

attached to the key barrel 6. This key is operated by the little finger of the left hand. The key 5 is kept always shut by a spring constituted in the customary way

5 by a needle 6¹ fixed on the one hand in the support of the spindle 8 and acting upon a hook attached to the key barrel 6.

There is also provided an upper G obtained by means of a cup located on the mouth of the mouthpiece. This cup is shown at 10 and is attached to a key barrel 11 suitably held by a supporting rod 12. The key barrel 11 is operated by means of a head 13 (Fig. 1) and the cup 10 is held always closed by a needle spring 10¹. This cup 10 is located on the mouth 14 of the mouthpiece 15. This mouthpiece 15 is pierced at 16, as may be seen in Fig. 3 at the place situated immediately

20 in front of the key or cup 10.

The note giving the upper G is obtained by pressure of the first joint of the forefinger of the right hand upon the head 13. Moreover the head 13 operates through a finger 17¹ upon the head 17 operating a key barrel 17² located in the prolongation of a key barrel 65 and rendered independent by a cut. Upon the key barrel 17² is fixed the key or cup 18 which opens consequently when the head 13 is pressed. The closing of the cup 18 on its hole is ensured by a needle spring 18¹.

Furthermore there is provided a hole of lower C sharp, that is to say its closing cup 27 remains always open under the action of a needle spring 25 located below the key barrel 26 to which the cup is connected by a lever 27¹.

40 The operation of the closing cup 27 (Fig. 6) is effected indifferently and independently

(1) By a finger 28 soldered to the cup 24 closing the C hole which is adjacent to it and held constantly open like it. The closing of the cup 24 is brought about as usual by the depression of a head 29 operated by the little finger of the left hand. The head 29 is attached to an arm 29¹ pivoted on a rod 29² and connected by a bridge member 29³ with the key barrel 29⁴ attached to the rod 29⁵ carrying the arm 29⁵ at the end of which the cup 24 is placed.

55 (2) By means of the lever arm 27¹ the point of which is soldered to the cup 27 and is attached to a key barrel 26 movable about the rod 26¹ and upon which is fixed another arm 29⁶ raised through the operation of the fingers by another lever arm 30 upon which it rests constantly under the action of the needle spring 25 located under the key barrel 26.

65 Owing to this arrangement it is clear that the lever 27¹ soldered to the cup 27

keeps this latter lifted by the needle spring 25 located under the key barrel 26 in such manner that the arm 29⁶ is always lowered and rests upon the arm 30.

The arm 30 is attached to a key barrel 31 upon which is placed another arm 32, the end of which is located under the head 22.

75 The head 22 is soldered to a key barrel 34 movable about the rod 35, the operation of which, when it is depressed by the finger, is to rest upon the arm 32 and upon a finger 33 attached to a head 20.

80 On the said rod 35 is also attached the key barrel 36 soldered to the head 20 and connected by a bridge piece 37 to the key barrel 38 carrying the arm 39 of the cup 19 adapted to close the D hole. The cup 19 and the head 20 are kept raised in the customary way, that is to say, by means of a needle spring 41 located under the key barrel and held in the knob 40, and resting upon a counter-spring soldered under the key barrel 36.

90 In the prolongation of the heads 20 and 22 there is located a head 21 attached to a key barrel 21¹ carrying a lever 21², the arm of which is soldered to a cup 21³ held constantly on the E flat hole by a needle spring located under the key barrel 21¹.

95 The aggregate constituted by the lever 30, its key barrel 31 and the lever 32 is held in its low position (30 depressed, 32 lifted), whilst the head 20 and its connecting piece 33 are kept lifted in such manner that the connecting piece 33 is directly in contact with the lower part of the head 22 through a needle spring 42 located under the key barrel 31, and which is attached like all needle springs of key-instruments, that is to say, one end is fixed in the rod of one of the knobs serving as support for the rod on which the key barrel is jointed and the other end or movable arm in a seat 43 located under the key barrel 31.

100 When the head 22 is pressed its depression acts through its lower surface upon the connecting piece 32 attached to the key barrel 31, which lifts up the arm 30, operating under the lower end of the arm 29⁶ attached to the key barrel 26, the arm 27¹ of which carries the cup 27 and consequently causes this latter to rock downwards in opposition to the action of the needle spring 25; the result of which is to block the C sharp hole. The same movement of depression also operates through the connecting piece 33 upon the head 20, which through the bridge piece 37 105 attached to the key barrels 36 and 38 closes the cup 19 on its hole. It thus results from the depression of the head 22, closing the holes of the cups 27 and 19, that the first hole remaining open in the 130