

(No Model.)

C. MEISTER.

MOUTH PIECE FOR BRASS MUSICAL INSTRUMENTS.

No. 315,810.

Patented Apr. 14, 1885.

Fig. 1.

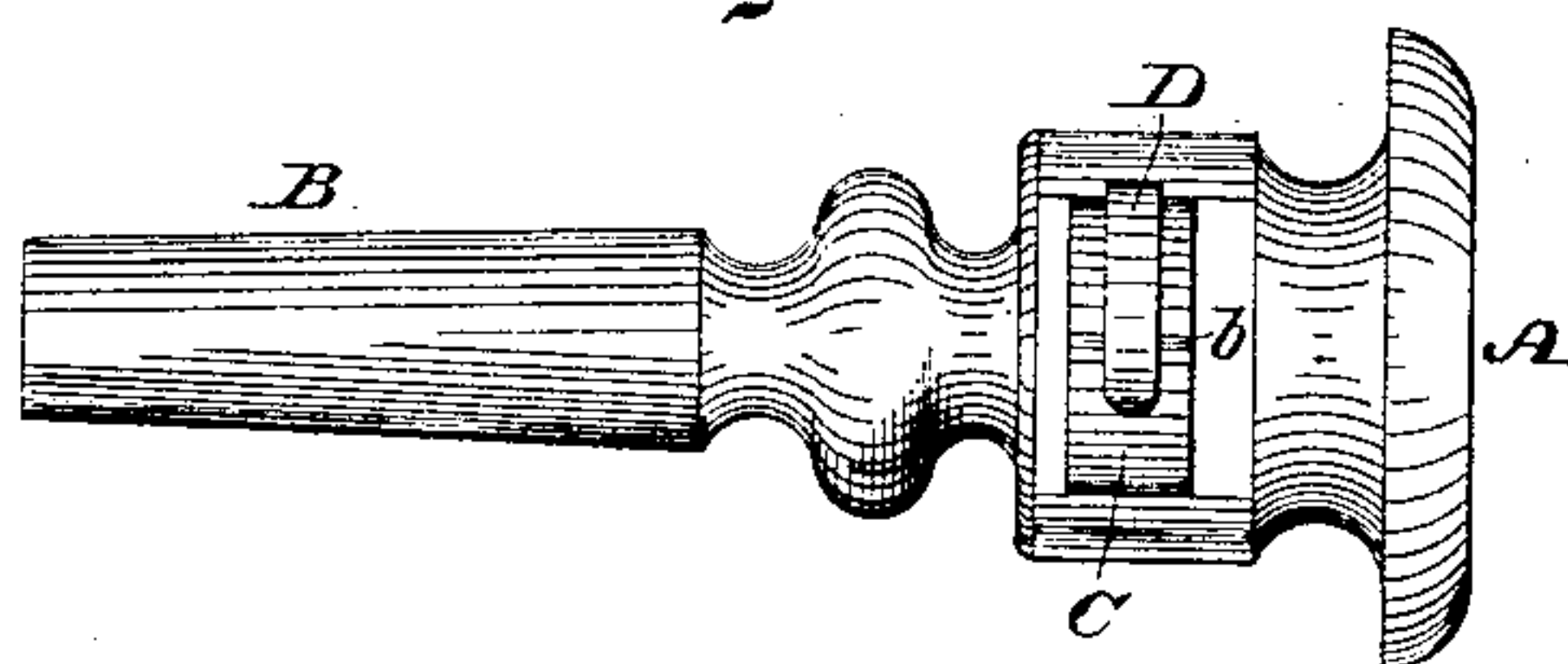


Fig. 2.

