

F. HOLTON.  
CORNET.

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1,005,972.

Patented Oct. 17, 1911.

Fig. 1.

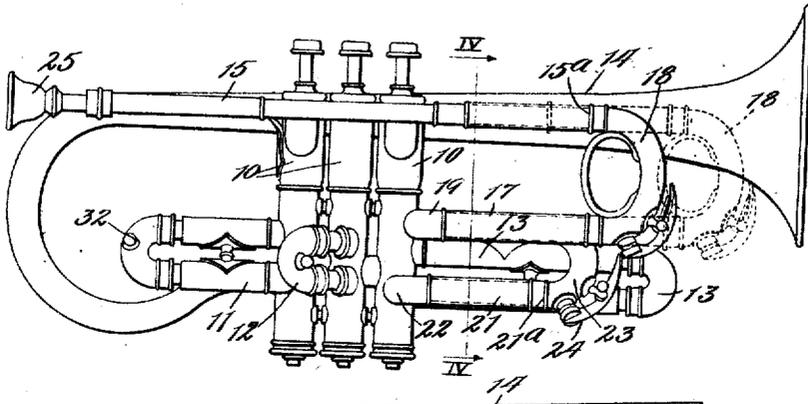


Fig. 2.

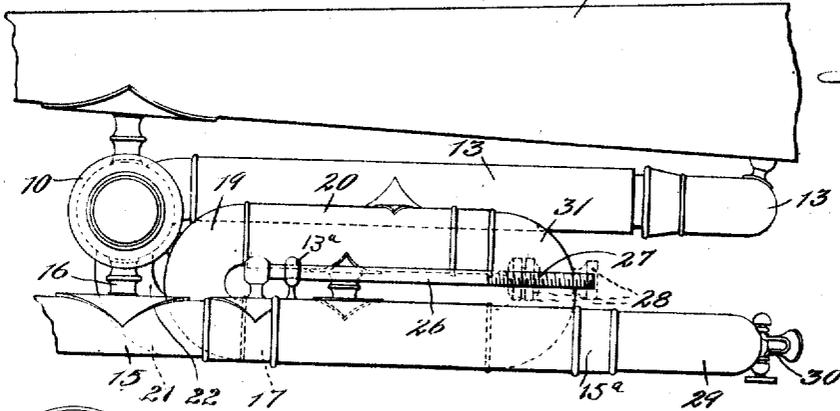


Fig. 3.

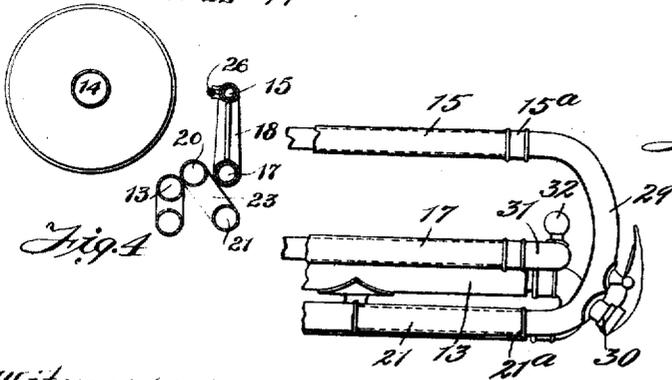


Fig. 4.

Witnesses:

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# UNITED STATES PATENT OFFICE.

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CORNET.

1,005,972.

Specification of Letters Patent.

Patented Oct. 17, 1911.

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To all whom it may concern:

Be it known that I, FRANK HOLTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cornets, of which the following is a specification.

This invention relates to improvements in cornets and has for one of its objects to provide an improved device of this character, the scale of which may be quickly and accurately changed from one key to another, such as from B-flat to A and vice versa and in which the tuning slide and the quick-change slide are located entirely to one side of the valve chambers whereby the cornet will be compact and at the same time permit the bell to be constructed of a length somewhat greater than the length of the bell in the ordinary cornet, thereby improving the resonance of the instrument and the intensity and qualities in general of the notes emitted therefrom.

