

Fuller & White,

*Reed Organ*

N<sup>o</sup> 84,486.

*Patented Dec. 1, 1868.*

Fig. 1.

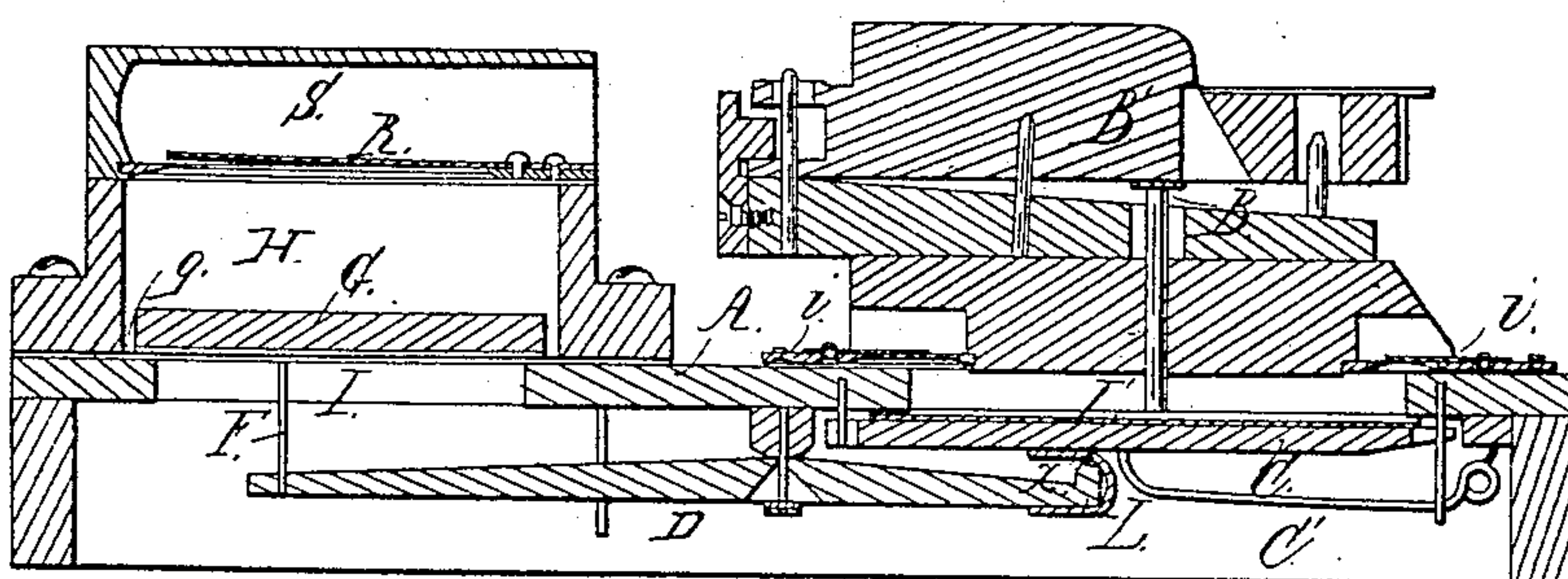
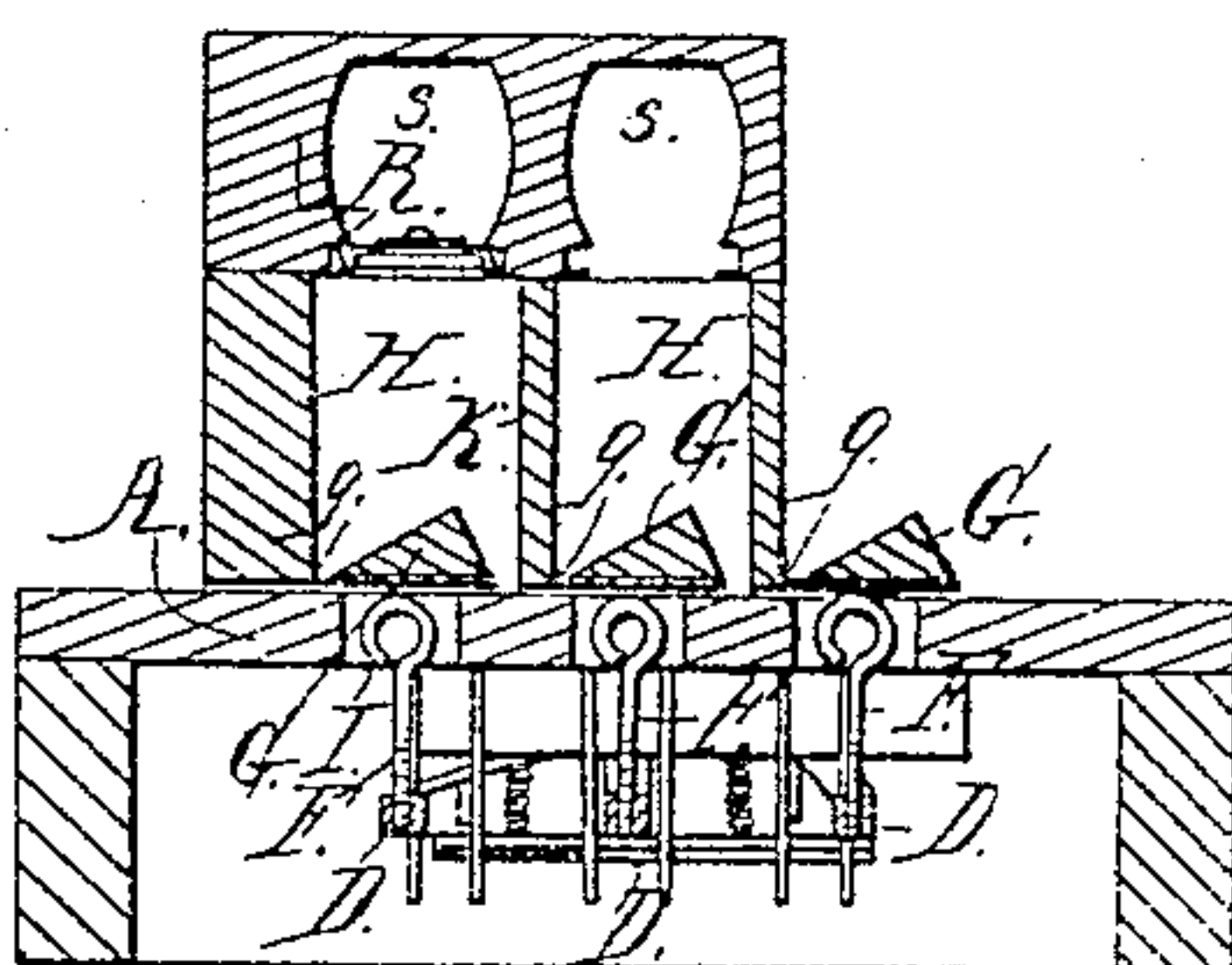