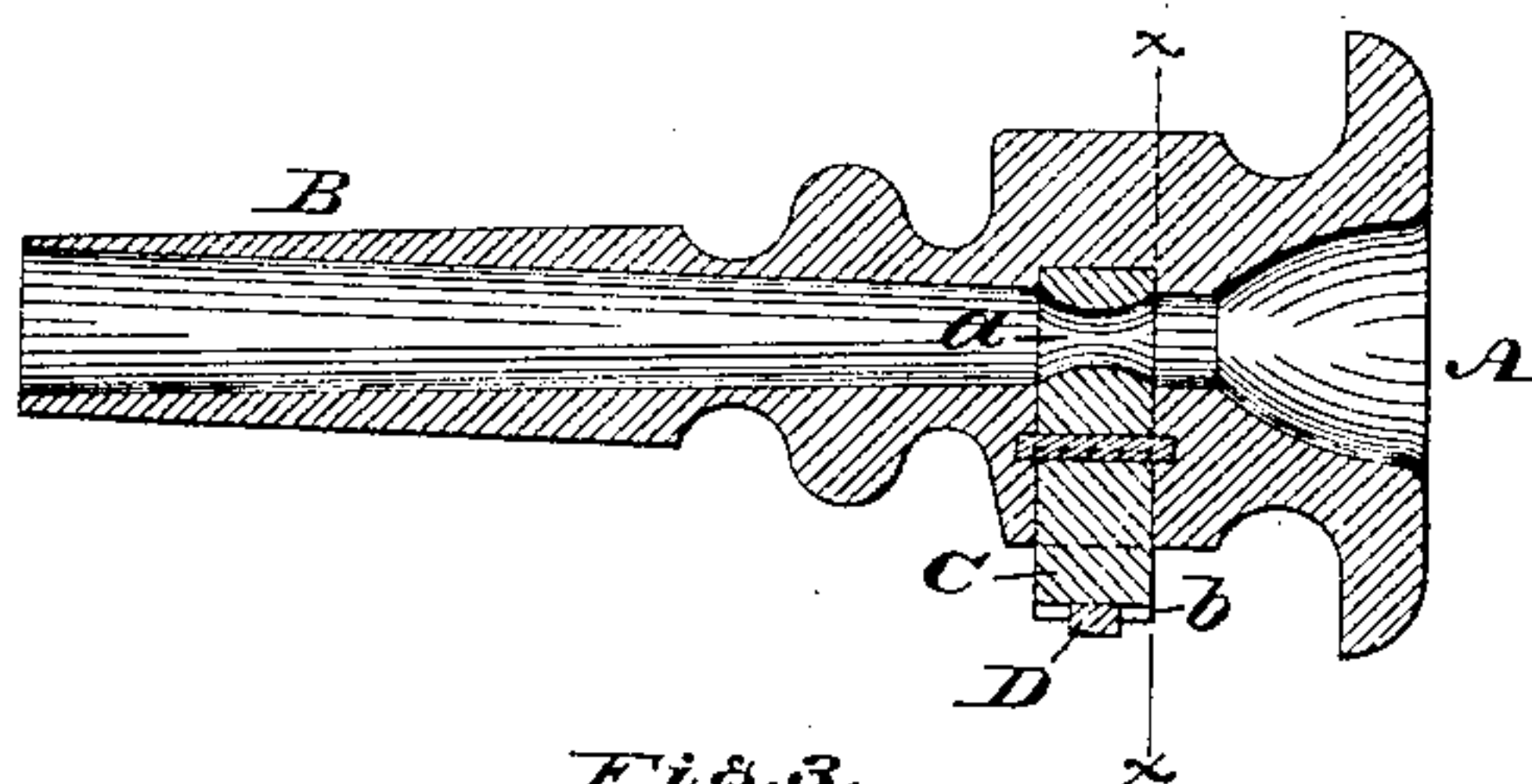


Fig. 3.