A further object is to provide improved means whereby a portion of the mouth pipe and the connection tube may be cut out to decrease the length to change the instrument to still another key, such as the key of C, for vocal accompaniment.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing, illustrating an exemplification of the invention and in which—

Figure 1 is a side elevation of an improved device of this character constructed in accordance with the principles of this invention, showing in full lines a B-flat cornet and with the parts adjusted as shown in dotted lines to change the instrument to the key of A. Fig. 2 is an enlarged detail top plan view showing a portion of the mouth pipe and connection tube cut out, and a slide joining the ends of the connection pipe to transpose the instrument to the key of C. Fig. 3 is a detail elevation of a portion of Fig. 2 showing the connecting slide in position. Fig. 4 is a sectional view taken on line IV—IV, Fig. 1.

Referring more particularly to the drawing and in the present exemplification of the invention, the numeral 10 designates the ordinary valve casings or chambers provided with the usual extension air passages 11, 12 and 13. The bell 14 is connected and has communication with one of the valve casings or housings 10 in the ordinary and usual manner. As used in this specification, the term bell designates that portion of the end of the tube from the point at which said tube begins to enlarge. A mouth pipe or tube 15 extends along the side of and beyond the valve casings 10 toward the mouth of the bell 14 in the usual manner and is supported by means of suitable brackets 16, which may be secured to the valve casings. This pipe or tube 15 terminates short of the end of the bell 14 and is bent back upon itself at 17 toward the valve casings to form spaced sections and the bend between these sections is formed by means of a sliding connection 18, by means of which the pitch of the instrument may be quickly changed from one key to another by quickly adjusting the slide with respect to the sections of the bend, as shown more clearly in dotted lines in Fig. 1 of the drawings. The bend or slide 18 is arranged substantially vertical and the free end of the section 17 is bent laterally and back upon itself, as at 19, and toward the mouth of the bell, to form another section 20, which is parallel with the section 17 and the bend 19 is substantially horizontal. One end of the section 20 terminates adjacent the slide 18 and is itself bent downwardly and back upon itself to form a section 21, which enters and has communication at 22 with the valve casing 10, which is located nearest to the mouth of the bell. The bend between the section 20 and the section 21 is formed by means of an adjustable slide 23, which is provided with the usual moisture outlet 24 and this slide is adapted to be adjusted in the sections 20 and 21 to properly tune the instrument. This bend or slide 23 is preferably located in a plane inclined to the plane of the slide 18 whereby the slides 18 and 23 may be located in close proximity to each other and at the same time either one may be readily adjusted without interfering with the adjustment of the other. A mouth piece 25 is provided on the end of

the tube or pipe 15 in the usual manner. In use air will pass from the mouth piece 25 through the section 15, slide 18 to the section 17, through the bend 19 into the section 20, through the slide 23 into the section 21 and from the section 21 into the valve casings 10 through the connection 22. Thus a continuous passage for the air will be formed from the mouth piece to the valve casing and which passage has communication with the valve casing only at one point and that at the end of the passage. With this improved construction it will be apparent that the mouth pipe or tube 15 is provided with the necessary length to produce the proper tones and at the same time by arranging the quick-change slide 18 and the tuning slide 23 entirely to one side of the valve casings and adjacent the outlet of the bell, a very compact instrument is produced and by this arrangement it is possible to provide a bell which is of considerable length thereby producing a tone of fine quality.

In order to provide means for limiting the outward movement of the key-changing slide 18, the ordinary and well known stop is provided and which consists of a bar or rod 26 rigidly secured at one end to a rigid portion of the mouth pipe 15 and extends longitudinally of said mouth pipe. Slidably engaging the rod 26, is a bearing 13<sup>a</sup> which is rigidly secured to the adjacent arm of the slide 18. The free end of the rod 26 is threaded for the reception of check nuts 28, indicated in dotted lines in Fig. 2, by the abutment of which against the sleeve the outward movement of the slide is limited.

