

No. 766,027.

PATENTED JULY 26, 1904.

F. H. FAIRCHILD.
MUSICAL INSTRUMENT.

APPLICATION FILED OCT. 21, 1903.

NO MODEL.

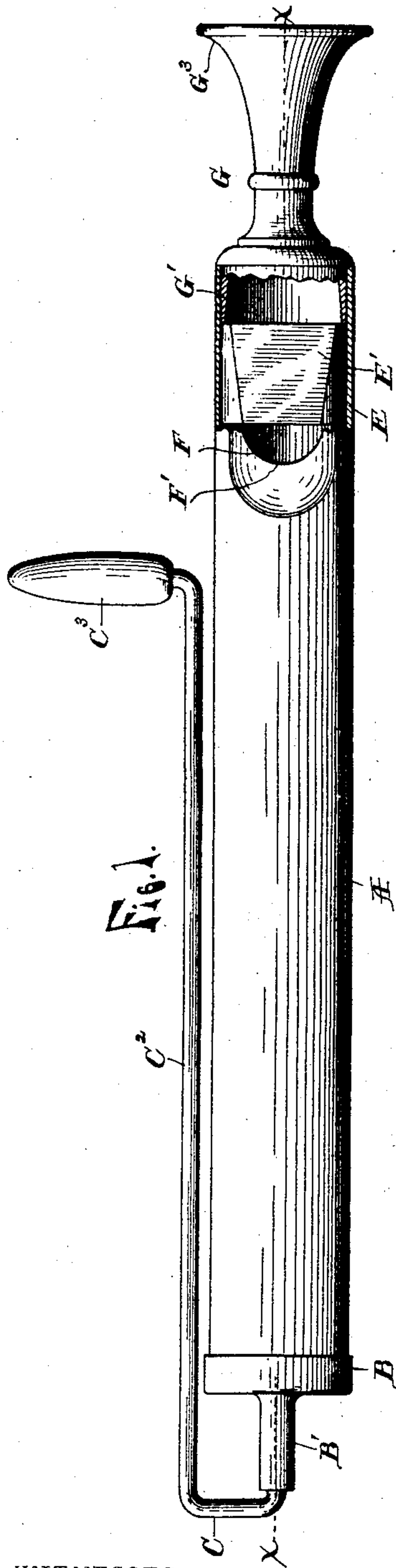


Fig. 1.

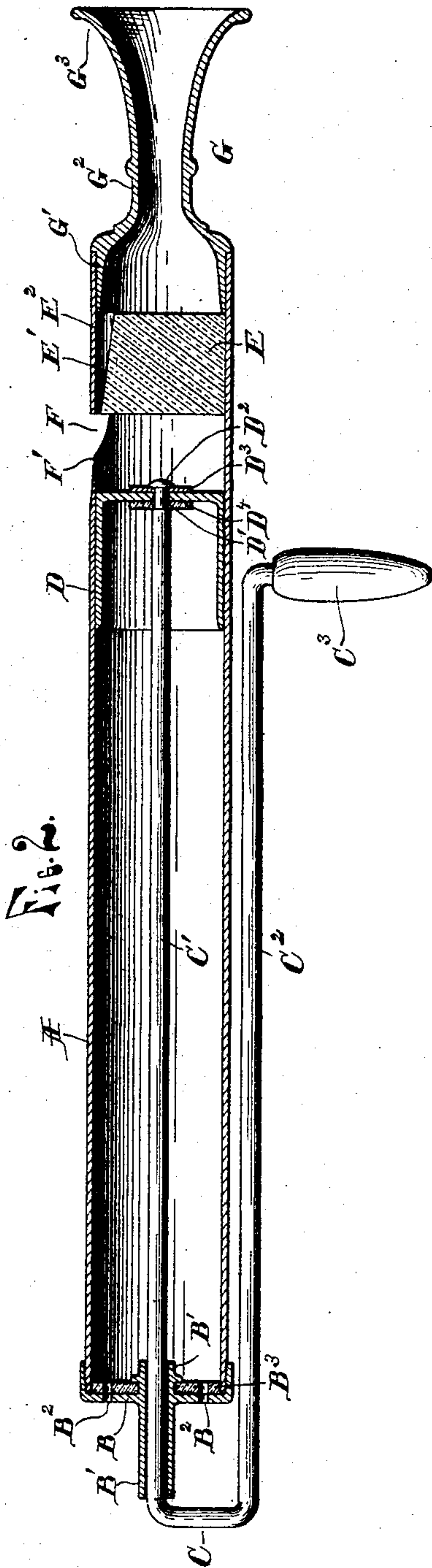


Fig. 2.

WITNESSES.

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MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 766,027, dated July 26, 1904.

