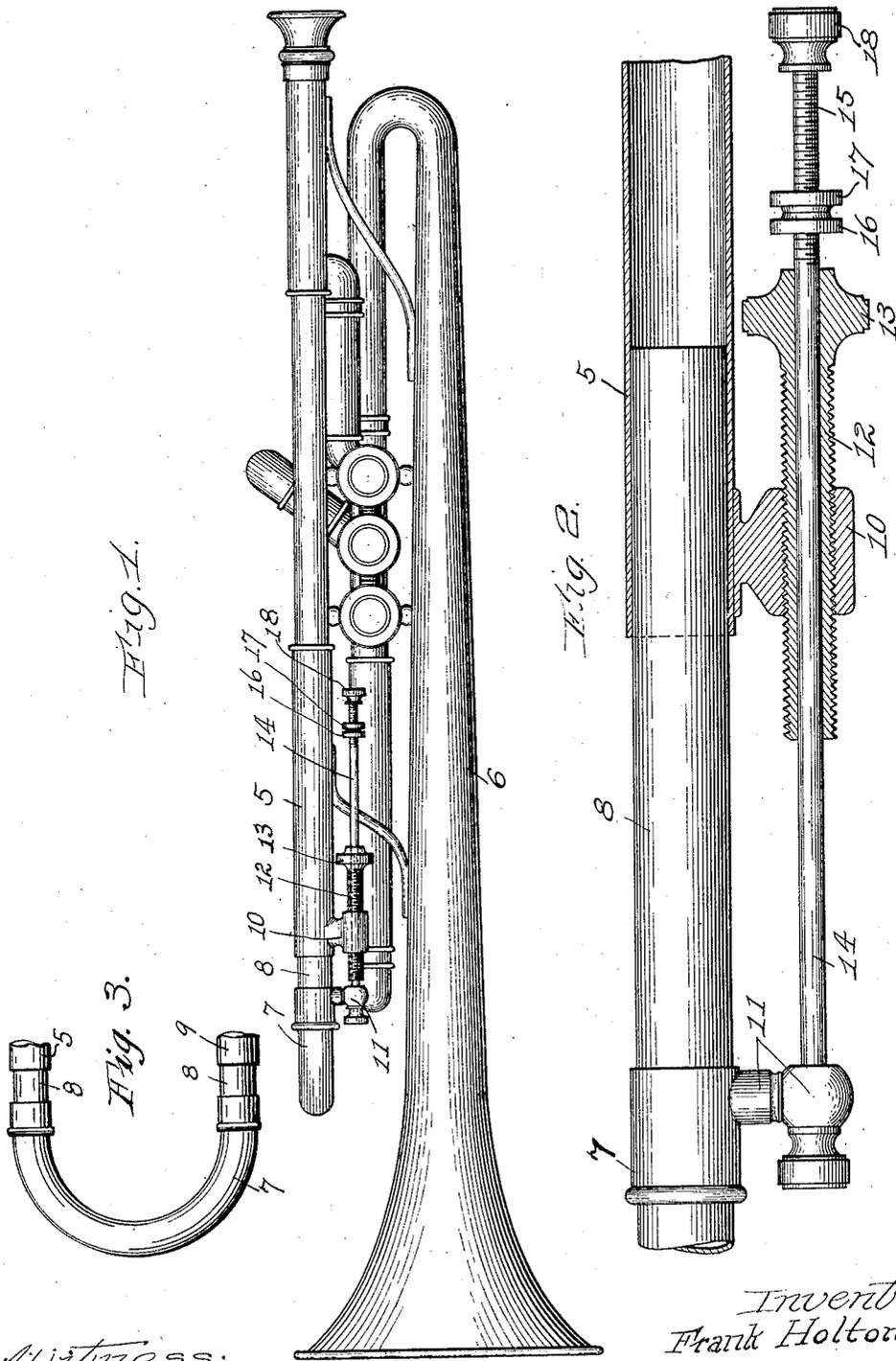


F. HOLTON.  
MUSICAL WIND INSTRUMENT.  
APPLICATION FILED JAN. 25, 1919.

1,330,806.

Patented Feb. 17, 1920.



Witness:  
R. L. Jamington

Inventor,  
Frank Holton,  
By Brown & Rosen  
Attys.

# UNITED STATES PATENT OFFICE.

FRANK HOLTON, OF ELKHORN, WISCONSIN.

MUSICAL WIND INSTRUMENT.

1,330,806.

Specification of Letters Patent.

Patented Feb. 17, 1920.

Application filed January 25, 1919. Serial No. 273,192.

*To all whom it may concern:*

Be it known that I, FRANK HOLTON, residing at Elkhorn, in the county of Walworth and State of Wisconsin, have invented certain new and useful Improvements in Musical Wind Instruments, of which the following is a specification.