In order to change the instrument to one in the key of C for the purpose of vocal accompaniment, and at the same time preserve the shape of the instrument, it is necessary to shorten the passage formed by the mouth pipe 15 between the mouth piece 25 and the point 22 where it enters the valve casing 10 by cutting out a portion of this passage. In order to cut out a portion of this pipe or render it inactive, the check nuts 28 are first removed from the rod 26 after which the quick change slide 18 connecting the ends of the sections 15 and 17 may be detached and the tuning slide 23 which forms a connection between the sections 20 and 21 may also be detached and when so detached the extremity 15<sup>a</sup> of the mouth pipe 15 is connected or joined directly to the extremity 21<sup>a</sup> of the section 21 by means of the tubular connection 29, (see Fig. 3) which is in the form of a slide similar to the slides 18 and 23 and is also provided with a moisture outlet 30. When this slide 29 is thus attached, it will be seen that the portion of the mouth pipe 15 comprising the sections 17 and 20, together with

the bend or connection 19, will be cut out and the air will pass directly from the pipe 15 through the connecting slide 29 and into the valve casing through the section 21.

A suitable tubular connection 31 may be provided for joining the free extremities of the sections 17 and 20 when the crook 29 is in use, as shown more clearly in Fig. 2 of the drawings for the purpose of giving the instrument a better appearance, as well as protecting the free extremities of these sections 17 and 20, although this connection may be omitted, if desired.

When the cornet is being used with the crook 29 in position, the valve tones may be perfected in the usual manner by means of tuning slides for regulating the lengths of air passages 11, 12 and 13. If desired, the connections may be provided with suitable projections 32 by means of which they may be readily adjusted.

In order that the invention might be fully understood, the details of the foregoing embodiment have been thus specifically described, but

What I claim as new is—

1. In a wind instrument, the combination of a valve casing, a bell member connected with said casing at one side thereof, a mouth pipe extending from the mouth piece situated at the first said side of said casing, the mouth pipe crossing the casing to the opposite side and entering the casing at the latter side, said mouth pipe comprising in its length three crooks, the one of which that is situated nearest the mouth piece containing a tuning slide, a second tuning slide being located in another of said crooks, and all of said crooks and said slides being disposed between the outer extremity of the bell member and the side of said casing adjacent the said bell extremity.

2. A wind instrument embodying a bell member, a valve casing, and a mouth pipe leading to said valve casing, said mouth pipe comprising four parallel branches and slides connecting the respective branches, all of said branches and slides being disposed entirely on the same side of the casing and adjacent the bell extremity, the extremity only of the pipe to which the mouth piece is connected projecting to the other side of the casing.

3. A valved wind instrument including a bell member and a valve casing, a mouth pipe leading to the valve casing, and being shaped to form a plurality of pairs of spaced sections, detachable connecting slides joining the extremities of the respective sections of each pair to form a continuous passage for the air through the entire length of the mouth pipe to the valve casing, and an additional connection adapted to join one of the sections of one pair with one of the sections of another pair when the first

said slides are detached, whereby a portion of the mouth pipe will be rendered inactive.

4. A valved wind instrument including a bell member and a valve casing, a mouth pipe leading to the valve casing, and being shaped to form a plurality of pairs of spaced sections, detachable connecting slides joining the extremities of the respective sections of each pair to form a continuous passage for the air through the entire length of the mouth pipe to the valve casing, said slides being located beyond and on the same side of the valve casing, and an additional connection adapted to join one of the sections of one pair with one of the sections of another pair when the first said slides are detached, whereby a portion of the mouth pipe will be rendered inactive.

