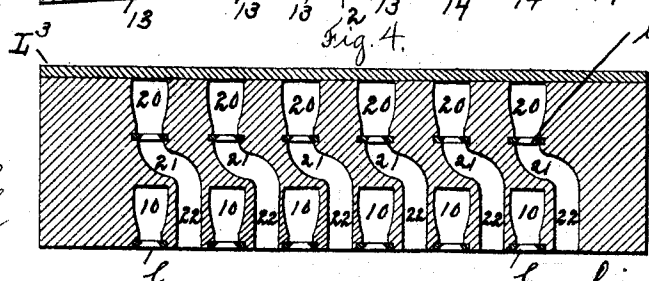
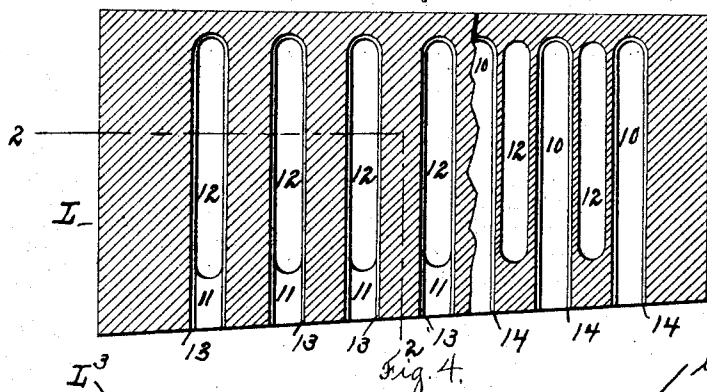
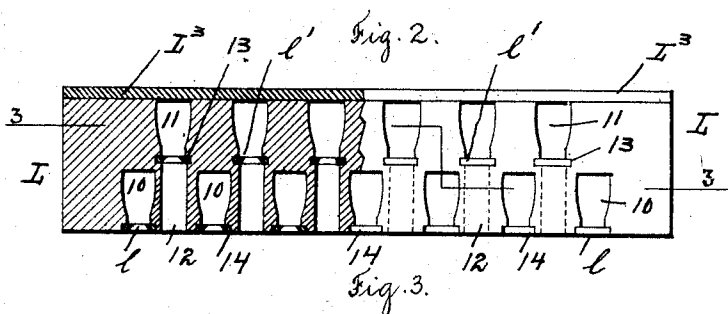
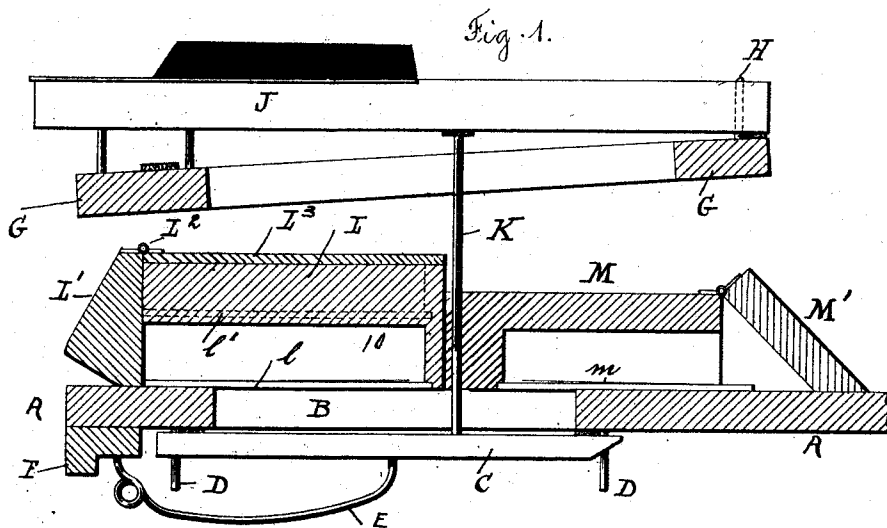


(No Model.)

E. W. HAM.
REED ORGAN.

No. 503,850.

Patented Aug. 22, 1893.



Witnesses
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UNITED STATES PATENT OFFICE.

EDWIN W. HAM, OF WORCESTER, MASSACHUSETTS.

REED-ORGAN.

SPECIFICATION forming part of Letters Patent No. 503,850, dated August 22, 1893.

Application filed March 6, 1893. Serial No. 464,672. (No model.)

To all whom it may concern:

Be it known that I, EDWIN W. HAM, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Reed-Organ, of which the following is a specification.

The aim of this invention is to improve the construction and arrangement of parts in reed organs, and the invention especially relates to the reed-board.

The invention consists of the device described and claimed in this specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a diagrammatic view of an organ action with my invention applied thereto. Fig. 2 is a section on line 2—2 of Fig. 3, of my improved reed-board. Fig. 3 is a section on line 3—3 of Fig. 2, of my improved reed-board, and Fig. 4 is a cross section of a modified form of reed-board.

My invention relates especially to the reed-board, which carries the reeds to form the sub-base of a reed-organ, although my invention can be applied and used in any part of the organ or with any set of reeds. In a sub-base, the reeds are so wide, that it is impossible to place them side by side, so that an octave of reeds will occupy only the distance that the keys of an octave occupy, and hence complicated constructions are used to get the reeds in the sub-base, so that they can be properly operated by the valves.