Fig. 2.



# UNITED STATES PATENT OFFICE.

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ASSIGNORS TO J. ESTEY & CO., OF SAME PLACE.

## IMPROVEMENT IN REED MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. 84,486, dated December 1, 1868.

*To all persons to whom these presents may come:*

Be it known that we, LEVI K. FULLER and HENRY K. WHITE, of Brattleborough, in the county of Windham and State of Vermont, have made a new and useful invention having reference to Reed-Organs or other Musical Instruments of like character; and we do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section of one key and the parts of the action thereof of a reed-organ. Fig. 2 is a transverse section taken through the back valve.

Our improvement consists in a peculiar arrangement of the hinge of each back valve; and our invention also relates to the connection of the back-valve operative lever with the front valve—viz., by a cloth hinge or its equivalent, such being to insure the return movement of the said lever.

In the drawings, A represents the action-board, through which the valve-openings I I' are made. B' is a key, and B the push-pin thereof.

The little reeds of the front valve-opening I' are shown at *i i' i i'*, and their valve at C. This valve has a spring, C', for closing it, and is connected with the back-valve operative lever D by means of a strip of cloth, L, which is carried around the front end of the said lever, in manner as represented in Fig. 1, and is glued to the valve C where resting against it. It is also glued to the lower surface of the lever D where it laps on such surface.

There is a small rounded projection, *x*, raised on the lever D, and to operate against the cloth connection, the same being as shown in Fig. 1.

We would remark that by the peculiar arrangement and application of the piece of leather or cloth L with respect to the valve C and the lever D such piece is made to serve as a cushion to the part *x*. By the piece not being cemented to the extreme end of the lever D, the cloth is left free to stretch and accommodate itself to the strain on it induced by the depression of the valve and lever.

By insuring the return movement of the lever D by a power independent of the valve G, we render the valve much more certain of returning upon its seat and of maintaining a close joint therewith. Besides, the cloth con-

necter L enables us, in most cases, to dispense with a spring on the valve G.

The push-pin of the said valve is shown at F as screwed into the lever D, the screw of it enabling it to be adjusted, from time to time, to a proper extension above the lever.

The larger or back reed is shown at R as arranged between two chambers, S H. The lower of these chambers—viz., that marked H—is the valve-chamber, it being situated in the board A, and provided with a valve-opening, I, leading through the board.

The valve shown at G, instead of being hinged at one end to the base of the chamber, is hinged along the lower edge of one side of it, the piece of leather *g*, constituting the hinge and cemented to the bottom of the valve, being carried underneath the partition *k*, which separates the valve-chamber from that next to it, such partition, by its pressure on the leather, serving not only to keep it in place and maintain a close joint, but is useful in other respects.

When the valve, hinged at one end, is raised off its seat, it causes most of the air which may pass it to rush by it near its free end, and consequently to first strike the reed at or near its heel, and next pass along it to its front. This renders the sounding of the reed slower than it will be when the valve-hinge is arranged along the side of valve, for, in this latter case, the current of the air, in passing to the reed, strikes it uniformly or at once throughout its length, and thus causes it to sound much quicker comparatively, and produces a better tone.

The results of the improved arrangement of the hinge of the valve are highly beneficial.

What we claim, therefore, as our invention is as follows:

1. We claim the improved arrangement of the valve-hinge—viz., along the side of the valve instead of at one end of it, as heretofore practiced.

2. We also claim the combination of the strip of leather L with the front valve, C, its spring C', the back valve, G, and its lever D.

LEVI K. FULLER.  
HENRY K. WHITE.

Witnesses:

GEO. P. COOK,  
WM. S. NEWTON.