5. A valved wind instrument including a bell member and a valve casing, a mouth pipe leading to the valve casing, and being shaped to form a plurality of pairs of spaced sections, adjustable and detachable connecting slides joining the extremities of the respective sections of each pair to form a continuous passage for the air through the entire length of the mouth pipe to the valve casing, said slides being located beyond and on the side of the valve casing toward the outlet of the bell, and an additional connection adapted to join one of the sections of one pair with one of the sections of another pair when the first said slides are detached whereby a portion of the mouth pipe intermediate its extremities will be rendered inactive.

6. A valved wind instrument including a bell member and a valve casing, a mouth pipe leading to the valve casing and being shaped to form a plurality of pairs of spaced sections, detachable connecting slides joining the extremities of the respective sections of each pair to form a continuous passage for the air through the entire length of the mouth pipe to the valve casing, an additional connection adapted to join one of the sections of one pair with one of the sections of another pair when the first said slides are detached whereby a portion of the mouth pipe will be rendered inactive, and means for protecting the exposed ends of the remaining sections.

7. A wind musical instrument embodying a bell member, a valve casing, a mouth pipe comprising four parallel branches, a pitch-changing slide in one of the branches and a tuning slide in another of the branches, all of said branches and slides being arranged entirely on the same side of the casing as the extremity of the bell, the extremity only of the mouth pipe to which the mouth piece is connected projecting to the other side of the casing.

8. In a wind musical instrument, the combination with a mouth pipe comprising four

or more sections adjacently disposed, removable slides connecting said sections successively in pairs, and a substitute slide adapted to connect the first section of the first pair with the last section of the second pair, whereby the intermediate sections are cut out of the air passage.

9. In a wind instrument, the combination of a mouth-pipe comprising a plurality of sections adjacently disposed, two of said sections being arranged on parallel axes said axes lying in the same horizontal plane when the instrument is in position for use, others of said sections being disposed above and below the latter, and removable slides connecting each of the two sections which are arranged in the said plane respectively with the sections above and below the last recited sections.

10. In a wind instrument, the combination of three valve casings, a bell member connected with one of said casings at one side thereof and crossing said casing and terminating at the other side of the farthest one of said casings, a mouth pipe extending from the mouth piece situated at the first said side of said casings, said mouth pipe crossing the casings to the opposite side and entering that one of the casings nearest the bell extremity, said mouth pipe comprising in its length three crooks, the one of which that is situated nearest the mouth piece containing a tuning slide, and a second tuning slide being located in another of said crooks, and all of said crooks and slides being disposed between the outer extremity of the bell member and the side of that one of the valve casings which is nearest the bell extremity.

11. In a wind instrument, the combination of a valve casing, a bell member connected therewith, the extremity of which member projects beyond the valve casing and on one side thereof, a mouth pipe comprising a plurality of sections adjacently disposed, two of said sections being arranged on parallel axes, said axes lying in substantially the same horizontal plane when the instrument is in position for use, others of said sections being disposed above and below the latter and removable slides connecting each of the two sections which are arranged in the said plane respectively with the sections above and below the last recited sections, said sections and slides being all disposed in the space between the plane of the outer edge of the bell member and the adjacent valve casing.

12. In a wind instrument, the combination of a valve casing, a bell member connected with said casing, at one side thereof and crossing the same and terminating at the other side, a mouth pipe extending from the mouth piece situated at the first said side of said casing, said mouth pipe crossing the casing to the opposite side and entering the

casing at the latter side said mouth pipe  
 comprising in its length three crooks, the  
 one of which that is situated nearest the  
 mouth piece containing a tuning slide and  
 5 being arranged in an upright plane with the  
 space adjacent said casing between the  
 branches thereof unobstructed to afford room  
 for the fingers of the operator, a second  
 tuning slide being located in another of said  
 10 crooks, and all of said crooks and said slides  
 being disposed between the outer extremity

of the bell member and the side of the said casing adjacent the said bell extremity.

In testimony whereof I have signed my name to this specification, in the presence of 15 two subscribing witnesses, on this 3rd day of March A. D. 1908.

FRANK HOLTON.

Witnesses:

J. H. JOCHUM, Jr.,  
M. W. CANTWELL.