My invention consists in placing each of the reeds of the set preferably alternately in different planes, and in leading passages from the reeds in one plane between the reeds in the other plane, whereby the reeds can be very compactly and nicely disposed, and can be arranged in one reed-board directly over the valves of the usual octave.

Referring now to the drawings, and in detail, A represents the usual sounding or base-board, through which are cut the usual passages B, and covering and closing communication through these passages B are arranged the usual valves C, which may be mounted on the usual pins D, and kept up to the passages B by means of the usual springs E, which are connected to the keys and the framing, as F.

G represents the usual key-supporting board, which may be arranged in the usual manner, and projecting from the same, are the usual key-pins H, upon which the usual keys J may be mounted, and extending down from the keys J to the valves C, are the usual tracker-pins K. This arrangement of keys and valves is well understood, and is not necessary further to describe at length.

My improved reed-board L is mounted directly over the valve-openings B, as shown, and, if desired, another reed-board M may be mounted at the rear of the same, in the ordinary manner, the reed-board M having the usual set of reeds *m* and a mute M' connected to the same.

It is evident, of course, that my improved reed-board L may be used by itself or in combination with any other number of reed-boards.

I have shown in the drawings, one simple arrangement, whereby two sets of reeds are operated by the usual keys.

My improved reed-board L is constructed as follows:—The front end of the same is made smooth or flush, and bearing against the same is a mute L', which is hinged to the cover or top L^s of my improved reed-board L, and this mute L' closes communication to all the reeds in the reed-board L, as hereinafter described.

My improved reed-board preferably consists of a single piece of wood L, which has a cover or top L^s glued to the same; the object of this construction being simply so that the passages and reed-spaces can be easily cut out of a single block.

In the reed-board L are placed two sets of reeds *l* and *l'*, as shown. The passages 10, for the lower reeds *l* are arranged near the bottom of the board, as shown, and have suitable grooves 14 into which the reeds *l* are slipped. The upper reeds *l'* are arranged above these passages 10, and in the construction under consideration, are arranged alternately between the spaces 10, as shown; that is, the passages 11, alternate with the passages 10. These passages 11 are grooved out, as at 13, as shown, so that the upper reeds *l'* can be inserted nicely in place. These upper passages 11 have passages 12, which pass down between the passages 10, as shown, whereby the same

can be set to register with the valve openings B. By this arrangement, it will be seen that I have provided for all the reeds l and l' , and still keep the valve openings in the usual manner, which greatly simplifies the construction, and enables the keys to be arranged in connection with the sub-base in the ordinary manner. Also, it will be seen that the single mute L' closes communication into both sets of passages 10 and 11, whereby this single mute L' controls the whole set of reeds.

The preferred construction of reed-board is shown in Figs. 2 and 3, and this construction is preferred because the passage 12 from the upper reeds l' is direct, and in a straight line. However, this arrangement can be modified, as shown in Fig. 4. In this case, the passages from the lower reeds l are arranged as before described, but the passages for the upper reeds l' are arranged directly over the passages 10, as shown, and curved passages 21 are cut through the board, so that the final outlet 22 from the passages 20, through the upper reeds l' will be in a position between the lower passages 10, as shown. This arrangement then can have the valves arranged as before described. Thus, by my improved construction, I am enabled to arrange a sub-base set of reeds, no matter what width the same are, so that the same can co-act with the ordinary set of valves and keys.

It is evident, of course, that my improved reed-board can be set horizontally, vertically, or in any desired position. I have shown the same arranged horizontally, as one convenient way of arranging the same. It is also evident that my improved construction can be applied to other octaves besides that of the sub-base, and can be used for other purposes, and in other parts of the organ.

The details and arrangement of parts herein shown and described may be greatly varied by a skilled mechanic without departing from the scope of my invention, as expressed in the claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a reed organ, the combination of a number of reeds arranged in one plane with a number of reeds arranged in a different

plane, and passages leading from the reeds in one plane between the reeds in the other plane, whereby the outlets to all the reeds may be arranged in the same plane side by side, substantially as described.

2. A reed board having reeds arranged in different planes, and passages leading alternately from the reeds in one plane down between the reeds in the other plane, substantially as described.

3. A reed-board having the reeds arranged in different planes as at l and l' , of the passages 11 communicating with the upper set of reeds l' , and the passages 10 communicating with the lower set of reeds l , and of passages leading from the upper passages 11 down between the lower passages 10, substantially as described.

4. A reed-board having the reeds arranged in two different planes as at l and l' , of the passages 11 communicating with the upper set of reeds l' , and the passages 10 communicating with the lower set of reeds l , of the passages 12 leading from the upper set of reeds l' alternately down between the passages 10, whereby the outlets to all the reeds may be arranged in the same plane, substantially as described.

5. A reed-board having the reeds alternately disposed in different planes, passages communicating with said reeds, and passages leading from the upper reeds down between the lower reeds, of a single mute as L' controlling the communication to all of said reeds, substantially as described.

6. A reed-board having the reeds alternately disposed in different planes, of passages communicating with said reeds, and passages leading from the upper set of reeds, between the under set of reeds, whereby the outlets to all the reeds may be arranged in the same plane, of a suitable cover arranged over the top of the upper of said sets of passages, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWIN W. HAM.

Witnesses:

LOUIS W. SOUTHGATE,
CHAS. F. SCHMELZ.