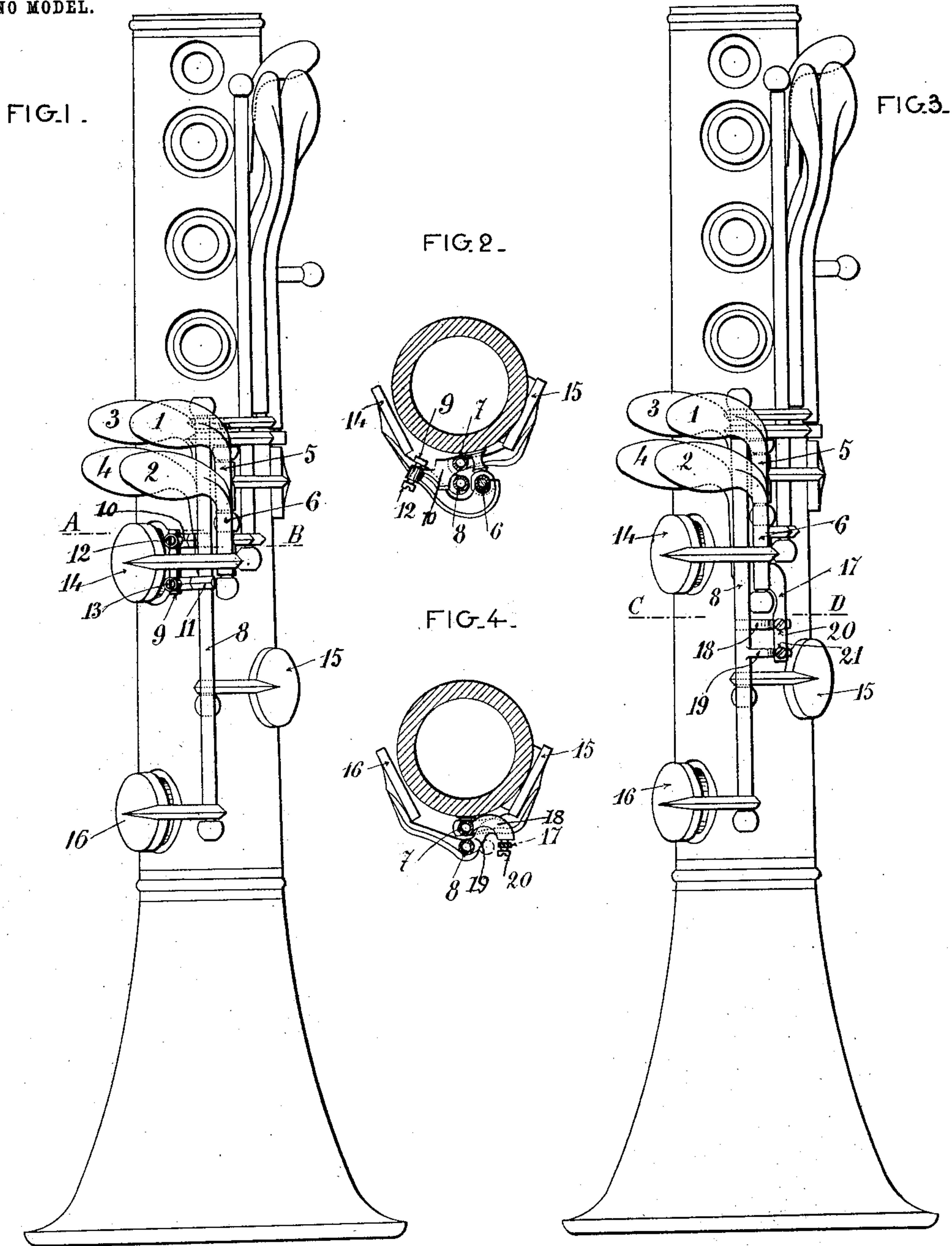


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E. BERCIoux.
CLARINET OF BOEHM.
APPLICATION FILED FEB. 17, 1902.

NO MODEL.



Witnesses:
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UNITED STATES PATENT OFFICE.

EUGÈNE BERCIoux, OF PARIS, FRANCE.

CLARINET OF BOEHM.

SPECIFICATION forming part of Letters Patent No. 750,935, dated February 2, 1904.

Application filed February 17, 1902. Serial No. 94,369. (No model.)

To all whom it may concern:

Be it known that I, EUGÈNE BERCIoux, a citizen of the Republic of France, and a resident of 91 Rue de Turenne, Paris, France, have invented a new and useful Improvement in Clarinets of Boehm, of which the following is a specification.

My invention relates to improvements in clarinets, and has for its object to provide mechanism for the E-flat, C, C-sharp, and B keys whereby they may be easily and quickly manipulated by the small finger of the player.

My invention is especially available, because it not only is applicable to new clarinets, but also to such as are now in use without disturbing any important part of their mechanism. The four keys which are connected to this mechanism, the rock-shafts, the pads for closing the holes, and the pad-stems which connect said pads with the rock-shafts all remain the same.

