H. K. WHITE.

ORGAN-REEDS.

No. 183,522. Patented Oct. 24, 1876.

Fig. 1.

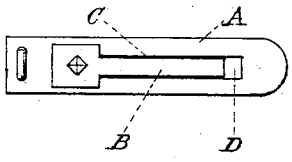


Fig. 2.

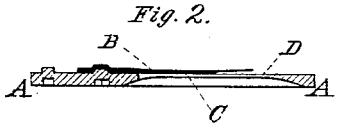
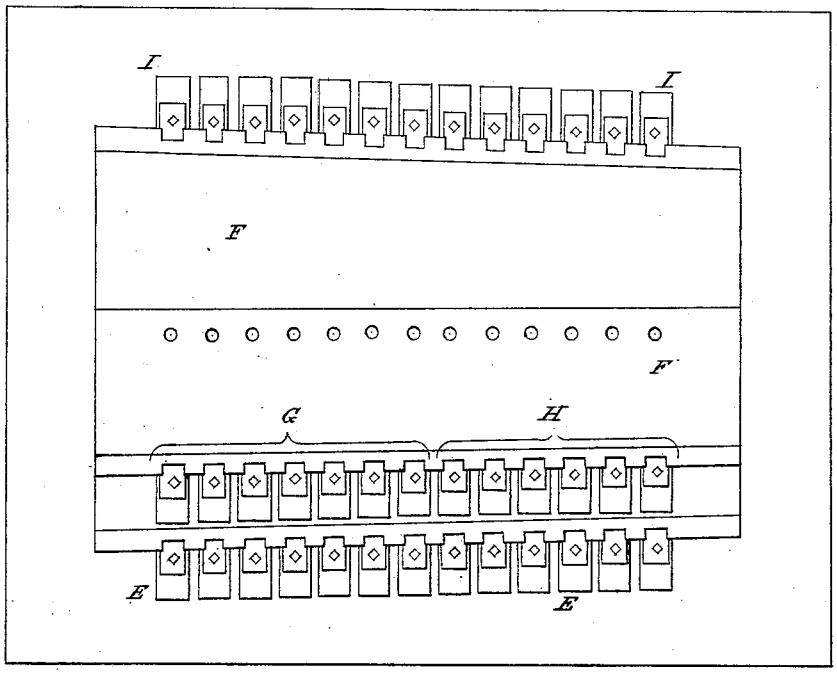


Fig. 3.



Witnesses:

William E. Bullock

Chas. M. Higgins.

Inventor:

Henry K. White,

Per Burke & Fraser,

Attorneys.

UNITED STATES PATENT OFFICE

HENRY K. WHITE, OF BRATTLEBOROUGH, VERMONT, ASSIGNOR TO J. ESTEY & CO., OF SAME PLACE.

IMPROVEMENT IN ORGAN-REEDS.

Specification forming part of Letters Patent No. **183,522**, dated October 24, 1876; application filed October 23, 1874.

To all whom it may concern:

Be it known that I, HENRY K. WHITE, of Brattleborough, Vermont, have invented certain new and useful Improvements in Reeds for Musical Instruments and in Reed-Organs, (assigned to J. ESTEY & Co., of same place,) of which the following is a specification:

My invention consists, first, in a reed for musical instruments having the slot in the reed-plate extended beyond the free end of the tongue thereof, to produce an echo-like or muffled tone, substantially as hereinafter specified. Second, my invention consists in the combination, with a diapason set of reeds and a principal set of common reeds, of a set composed in part of reeds having the extended slots herein described, and in part of common reeds, substantially as hereinafter specified.

In the accompanying drawings, Figure 1 represents a plan view of my improved reed, and Fig. 2 a longitudinal section thereof. Fig. 3 is a plan view of the reed-board of an organ provided with three sets of reeds, and illustrates the mode of combining and arranging my improved reeds with reeds of the common form.

As shown in Figs. 1 and 2, A is the slotted plate of the reed, to which the vibrating tongue B is secured. The tongue B is arranged immediately over the slot, in the same relative position therewith as in the common reed; but the slot is longer, or of greater area, than the tongue, so as to leave a space or aperture, D, at the end of the tongue, as shown. The proportionate size of this enlarged space D is about as represented in Fig. 1, the extent endwise of the slot being nearly the same as the width of the slot, but not exceeding it. The length of the slot-extension may vary somewhat in tuning and voicing the reed.

The effect of this construction is to produce a soft and pleasing tone, of a peculiar character, and of a nature superior to anything that has been heretofore obtained with reeds.

Many efforts have hitherto been made to produce a soft tone with reeds, but they have failed to a greater or less extent. These have consisted in a muffling of the cell or air-passage to deaden or obstruct the transmission of the sound, the tone being first produced strong, and the cell then muffled or covered up sufficiently until the required degree of softness is obtained or approximated to. This has been attended with considerable difficulty and expense, and has been but partly successful in producing a tone of the desired character.

By my invention this soft tone is produced by simple means and in an effective manner. As the slot of the reed is partly open or unobstructed, the current of air in passing through it acts less forcibly on the tongue, producing vibrations of a less decided character, with the resulting tone correspondingly modified to a subdued tone having the softness characteristic of a whisper or like that of an echo.

In order to obtain one of the best effects from my improved reeds, in combination with the common reeds in a reed-organ, I arrange them as shown in Fig. 3. F is the reed-board, which, as shown, is provided with three sets of reeds, the reeds on a line with each other in the different sets being of the same note, as is usual. E is the front or principal set, composed of the common reeds. I is the back or diapason set, and is likewise composed of common reeds; and G H is a third or upper set, the right or treble half H of which is composed of the common reeds, while the left or bass half G is composed of the improved reeds. The reeds G are the same size as the principal set E, and the reeds H are the same as the diapason set I, so that the improved reeds G are an octave higher than the reeds H.

The advantages of this arrangement are, that it enables the player to obtain the effects of two banks of keys upon one bank—that is, if he is playing with the right hand, by means of the strong reeds H he will have strong solo effects, while with the left hand, by means of the soft reeds G in the bass or left end, he will have a very light bass, and thus play harmony with both hands. By this means a result heretofore impossible without considerable expense in single-bank organs with few sets of reeds is accomplished in a very simple and effectual manner.

What I claim as my invention, and desire to secure by Letters Patent, is as follows:

1. A reed for musical instruments, having the slot in the reed-plate extended beyond the free end of the tongue for a distance about equal to the width of the reed-slot, as herein described, to produce an echo-like or muffled tone, substantially as herein specified.

2. In a reed-organ or musical instrument, the combination, with a diapason set of reeds and a principal set of common reeds, of a set composed in part of reeds having extended slots, as hereinabove described and claimed, and in part of common reeds, substantially as and for the purpose herein specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY K. WHITE.

Witnesses:

GEO. S. DOWLEY,

J. E. HALL.