

(No Model.)

J. HEALD.
CORNET.

No. 543,015.

Patented July 23, 1895.

Fig. 1.

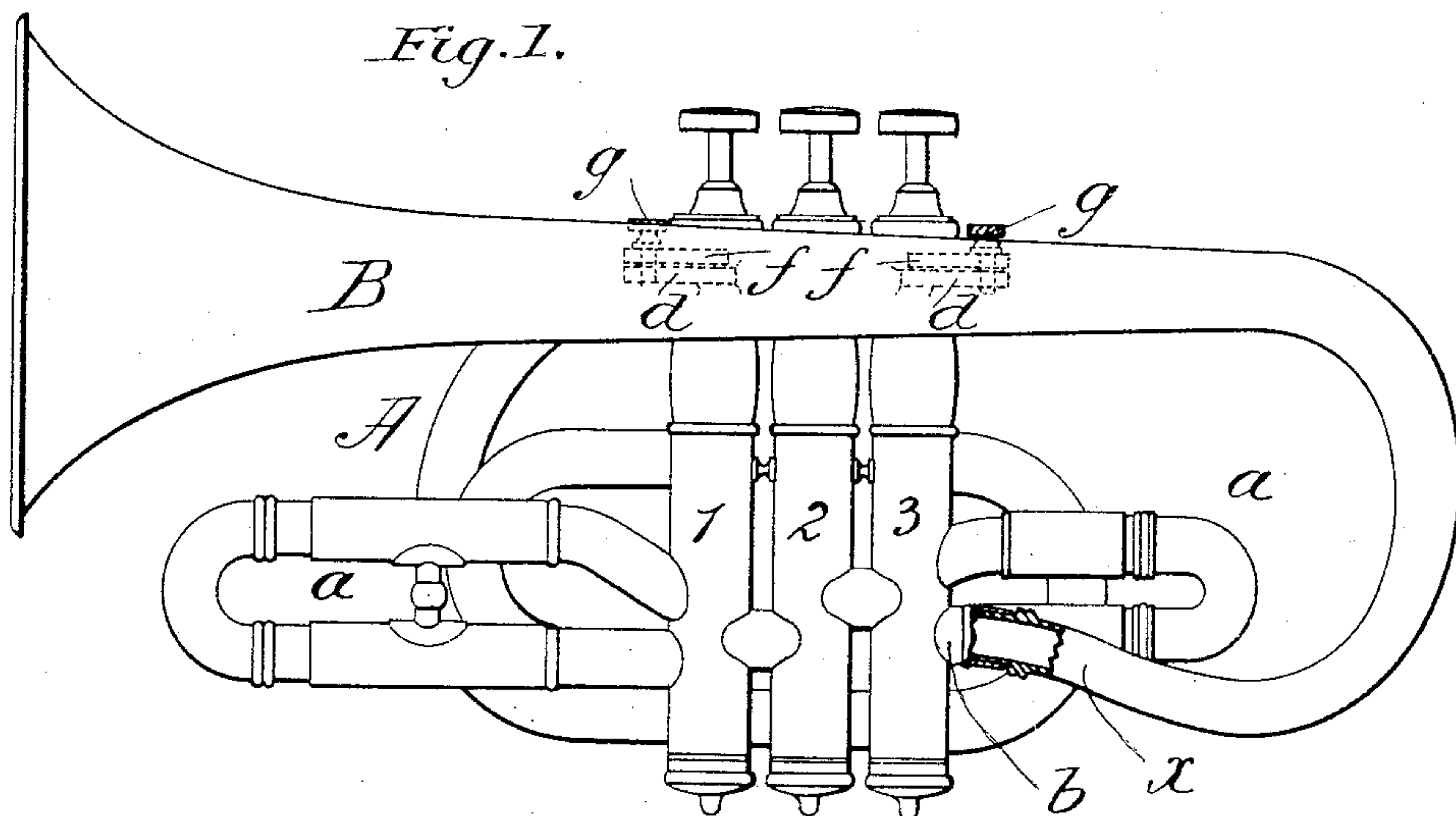
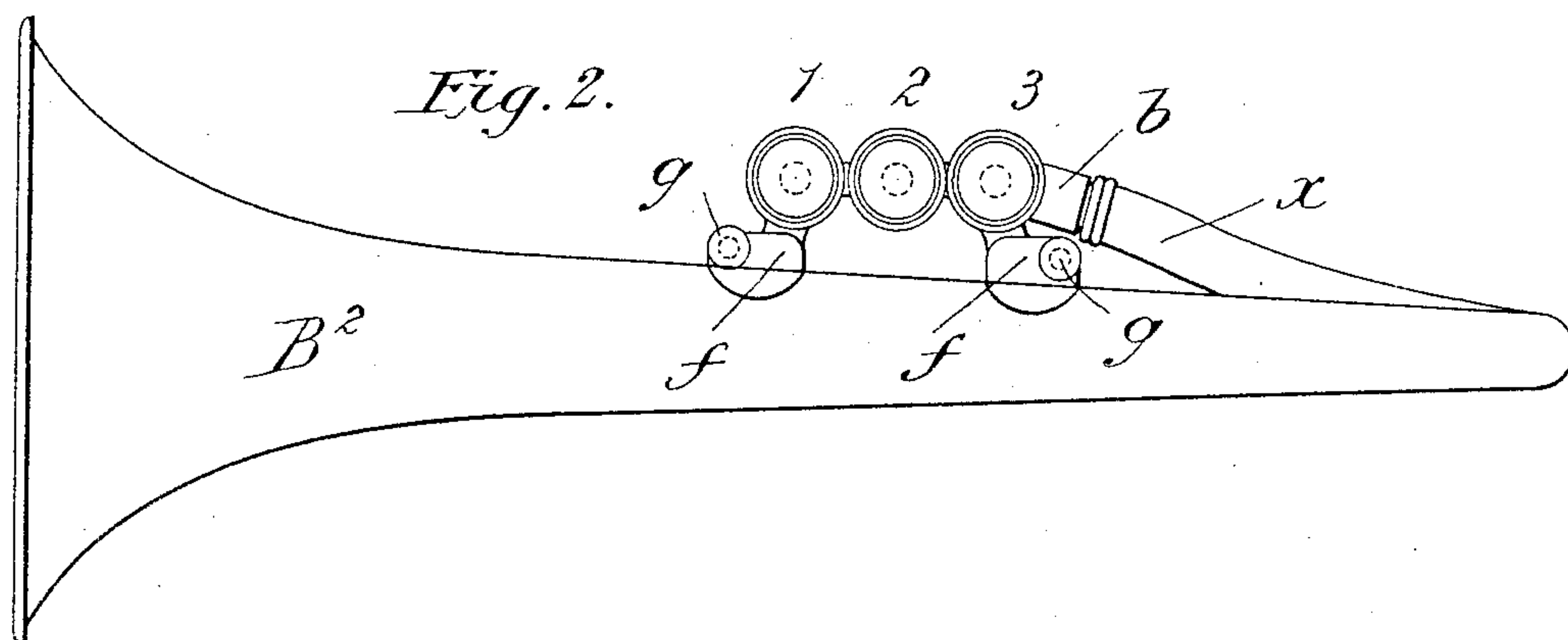