The improvement consists in dispensing with the ordinary claw-ended piece carried by the C-key and extending under the C-sharp and B keys. This piece is very easily so much deranged that its operation is materially hindered, if not entirely prevented. It also is of such construction that a part of the wood of the instrument has to be cut away to provide a proper seat for it. There is no cutting away of a part of the wood necessary for the application of my improvement, and it does not easily get out of order.

The invention will be fully understood from the following general description and the annexed drawings and will be subsequently pointed out in the claims.

In the accompanying drawings, which are hereby made a part of this specification, Figure 1 is a front view of the lower part of a clarinet comprising one example of my invention, which will be more fully hereinafter described. Fig. 2 is a sectional view taken on the line A B of Fig. 1. Fig. 3 is a front view of the lower part of a clarinet comprising a second example of my invention. Fig. 4 is a sectional view taken on the line C D of Fig. 3.

In the drawings, 1 represents the key of E-flat, 2 represents the key of C, 3 represents

the key of C-sharp, and 4 represents the key of B.

5 designates the rock-shaft of key 1, 6 the rock-shaft of key 2, 7 the rock-shaft of key 3, and 8 the rock-shaft of key 4.

In the first example of my invention (illustrated in Figs. 1 and 2) I solder a bar 9 on the pad-stem of the rock-shaft 6, which bar is arranged parallel to the said rock-shaft 6. On the rock-shafts 7 and 8 I solder the laterally-extending arms 10 and 11, one on each. These arms extend across the bar 9 and carry adjusting-screws 12 and 13, which engage the said bar 9. 14, 15, and 16 designate pads for closing the holes in the clarinet. These pads are connected with the rock-shafts by pad-stems, as illustrated. All these parts are arranged as illustrated in Figs. 1 and 2. It will be observed that pads 14 and 16 are illustrated as being normally open and pad 15 as being normally closed. If the key 2 be depressed, it will close the pad 14 without affecting either of the other rock-shafts or their accompanying pads. If the key 3 be depressed, the pad 15 will be opened and the pad 14 closed. If the key 4 be depressed, the pads 14 and 16 will both be closed. These different effects are produced by the action of the bar 9 in connection with the arms 10 and 11, and thus the player is enabled readily to manipulate all these parts with his small finger.

In the second example of my invention as illustrated in Figs. 3 and 4 the bar 17 corresponds to the bar 9 of Fig. 1. This bar 17 I solder directly on the rock-shaft 6, and it is bent and arranged as illustrated, so that it will engage the laterally-extending arms 18 and 19 of the rock-shafts 7 and 8. The engagement between these arms 18 and 19 and the bar 17 is effected by means of the adjusting-screws 20 and 21. If the key 2 be depressed, the pad 14 will be closed and the bar 17 will rise without affecting any other part of the mechanism. If the key 3 be depressed, the pad 15 is opened and the pad 14 closed by the coaction of the bar 17 and the arm 18. If the key 4 be depressed, the pad 16 will be closed, and at the same time on account of the coaction of the bar 17 and the arm 19 the pad 14

will also be closed. Thus by a slight change of arrangement, but adhering to the same principles of construction, I obtain the same result in both examples of my invention.

5 Having now described and ascertained what my invention is and how the same is constructed and used, what I claim as my invention, and desire to secure by Letters Patent, is—

10 1. In a clarinet, the combination with three rock-shafts, bearings mounted on said clarinet, wherein said rock-shafts turn, laterally-extending arms carried by two of said rock-shafts and keys attached to said shafts and arranged to actuate the same, of pads arranged to
15 close openings in said clarinet, pad-stems connecting said pads with said rock-shafts, a bar attached to said third rock-shaft, arranged to cooperate with said arms and an adjustable
20 engagement connecting said bar with said arms.

2. In a clarinet, the combination of a rock-shaft having a laterally-extended arm, a pad-stem and pad, and a rock-shaft having a laterally-extended arm, pad-stem and pad and a
25 rock-shaft having a pad-stem and pad, and a

bar carried by said last-named rock-shaft and arranged parallel thereto said bar adapted to cooperate with said arms of the two first-named rock-shafts, and two adjusting-screws
30 engaging the said bar and the said arms, substantially as shown and described.

3. In a clarinet, the combination of an arm soldered to the rock-shaft 6 and carrying the pad 14 corresponding to the C-key, a bar 9
35 secured to said arm, a rock-shaft 7 corresponding to the C-sharp key and provided with an arm 10 soldered thereto and adapted to depress the bar 9, a rock-shaft 8 corresponding to the B-key and provided with an arm 11 soldered thereto and adapted to depress the bar
40 9, and adjusting-screws 12 and 13 respectively carried by the arms 10 and 11, having their ends in contact with the top of the bar 9, substantially as and for the purpose set forth. 45

In witness whereof I have hereunto set my hand in presence of two witnesses.

EUGÈNE BERCIoux.

Witnesses:

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