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REED BLOCK FOR ACCORDIONS

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Fig. 1.

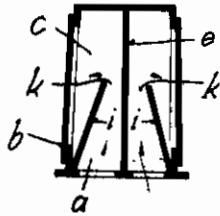


Fig. 2.

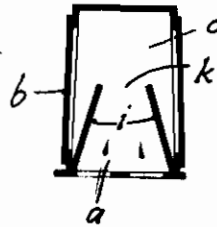


Fig. 3.

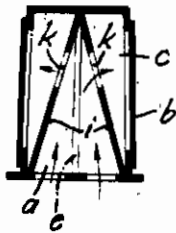


Fig. 4.



Fig. 5.

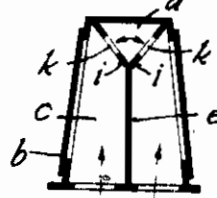


Fig. 6.

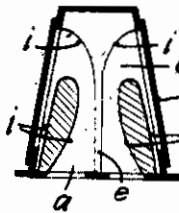


Fig. 7.

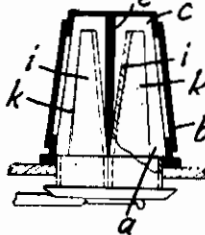


Fig. 8.

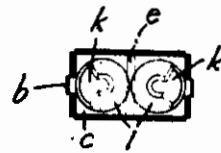
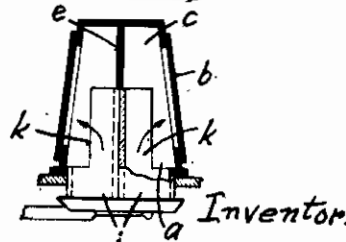


Fig. 9.



Fig. 10.



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ALIEN PROPERTY CUSTODIAN

REED BLOCK FOR ACCORDIONS

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This invention relates to a reed block for accordions of the type in which resonance air spaces are provided in front of the reeds to produce an improved tonal effect which, according to the invention, is enhanced still more by separating these reedless resonance air spaces by walls inserted in the holes and leaving a contracted air passage whereby elastic coupling and thereby an improved sound effect is obtained.

Owing to the construction of the resonance spaces according to the invention the sound becomes softer and mellower than the sound produced at the reed blocks. The improved effect is further due to the fact that the space of the holes does not form a unit but is subdivided into chambers in such manner that the air passes to the reed through the resonance spaces connected by a contraction. In this way resonance conditions are provided which in acoustics represent an elastic coupling of sound spaces, and the surprising discovery was made that higher overtones which impart sharpness to the complex tone are suppressed thereby. Another feature of the invention is that in view of compact arrangement the reed blocks, in spite of the improved sound effect, do not require more space than at present.

The resonance spaces may be separated according to the invention in different ways. For example, in case of reed blocks having holes whose reeds are oppositely positioned the partitions may be inclined relative to one another so that the free ends thereof form the contracted air passage. Or the partitions may extend only for some distance into the holes, in which case the space between the free ends of the partitions constitutes the air passage.

Furthermore, the partitions may proceed from the front wall of the holes supporting the openings of the pads and converge at the opposite wall, or, inversely, the partitions may proceed from this rear wall and converge at the front wall. It is possible also to provide for converging of the partitions on a middle wall.

In all embodiments of the invention the partitions can be constructed so as to comply with aerodynamic requirements, i.e., the walls of the channel are curved in such manner that their curvatures correspond to the aerodynamic course of an air current, obstructions are avoided and the air current reaches the reeds without any whirling motion or disturbance.

The partitions may further comprise tubular members inserted in the holes and provided with an air opening, in which case the resonance spaces are formed by these tubular members.

The invention is illustrated by way of example in the accompanying drawing, in which

Figures 1, 2, 3, 4 and 5 are cross sections of different reed blocks with resonance air spaces provided in front of them;

Fig. 6 shows an aerodynamic construction thereof;

Figs. 7 and 8 show a modification in which a tubular member serves as resonance air space;

Fig. 9 is a diagrammatic view thereof; and

Fig. 10 is a modified form of the construction shown in Figs. 7 and 9.

Each hole *a* of the reed blocks *b* according to the invention possesses an associated resonance air space *c*, and the spaces *c* communicate with the holes *a* in such manner that during playing of the instrument the air for the reeds can pass from one space to the other, both in blowing and sucking. The position, shape and construction of the resonance air spaces *c* may be chosen at will, but, according to the invention they are separated from the holes *a* by inserted partitions *i* possessing openings *k* which form contracted air passages.

In the construction shown in Figs. 1 and 2 the partitions *i* proceed from the front wall of the hole *c* and are inclined relative to one another, though they extend only for a certain distance into the hole *c*. The space formed between their free ends constitutes the contracted air passage *k*. As indicated in Fig. 1, a middle wall *e* may be provided in the holes *c*, but this is not necessary and it may be omitted as in the construction shown in Fig. 2.

Fig. 3 shows a construction in which the inclined partitions *i* meet in the back wall of the hole *c*, the air passages *k* being disposed in the partitions *i*.

Fig. 4 shows an inverted arrangement of the partitions *i* which proceed from the back wall of the hole *c* and meet in the front wall thereof.

In the construction shown in Fig. 5 the partitions *i* while proceeding also from the back wall of the hole *c* meet in the middle wall *e*.

Fig. 6 illustrates a form of the partitions *i*, which corresponds to the aerodynamic course of the air current, that is, the walls *i* are so curved that the blown in air current on its travel to the reeds is not subjected to disturbances or obstructions. The air channel is thus contracted before the air, owing to suitable curving of the partitions *i*, passes to the reeds without any whirling motion.

The partitions *i* may be ordinary walls or formed by inserted bodies, as indicated in Fig. 6.

Figs. 7 to 10 show two modifications in which the partitions *i* comprise tubular members which are inserted from the front in the holes *c* and provided with an opening *k* serving as contracted air passage. In the construction shown in Figs. 7 to 9 the partition *i* has the form of a nozzle-like tubular member, and in the construction shown in Fig. 10 the partition *i* constitutes a cylindrical tubular member.

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