

PUBLISHED
JUNE 1, 1943.
BY A. P. C.

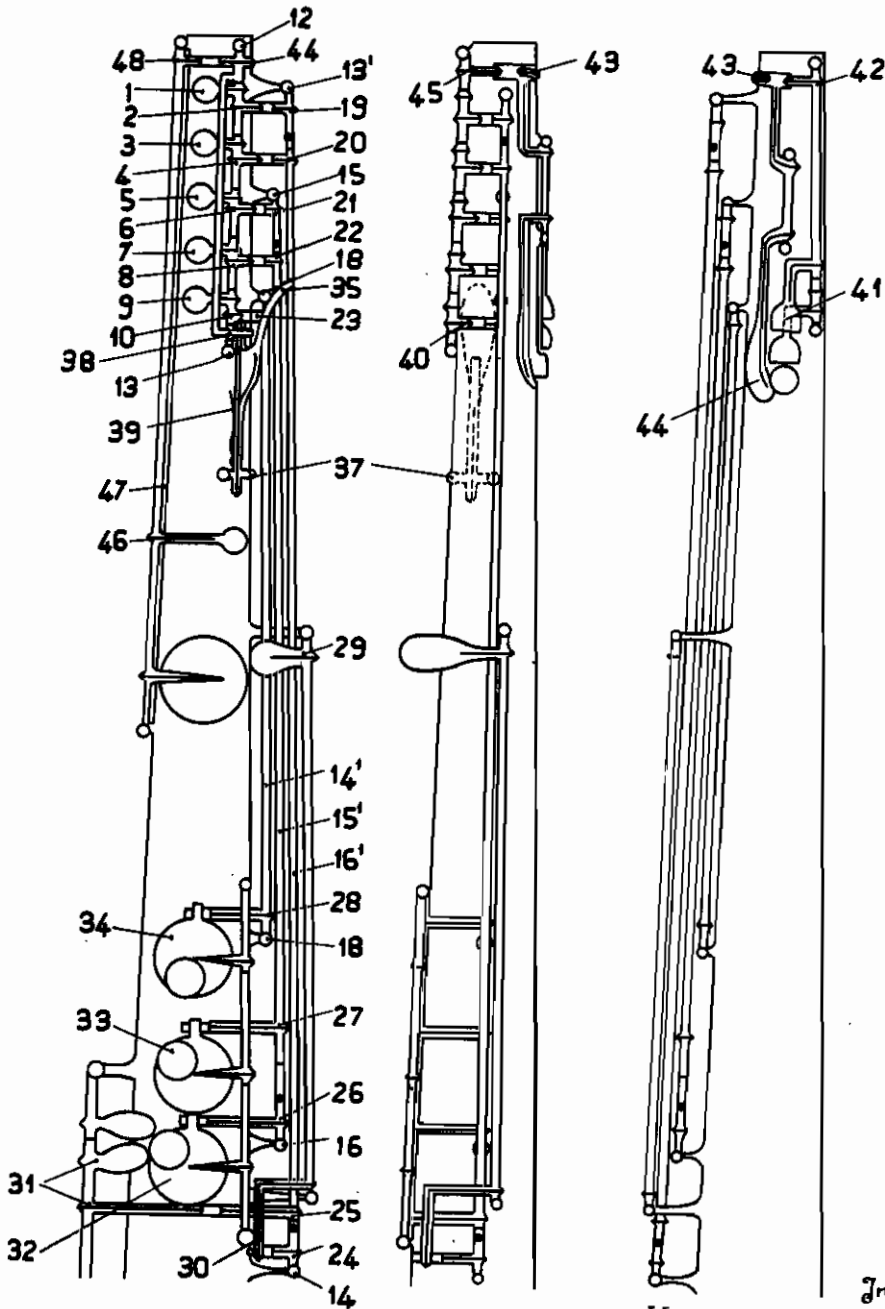
V. INCAGNOLI
SAXOPHONES, PARTICULARLY FOR THE
PRODUCTION OF HIGH NOTES
Filed Oct. 25, 1939

Serial No.
301,264

- Fig. 1 -

- Fig. 2 -

- Fig. 3 -



Inventor
Venanzio Incagnoli
Strauch & Hoffman
Attorneys

ALIEN PROPERTY CUSTODIAN

SAXOPHONES, PARTICULARLY FOR THE PRODUCTION OF HIGH NOTES

Venanzio Incagnoli, Ceprano, Forlino, Italy;
vested in the Alien Property Custodian

Application filed October 25, 1939

In the saxophones actually used the production of high notes is made rather difficult because the keys relating thereto are placed in inconvenient positions and distant from one another. To use such keys the player has sometimes to make real efforts and undergo much fatigue.