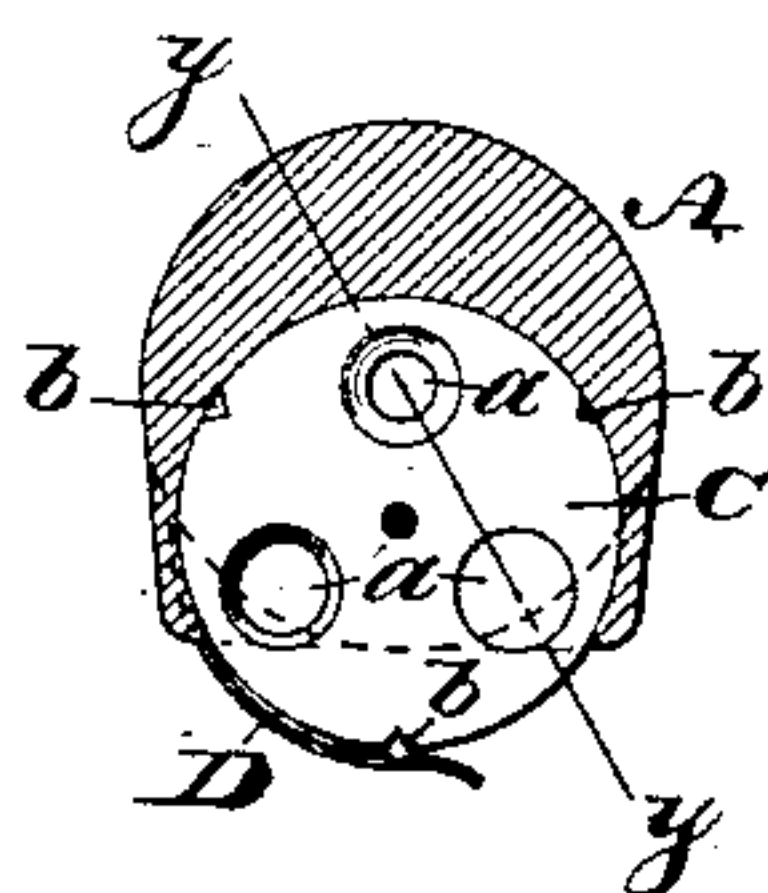


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## MOUTH-PIECE FOR BRASS MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 315,810, dated April 14, 1885.

Application filed February 13, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, CARL MEISTER, a citizen of Switzerland, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Mouth-Pieces for Brass Musical Instruments, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a side elevation of a mouth-piece for a brass musical instrument embodying my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a transverse section thereof in line *xx*, Fig. 2. Fig. 4 is a section of a detached portion in line *yy*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a mouth-piece for a musical instrument of the class generally termed "brass musical instruments," provided with means for adjusting the bore thereof, whereby advantages are attained, as will be hereinafter fully set forth.

Referring to the drawings, A represents the mouth-piece of a brass musical instrument, and B the tube thereof. In the base of the mouth-piece is formed a recess, in which is fitted a rotatable disk or block, C, the axis whereof is parallel with the longitudinal direction of the mouth-piece and eccentric with the opening of the mouth-piece and tube. The object of the disk or block C is the adjustability of the bore of the mouth-piece, whereby the latter is adapted to different styles of instruments, the variations in the lips of the performer and instruments of different caliber, it being evident that the correct size of the bore is of great importance to both the tone of the instrument and performance of the player. A mouth-piece with a small bore will impart to the instrument an acute tone, sharp and cutting in quality, advantageous for outdoor or military-band playing. For in-door performance a softer and more mellow tone is desirable, and this may be produced by a larger bore. These are both accomplished by the adjustment of the bore through the movement of the disk, effects heretofore attainable by the employment of two different mouth-pieces,

which, as well known, are injurious to the lips. In the disk are a number of openings or passages, *a*, two or more, of different diameters, and arranged concentric with the axis of the disk, so that by rotating the disk either passage may be placed in communication with the openings of the mouth-piece and tube, said passage thus constituting partly or entirely the bore of the mouth-piece. The disk has a portion of its periphery projecting outside of the mouth-piece, whereby it may be conveniently engaged by the fingers, and thereby rotated. In the present case the bore is shown partly in the disk C and partly in the contiguous portion of the mouth-piece; but it is evident that the disk may be of such dimension as to have either of its openings constitute the entire bore. It will be seen that by rotating the disk either opening thereof may be placed in communication with the mouth-piece, thus enlarging or reducing the bore of the mouth-piece.

The "embouchure," a term designating the action and function of the lips in producing the sound through a mouth-piece, often becomes wearied by continuous playing. This is relieved and benefited by the adjustable bore, as high or low notes can be attained with comparative ease, and fatigue to the lips is avoided. After forming the embouchure upon one particular size of mouth-piece, it is of the utmost importance that the same size of rim should be retained; but as differently-pitched instruments require mouth-pieces with different sizes of bore, it is evident that the adjustable bore supplies the requirements without changing the mouth-piece.

In order to retain the disk in adjusted position the periphery thereof is provided with notches *b*, into either of which drops the end of a spring, D, which is attached to the exterior of the mouth-piece, the spring thus serving to hold the disk firmly in position. The same result may be produced by a set-screw passed through the wall of the mouth-piece and tightening against the disk. The power of the spring may be readily overcome or the set-screw loosened, and thus the disk may be rotated as desired.



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

1. A mouth-piece having its tube provided  
5 with a device in which are passages of different sizes, whereby the bore of said tube is varied in its width, substantially as described.

2. A mouth-piece of a brass musical instrument, provided with a disk having passages of  
10 different diameters, either of which may be placed in communication with said mouth-

piece, thus varying the width of the bore in the tube of the mouth-piece, substantially as and for the purpose set forth.

3. A mouth-piece having a rotatable disk 15 with passages of different diameters, and means for retaining said disk in position, substantially as and for the purpose set forth.

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