Application filed October 21, 1903. Serial No. 177,861. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. FAIRCHILD, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to an improved musical instrument; and its object is to provide a wind instrument which will give forth sounds differing from those produced by any instrument in the nature of a horn, flute, or
15 whistle and which is very simple and cheap in construction and upon which it is easy to learn to play.

To this end the invention consists in the particular construction, arrangement, and combination of parts, all as hereinafter more fully described, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation of a device embodying the invention, showing the side in which the sound-opening is located with parts broken
25 away to show the construction; and Fig. 2 a longitudinal section of the same on the line *x x* of Fig. 1.

As shown in the drawings, A is a tubular body portion formed of a thin metal tube closed at one end by a cap B screwed thereon, said cap being provided with outwardly and inwardly extending bosses B', having an axial opening through which the rod C passes and
30 forming an extended bearing therefor. The cap is also provided with openings B² for the escape of the air contained in the cylinder or body A behind the piston D, said piston consisting of a cup-shaped head fitting closely
35 within the body to slide therein and secured to the inner end of the rod C. A disk B³, of leather or other suitable material, is secured upon the inner boss against the inner side of the cap and forms a buffer for the piston.
40 The piston is secured to the end of the rod by reducing said end to form a shoulder thereon and to pass through an opening in the head and by forming a head D² on the end of the

reduced portion D' to engage a washer D³, interposed between said head and the piston, a
50 flexible washer D⁴, of rubber or other suitable material, being interposed between the piston and the shoulder, so that the head is secured to the rod against longitudinal movement thereon, but free to have a slight lat-
55 eral movement, thus preventing it from binding and sticking in the cylinder.

Fitted tightly within the body A, near the opposite end thereof from that closed by the cap B, is a plug E, formed of any suitable material which is not appreciably affected by
60 varying temperatures, so that it may be driven hard into the tube or body, and at its upper side this plug is cut away or provided with a flat portion E', so that a passage E² is formed
65 between the plug and tube, the plug being cut away at an incline to its axial line, so that the passage will be contracted toward the rear end of the plug. In the tubular body at the
70 rear side of the plug and opposite the passage E² is cut a notch or sound-opening F, the edge of the metal tube opposite the end of the passage being formed with a feather-edge F'.

A mouthpiece G is provided with a tubular portion G' to fit closely within the end of the
75 tube adjacent to the plug and is contracted to form a narrow throat portion G² and formed with a flaring or bell-shaped end G³ to be pressed against the lips.

The rod C is bent twice at right angles, forming the two parallel portions C' and C², the portion C' extending within the body and having the piston secured to its end and the
80 portion C² passing outside the body and close to the side thereof, its end being turned at right angles and provided with a handle C³,
85 extending radially outward from the body. By thus bending the piston-rod the handle, whether the rod be extended or not, is always adjacent to the body in a position to support
90 the same and to be easily and accurately operated, the operator being able to move the piston much more accurately and easily by having the handle where it can be grasped
95 without extending the arm. The piston and rod being free to turn within the body the

handle may be turned to extend radially outward from any side thereof, and therefore the operator may operate the same with either hand or in any position to suit his convenience. The body being a thin metal tube formed with the sound-opening having the feather-edge when the player blows into the same the body vibrates and produces pleasing tones, the length of the vibrations being determined by the position of the piston, which may be moved to make any note desired within the range of the instrument, the feather-edge of the sound-opening and the size and shape of the passage E^2 being essential elements in determining the quality of the tones.

In using the instrument the player grasps the mouthpiece with one hand and presses the flaring end against his lips, while with the other hand he grasps the handle which operates the piston and at the same time supports the body, which is thus free to vibrate and gives a much more pleasing tone than it would if the hand of the player came in contact with it.

By providing the flaring mouthpiece the instrument may be held firmly against the lips and the piston operated without injury to lips or teeth by the jar or vibration, and by connecting the piston to the rod as described the movement of the piston will not be hindered if the rod is not guided accurately, and thus the piston will move freely without binding at all times.

Having thus fully described my invention, what I claim is—

1. In a musical instrument, the combination of a cylindrical body having a sound-opening in its side and provided with a mouthpiece, a plug in the body cut away to form a passage adjacent to said opening, a piston in said body, a rod attached at one end to said piston and formed with two parallel portions, one to extend within the body and the other to extend outside the same adjacent to the side thereof, and a handle on the end of the outer portion of the rod.

2. In a musical instrument, the combination of a tubular body having a sound-opening, a plug in the body adjacent to said opening and forming a passage, a flaring mouthpiece fitted within the end of the body adjacent to the plug, a cap on the opposite end of the body provided with a boss having an axial opening and provided with openings, a buffer secured to the inner face of the cap, a cupped piston within the body, and a rod having parallel portions, one end of one portion attached to the piston and the end of the other portion provided with a handle extending radially outward from the body.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK H. FAIRCHILD.

Witnesses:

OTTO F. BARTHEL,
JOHN G. THRASHER.