The present invention introduces into saxophones certain devices which eliminate the difficulty mentioned above. At the same time, it introduces a new high note, corresponding to "natural A" in saxophones of the contralto type and to "natural E" in saxophones of the soprano type. The insertion of this note, however, will be optional and may be suppressed in instruments in which it is not wanted.

In a saxophone improved according to this invention the pads of the high notes are all placed one one line and precisely on the same line on which the majority of the other notes are placed; this does not occur in the saxophones used up to this day.

The pads of the four normal high notes and that of the new note, now introduced, are actuated like those of the other notes, by a single key-board by means of appropriate hollow key-steels and their respective shanks. In order that these key-steels may occupy as little space as possible, two of them lodge in their interior two thinner key-steels. To the five high notes correspond five key-steels, of which three are visible.

The single key-board common to the high notes and to a great part of the medium and low notes, as realized for the first time by this invention, is easy to work on as it comes all under the fingers of the right hand and the little finger of the left hand.

An important feature of the present invention is that the means by which the high notes are actuated, though connected with the said single key-board, are at the same time, independent of the latter and may be actuated otherwise.

In order to obtain this independence, a spatule is provided, which, located in a convenient position, allows of the closing of all the high notes whenever the player wishes to use only the medium and low notes, and the same result is also attained by means of two keys placed in other positions on the body of the saxophone.

In the annexed drawing given only as an example without limitation:

Figures 1, 2, 3 show three longitudinal views of the instrument.

With reference to the said drawing, pads 1, 3, 5, 7, 9 which close the holes through which the new note "natural A or E" and the common high

notes are produced, are fixed to the shanks 2, 4, 6, 8, 10 made as second order levers whose fulcrums are all on axle 11 supported by the knobs 12 and 13. Key-steels 14, 15' and 16', each of which is supported by its respective pair of knobs 13—14, 15—16, 17—18 actuate indirectly, by means of other shanks 19, 20, 21, 22 and 23, the aforesaid pads 1, 3, 5, 7, 9.

Key-steels 14', 15', and 16' are hollow, and the first two, 14' and 15', are double or telescopic, that is to say, they contain each a thinner key-steel. Thus one attains the object of actuating separately the single pads above numbered occupying a very small space and reducing precisely to the space of only three key-steels the space which would have occurred to arrange five key-steels.

Each key-steel and each smaller one is provided with an opening needle-spring powerful enough to overcome the resistance of the opening needle-spring with which is supplied each pad 1—3—5—7—9. These springs, already known, have been omitted in the drawing for the sake of clearness.

The rotation of each of the key-steels 14', 15' and 16' and of the two smaller key-steels contained in key-steels 14', 15', and consequently the opening and closing of pads 1, 3, 5, 7, 9 is obtained by the intermediary of shanks 24, 25, 26, 27, 28 actuating respectively key 29 supplied with shank 30, key 31 and its shank, and pad-keys 32, 33, 34. The pad-keys just mentioned are the same as already exist in the ordinary saxophones, inasmuch as they serve to form the medium and low notes.

When it is desired to prevent the opening of the pads corresponding to the holes of the high notes, the player can move with the ring-finger of his left hand spatule 35, supported by the knobs 36, 37, which actuates, in the manner that will be indicated, a double-hinge bridge 38 without spring, placed above shanks 2, 4, 6, 8, 10 in a sense transversal thereto. Spatule 35 is supplied in its lower part with a spring 38 which tends to keep the said spatule in a raised position. Tail 40 of spatule 36 strikes then with its end under said bridge 38 and keeps it adherent to shanks 2, 4, 6, 8, 10. Thus the high notes will be obtained only when spatule 35 is lowered.

The same result may be attained by means of key 41 actuated by the thumb of the left hand and supplied with an opening needle-spring, which with its shank 42, that overlays shank 43, which can be actuated directly by key 44, urges upwards shank 45, and through the latter actuates bridge 38. Spatule 46, by means of its key-steel 47 and

shank 48 which overlays shank 43, serves to close the pads of the high notes when, such pads being open, it is desired to give out only medium and low notes.

For the production of high notes, therefore, it is sufficient to press any of the said keys 35, 41, 44.

The fingering of the instrument for the production of the four normal high notes and of the new note "natural A or E" is the following: For Soprano, Contralto, Baritone and Contrabass saxophones, natural F is obtained by pressing with the index of the right hand, F diesis with the mid-

dle finger of the right hand, natural G with the ring-finger of the same hand, G diesis with the little finger of the same hand touching the second key towards the lower part of the two keys already existing in the ordinary saxophones, "natural A" with the little finger of the left hand. For the Soprano, Tenor and Bass saxophones, by using the same fingering as above one obtains, in the place of natural F, natural C, in the place of F diesis C diesis, in the place of G natural D natural, in the place of G diesis D diesis, in the place of the new note "A natural" "E natural".

VENANZIO INCAGNOLI.