My invention relates to musical wind instruments, and has for its object the provision of simple and efficient means for quickly and easily changing the key of a musical wind instrument, and also for tuning such an instrument.

Other objects will appear hereinafter.

An embodiment of my invention is shown in the accompanying drawing forming a part of this specification, and in which;

Figure 1 is a plan view of a musical wind instrument embodying my invention.

Fig. 2 is an enlarged section showing details of my invention, and

Fig. 3 is a fragmental view showing a tuning slide of the wind instrument embodying my invention.

An important feature of my improvement is the provision of a single slide which can be quickly and easily moved and stopped at desired positions to tune or change the key of an instrument equipped with it. This is preferably accomplished by a means permitting one adjustment for tuning and another adjustment for changing the key, all operating on the same slide.

In Fig. 1, I have shown a top or plan view of a trumpet having a mouth pipe 5, a bell pipe 6 and a tuning slide 7. The tuning slide 7 is provided with tubular portions 8 which are telescoped in the mouth pipe 5 and a pipe 9 immediately under the mouth pipe 5, in Fig. 1, a portion of the pipe 9 appearing in Fig. 3. The parts 5, 8 and 9 are so formed that the parts 8 may slide freely into and out of the pipes 5 and 9 to effect tuning and changing the key of the instrument.

I preferably secure an arm 10 on the mouth pipe 5 and an arm 11 on the tuning slide 7. The arms 10 and 11 are preferably positioned between the mouth pipe 5 and the bell pipe 6 so that when the instrument is in use, the locking feature will be substantially out of view. The arm 10 is preferably threaded, as clearly indicated in Fig. 2, and a tubular stop member 12 threaded in the threaded perforation of arm 10 so that the member 12 can be adjusted longitudinally

of the pipe 5 by revolving it in the arm 10. One end of the member 12 should be provided with a thumb-wheel 13, or its equivalent, by means of which it can be rotated to adjust it in the arm 10.

In the arm 11 is secured a rod 14 and the latter extends through a longitudinal perforation in the member 12, as clearly indicated in Fig. 2. The rod 14 may be secured to the arm 11 in any desirable manner. Near one end of the rod 14 I provide a threaded portion 15 on which is threaded two nuts 16 and 17, and at the outer end of the portion 15 is provided a nut 18, the latter simply serving the purpose of preventing displacement of the nuts 16 and 17 from the portion 15.

When it is desired to change the instrument from one key to another, for instance, from "B flat" to "A", the slide 7 is pulled out until the nut 16 engages the end of member 12 having the thumb wheel 13 on it. Should the instrument be slightly out of tune, the nut 16 may be adjusted along the rod 14 until the adjacent end of member 12 will rest against the nut 16 when the instrument is properly tuned. To change the key of the instrument back to "B flat" the slide 7 is pushed in again until the end of member 12 adjacent arm 11 engages the latter. Should the instrument be out of tune with the slide in the last-named position, the tubular member 12 may be adjusted in the ear 10 so that when its end adjacent arm 11 is against the latter, the instrument will be at the proper pitch. When these adjustments are properly set it is only necessary to move the slide 7 inwardly until the arm 11 engages one end of member 12 to have the instrument in one pitch or key and move the slide 7 outwardly until the nut 16 engages the other end of the member 12 to change the instrument to another key.

I claim:

1. A device of the kind described comprising two tubular portions telescoped together; an arm extending laterally from each of said tubular portions; a tubular member threaded in one of the arms; a rod attached at one end to the other of said arms and slidably mounted in said tubular member; and a nut threaded on the other end portion of said rod.

2. A device of the kind described comprising two tubular portions telescoped together; an arm extending laterally from

each of said tubular portions; a tubular member adjustably mounted in one of said arms; a rod secured to the other of said arms and slidably mounted in said tubular member; and a stop on said rod, said stop and the last-mentioned arm being adapted to engage the tubular member, one at a time, to limit the telescoping movements of the tubular portions.

3. A device of the kind described comprising two tubular portions telescoped together; an arm extending laterally from each of said tubular portions, one of said arms having a threaded perforation therein; a tubular member threaded in said threaded perforation; a rod secured to the other of said arms and slidably mounted in said tubular member; and a stop adjustably mounted on said rod, said adjustably mounted stop and the last-mentioned arm being adapted to engage the tubular member, one

at a time, to limit the telescoping movements of said tubular portions.

4. A device of the kind described comprising tubular portions; a tuning slide telescoped in said tubular portions; an arm on said tuning slide; an arm on one of the tubular portions; a tubular member mounted in the arm on said tubular portion; a rod attached to the arm on said slide and slidably mounted in said tubular member; and a stop on said rod, the tubular member being of a length to be engaged by the arm on said slide to limit the movement of said slide in one direction and to engage said stop to limit the movement of the slide in the other direction.

In testimony whereof I have signed my name to this specification on this 20th day of January, A. D. 1919.

FRANK HOLTON.