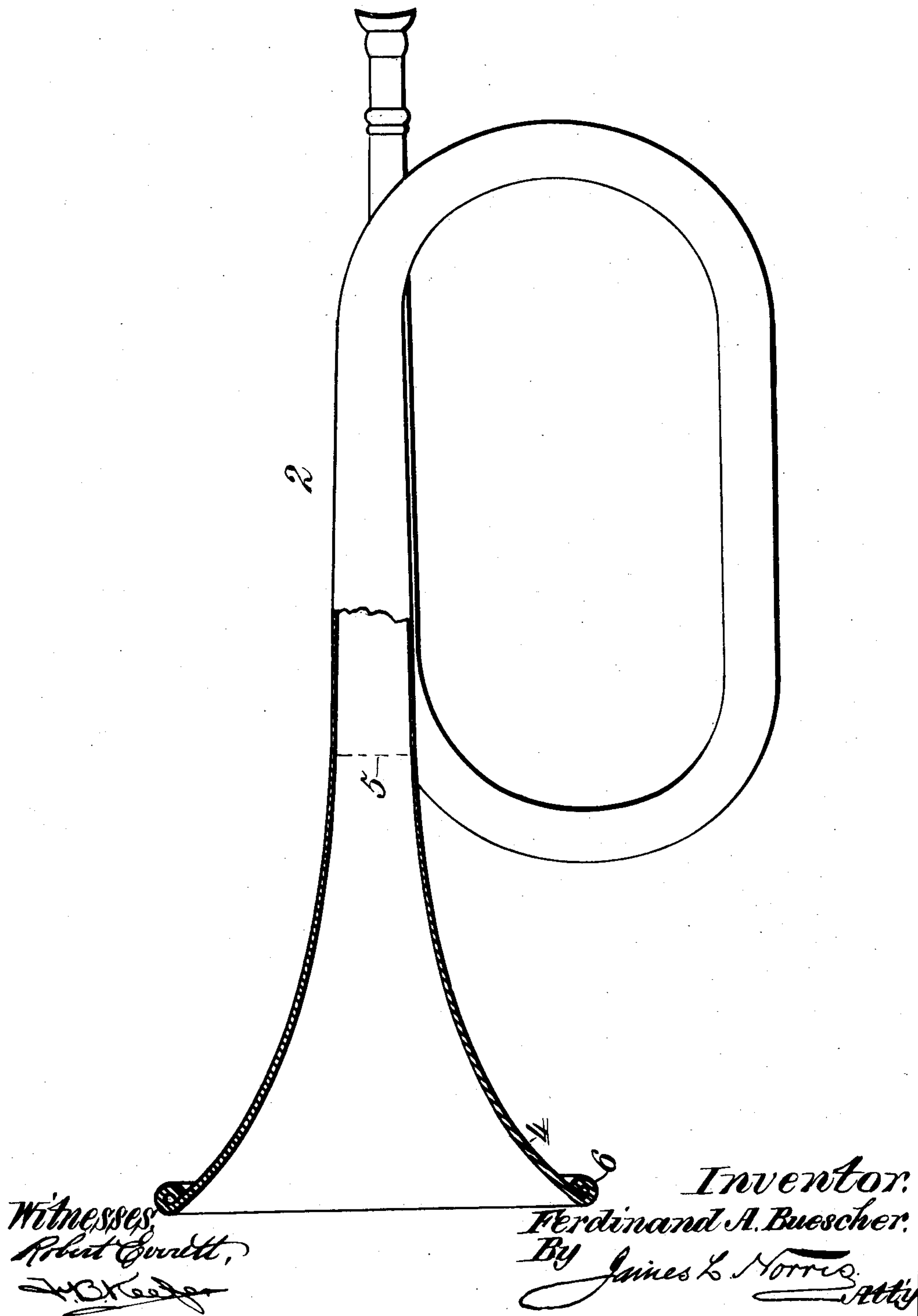


No. 869,619.

PATENTED OCT. 29, 1907.

F. A. BUESCHER.
WIND MUSICAL INSTRUMENT.
APPLICATION FILED JULY 18, 1907.



UNITED STATES PATENT OFFICE.

FERDINAND A. BUESCHER, OF ELKHART, INDIANA.

WIND MUSICAL INSTRUMENT.

No. 869,619.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed July 18, 1907. Serial No. 384,395.

To all whom it may concern:

Be it known that FERDINAND A. BUESCHER, a citizen of the United States, residing at Elkhart, in the county of Elkhart and State of Indiana, have invented new and useful Improvements in Wind Musical Instruments, of which the following is a specification.

This invention relates to wind musical instruments and more especially to the bell part thereof from which the tone is produced by air being forced through the instrument. The invention can be embodied with advantage in various types of wind musical instruments. As an illustration I might mention a cornet. The necessary wind may be supplied either by the mouth or mechanically.

I desire to state that when I use the term "musical instrument," although I believe this will be understood, I include band instruments, orchestra instruments, musical playing organs, and the like, in the designation mentioned.

The bell portions of wind musical instruments are ordinarily constructed in such a way that the extreme large or outer portion of the bell is made thinner than the remainder thereof owing to the fact that such particular portion is developed to a considerable extent by stretching the metal of which the same is composed in shaping said bell portion, on a mandrel. The consequence is that, when an excessive pressure is employed in blowing the instrument, the tone becomes split, as it is known, and its qualities injured and its carrying powers and fullness are affected. A wind musical instrument involving my invention eliminates these disadvantages and no matter what pressure is employed in my instrument in the production of the music the tone cannot in any way be injured and the brilliancy and roundness of tone qualities are maintained and, at the same time, I insure great volume and carrying power of the instrument. I secure the advantages in question by making the enlarged or outwardly-flared or tapered portion of the bell of progressively-increasing thickness, and I find that by so doing I obtain a clear, penetrating, and far-carrying musical sound.

In the drawings accompanying and forming a part of this specification I show in sectional elevation a wind

musical instrument comprising my invention, and the same is denoted in a general way by 2. This instrument is ordinarily constructed of metal and it has the usual bell provided with the enlarged or outwardly-flared tapered portion 4, and my invention, as will be apparent, resides in this enlarged or outwardly-flared tapered portion 4. The instrument may be made of the metal usually employed in the formation of cornets, trumpets, and other horns, and its shape, except that at the outer terminal portion 4, may be of any suitable or desired character. The outer terminal or flared portion is of progressively increasing thickness commencing substantially at the line 5 and continuing outward to the bead 6. This progressive thickening of the outer terminal portion of the bell 3 may be secured in several ways, although in the present case it is so formed as to leave the inner and outer surfaces of said outer terminal portion smooth. From the statements just made it will be apparent that the outer terminal portion of the bell is of progressively-increasing thickness in an outward direction. I state that the increase in thickness of the bell portion of the instrument commences substantially at the line 5. The commencement of this increase may be further inward or further outward, as will be clear. It is also obvious that the bell portion of the instrument need not be of integral construction for said bell portion may be of two thicknesses of metal, the flare part thereof being of heavier gage than the tail part.

What I claim is:

1. A wind musical instrument having a bell, the outer portion of which is of progressively-increasing thickness in an outward direction.
2. A wind musical instrument having a bell, the outer portion of which is of progressively-increasing thickness in an outward direction, the inner and outer surfaces of said progressively-increased thickened portion being smooth.
3. A wind musical instrument having a bell provided with an outwardly-flared terminal portion of progressively-increasing thickness in an outward direction.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FERDINAND A. BUESCHER.

Witnesses:

LIVY CHAMBERLAIN,
WILLIAM O. JESSUP.