and to abut against the rim or flange A′, as before described, but being so shaped as to leave an air chamber or space C′ entirely surrounding the bell of the mouthpiece.

In the particular form of construction shown in Fig. 2 the shell C is provided with an annular flange *c*, arranged to extend inward and to rest against the forward end of the shank A^2, so as to cover and conceal the annular flange *a′*.

As a separate improvement I may, if desired, employ a construction such as shown in Figs. 3 and 4, in which a shell D of non-conducting material is arranged upon the outside of the mouthpiece, being engaged in the manner before described with the screw-threaded flange *a′*, but having its rear edge *d* arranged to terminate outside of the annular flange *a′* in the manner shown. In this particular form of construction a suitable number of apertures a^2 a^2 are arranged in the annular flange *a′* and a number of suitable apertures *d′ d′* are arranged in or adjacent to the forward part of the covering or shell D, said apertures a^2 and *d′* communicating with

the air-space C′ between the inside of the covering or shell and the outside of the bell of the mouthpiece. By this last-described construction a circulation of air around the outside of the bell of the mouthpiece and inside of the shell D is permitted, and such circulation of air will materially assist in keeping mouthpieces cool.

If desired, the forms of covering or shell shown in Figs. 2 and 3 may be applied to the same mouthpiece, in which the flange a' is provided with the apertures a^2 a^2, as before described, and in such case the flange c of the shell C will, when the latter is applied to the mouthpiece, cover and conceal the apertures a^2 a^2, while by placing the shell D upon the mouthpiece the described circulation of air may be obtained. If desired, these two forms of the covering or shell may be made interchangeable, so that the musician may readily place either one of the same upon the mouthpiece as he may desire for his immediate use, or the mouthpiece, which is provided with the air holes or ports, may be provided with suitable means for closing the same at will, so as to form a dead-air space.

In making my improved mouthpiece any suitable or desired kind of non-conducting material may be employed—such, for instance, as wood, hard rubber, ivory, or the like.

Furthermore, if desired my improved device may be provided with more than one air-space, so as to further assist in retaining the normal temperature of the mouthpiece.

I have found in practice that by placing the described non-conducting covering or shell upon the outside of the mouthpiece the aforesaid heating of the mouthpiece when in use is very materially lessened and that the player is enabled to use the instrument for an indefinite length of time without discomfort.

The form of construction shown in Figs. 1 and 2 is adapted not only to prevent heating of the mouthpiece when in use in warm weather but also to preserve the normal temperature of the mouthpiece when used outdoors in cold weather, the non-conducting cover simply serving to retain and prevent the radiation of the heat from the mouthpiece when exposed to low temperatures. This form of construction is particularly adapted for outdoor use during cold weather.

I would have it understood that I do not desire to limit myself to the exact form or forms of construction shown in the drawings and herein described, as various modifications or variations might be made in details of construction without departure from my original invention, and that I would regard any form of mouthpiece provided with a covering or shell of non-conducting material upon its outside adapted to prevent heating of the mouthpiece as coming within the scope of my original invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with the mouthpiece of a wind instrument, of a covering or shell of non-conducting material located upon the outside of the bell portion of the mouthpiece in rear of the rim and arranged to expose the rim for contact with the lips, substantially as described.

2. The combination with the mouthpiece of a wind instrument, of a shell of non-conducting material of larger interior dimensions than the exterior of the bell portion of the mouthpiece, and secured upon the outside of the latter in rear of the rim, so as to form an air-space between the shell and the outside of the bell, but arranged to leave the rim exposed for contact with the lips, substantially as described.

3. The combination with the mouthpiece of a wind instrument, of a shell of non-conducting material of larger interior dimensions than the exterior of the mouthpiece, and secured to the outside of the latter so as to form an air-space within the shell and outside of the mouthpiece, and a plurality of suitable ports or apertures communicating with said air-space for permitting a circulation of air therethrough, substantially as described.

4. The combination with the mouthpiece of a wind instrument provided with an exterior screw-thread, of a shell of non-conducting material engaged therewith, said shell being made of larger interior dimensions than the exterior of the mouthpiece so as to afford an air-space within the shell and outside of the mouthpiece, and a plurality of ports or apertures communicating with said air-space for permitting a circulation of air therethrough, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

FREDERICK R. SKIDMORE.

Witnesses:
JOHN E. WILES,
J. M. CLARKE.