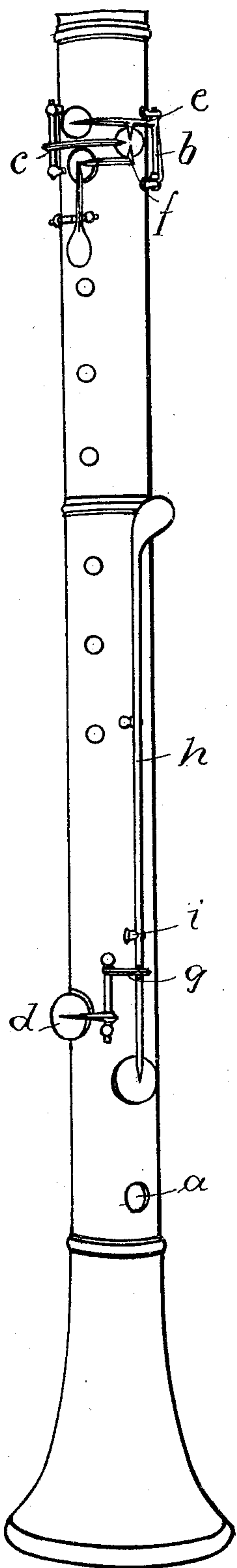


(No Model.)

T. LÄSSIG & A. PFRETZSCHNER.
CLARINET.

No. 488,656.

Patented Dec. 27, 1892.



Witnesses.
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UNITED STATES PATENT OFFICE.

THEODOR LÄSSIG AND ADOLF PFRETZSCHNER, OF MARKNEUKIRCHEN,
GERMANY.

CLARINET.

SPECIFICATION forming part of Letters Patent No. 488,656, dated December 27, 1892.

Application filed May 31, 1892. Serial No. 435,006. (No model.)

To all whom it may concern:

Be it known that we, THEODOR LÄSSIG and ADOLF PFRETZSCHNER, subjects of the King of Saxony, both residents of Markneukirchen, in Voigtland, in the Kingdom of Saxony, German Empire, have invented new and useful Improvements in Clarinets, of which the following is an exact specification.

Our invention relates to an improved clarinet, which is characterized by the following novel features: First. A hole is provided between the lower conical opening of the instrument and the last of the keys. Second. All the keys are placed nearer the mouth-piece than in instruments of usual construction. Third. With several of the keys there are combined additional keys in such manner, that they are operated in conjunction with the same, as more clearly stated hereinafter.

The object of our improvements is to raise the pitch of the tones emitted from the instrument, and also to secure a clear sounding of certain notes.

Our invention will be more readily understood by reference to the accompanying drawings, which show a clarinet embodying our improvements, the mouth-piece being broken off, and the view showing only those keys which form part of our invention, the other keys being constructed in the usual manner. The instrument is a C-clarinet.

Near the lower end of the instrument we have provided a hole *a*, which is not found in clarinets of usual construction, furthermore the keys are all placed nearer the mouth-piece than hitherto. In the third place we have provided two auxiliary keys *c* and *d*. The key *c* is placed between the C- or octave- key and the A- key, and provided with a spring which tends to open the same. The octave key *b* and the A- key are both provided with small pins or studs *e* *f* which keep the auxiliary key *c* closed, the keys A and C being themselves kept closed in the usual manner by means of springs. The other auxiliary key *d* is provided with a lever *h* pivoted at *i* and operating the B- key. By this arrangement the key *d* is kept open as long as the B- key is closed, and when the latter is opened, the auxiliary key *d* is automatically closed. The addition of the hole *a* has the effect of raising the pitch

of the notes produced by the instrument. This effect is still increased by placing the holes and keys of the instrument nearer to the mouth-piece than hitherto, and by suitable location of the holes it is possible to raise the tones of the instrument by one step with regard to those emitted from an instrument of usual construction and of the same length. That is to say, a C-, D- or F-clarinet of our improved construction may have the same length as a B-flat, C or E flat clarinet of the usual construction. The C- key *b* is placed at the same point where it was located hitherto, thus the play on our improved instrument presents no difficulty.

We will particularly mention that though the pitch of the notes emitted from our instrument is raised, the timbre of the same is not changed, and this is a very important feature, as hitherto the timbre of the higher-pitched clarinets was not as satisfactory as that of lower-pitched instruments, and by our improvements the advantages of the latter are secured in the former. Our invention presents therefore the special advantage that the character of the tones is a very agreeable one, and moreover it is possible to make the higher-pitched instruments of the same length as those of lower pitch, which will be found very convenient by musicians.

The purpose of the auxiliary key *c* is the following: When both keys *b* and the A- key are operated by depressing the corresponding levers, both the pins *e* and *f* are raised, and the key *c* is opened by the spring operating the same. Thus the three keys are opened and the note B-flat is produced. The tone is emitted perfectly pure and clear.

The object of the auxiliary key *d* is a similar one. We have already stated that this key is opened only when the B- key is closed, and is closed by means of the levers *h* and *g* when the B- key is opened, this having the effect of securing a pure emission of the note B.

Of course when our improvements are applied to other clarinets than C-clarinets, the notes to which the auxiliary keys *c* and *d* correspond are changed, but in each case the said keys belong to the sixth. and seventh. notes of the scale respectively.

Having thus fully described the nature of

our invention, what we desire to secure by Letters Patent of the United States is:—

1. A clarinet having an additional opening *a* between the keys and its lower end, for the purpose as described.

2. A clarinet having an additional opening *a* between the keys and its lower end, the keys being placed nearer the mouth-piece than usual, the location of the octave-key (*b*) remaining unchanged, for the purpose as described.

3. In a clarinet, the auxiliary key (*c*) in combination with pins (*e* and *f*) fixed to the sixth-key and octave-key (*b*) respectively,

these keys being actuated by means of springs, in the manner and for the purpose specified.

4. In a clarinet, the auxiliary key (*d*), having a lever (*g*), in combination with the seventh-key, having a long lever (*h*), substantially and for the purpose as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

THEODOR LÄSSIG.

ADOLF PFRETZSCHNER.

Witnesses:

OSCAR GOTT. SCHALK,
WILLIAM KRAFT.