Fig. 2.



WITNESSES

Wm H Chapin
H. J. Clemons

INVENTOR.

John Heald

By Chapin &
ATTY'S

UNITED STATES PATENT OFFICE.

JOHN HEALD, OF SPRINGFIELD, MASSACHUSETTS.

CORNET.

SPECIFICATION forming part of Letters Patent No. 543,015, dated July 23, 1895.

Application filed February 13, 1895. Serial No. 538,182. (No model.)

To all whom it may concern:

Be it known that I, JOHN HEALD, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Cornets, of which the following is a specification.

Cornets and analogous musical instruments as heretofore made have been dependent upon the usual U-shaped slide located in the air-conduit intermediate of the mouth-piece and the bell of the instrument for changing the pitch from a higher to a lower one, and vice versa, the said bell being permanently attached to the cornet. Consequently, as aforesaid, no part of the instrument except said slide could be operated for said change of pitch. It has been found in practice that the proper volume and quality of tone are unattainable through the use of a tuning-slide alone when the pitch is altered by the slide.

The object of this invention is to provide for use with a wind instrument of the herein-described class, which has the usual cylinders, valves, air-conduits, and valve-operating devices, one or more removable substitute bells of suitable varying sizes, which severally contribute in connection with the aforesaid slide to the production of correct varying musical pitches, as above set forth. The said substitute bell constitutes the terminal of the wind-passages through the instrument, as also does the bell which it takes the place of.

The improved cornet is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of the cornet with some of the novel features shown in section and by dotted lines. Fig. 2 is a plan view showing the middle or piston and valve portion of the cornet, the interchangeable bell which here is of a larger size as to length and diameter from the one shown in Fig. 1 and the confining and steadying devices therefor.

The cornet A has, as usual, the several cylinders 1 2 3, bowed or U-shaped sides, tubes *a*, the piston-valves in the cylinders, and a pipe (here concealed by other parts) to which the mouthpiece is connected leading by the usual looped course to the first one of the cylinders 1. Leading from the last of the cylin-

ders 3 is a tubular stem *b*, and with this is connected by a "slip" or telescopic joint the return-bent portion *x* of the bell or horn B or B². On the piston-cases—one or more thereof—are formed or secured ear-lugs *d d*, and the part of the bell which is opposite thereto has corresponding ear-lugs *f f*, the matching ear-lugs being detachably confined by the thumb-screws *g g*.

By removing the set-screws and forcing the bell B substantially horizontally in the proper direction it may be freed from the body or main portion of the instrument and another bell of different length or diameter, or different both in length and diameter, may be slipped into or onto the tubular stem and restrained by having the set-screws passed through its ear-lugs, which, as did those of the other bell, match with the ear-lugs on the body of the instrument.

The operation of my improvements is as follows: It is well known to persons skilled in the use of cornets and analogous instruments heretofore made that the operation of said tuning-slide for, for instance, lowering the pitch of a B-flat cornet a tone or a semitone by the use of the tuning-slide only does not produce the desired volume of tone, for it lacks the full, sonorous quality which such lower tone should possess because the size or capacity of the bell B, while adequate for the higher tone, is not adapted to the production of the lower one. Consequently when the player using my improvements reduces the pitch of the instrument through the slide *a*, as aforesaid, he also removes the smaller bell B and substitutes the bell B² therefor, which is longer and of greater diameter at and back of its mouth, and thereby a lower tone or pitch is produced having the full, sonorous quality belonging to such a pitch. Likewise, in then tuning the instrument to a higher pitch the smaller bell is substituted for the larger one.

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

1. A cornet or analogous musical instrument having its main portion comprising the passages and one or more tuning slides as usual, combined with a detachable open-mouthed terminal bell, whereby the same may

be substituted by similarly applied bells of different dimensions, substantially as described.

2. A cornet or analogous musical instrument having its main portion comprising the passages and one or more tuning slides as usual, and having that portion thereof which comprises the passage which carries the tone

into the bell constructed with a socket adapted to receive the smaller end of interchangeable, substitute bells, having open-mouthed terminals, substantially as described.

JOHN HEALD.

Witnesses:

WM. S. BELLOWS,
H. A. CHAPIN.