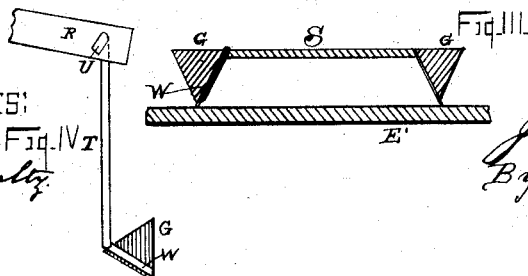
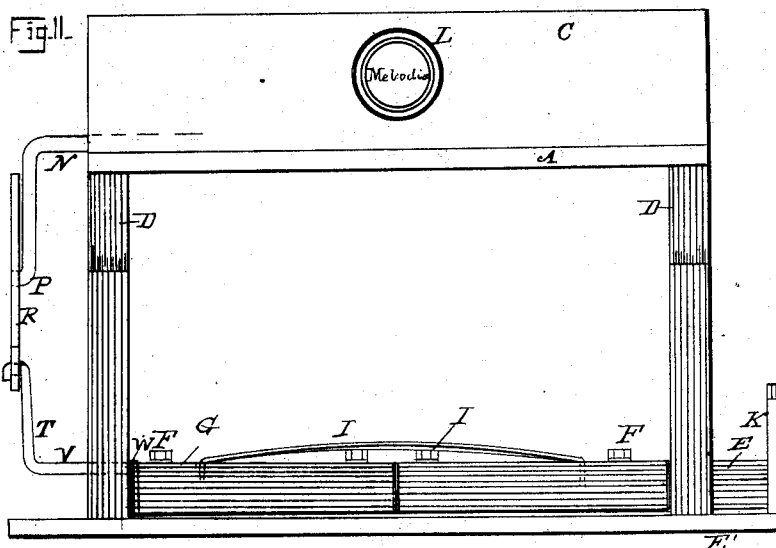


J. A. HILLSTROM.
STOP ACTION FOR ORGANS.

Patented Feb. 11, 1890.



WITNESSES:
 W. P. Fox. Fred. IVT
 George Schultz.

INVENTOR
John A. Hillstrom.
By G. L. Chapin.
Att'y.

UNITED STATES PATENT OFFICE.

JOHN A. HILLSTROM, OF CHESTERTON, INDIANA, ASSIGNOR TO C. O.
HILLSTROM, OF SAME PLACE.

STOP-ACTION FOR ORGANS.

SPECIFICATION forming part of Letters Patent No. 420,998, dated February 11, 1890.

Application filed September 23, 1889. Serial No. 324,839. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. HILLSTROM, a citizen of the United States, and a resident of Chesterton, in the county of Porter and State of Indiana, have invented new and useful Improvements in Stop - Actions for Organs, of which the following is a specification, reference being had to the annexed drawings, illustrating the invention, in which—

10 Figure I is a section in top or plan view of a reed-organ; Fig. II, a front elevation of Fig. I; Fig. III, a cross-section of the tube-board, two mutes, and the reed-board; Fig. IV, an end view of one mute, showing how the crank-
15 lever engages it.

It has been the custom to construct mutes with ends projecting through holes in the partitions, against which the tube-board abuts; but as each hole has to be larger than the cross-
20 section of a mute therein mice can readily work their way into the organ, and the compartments are not separated as they should be to attain the best results. My improvement to obviate these objections and to insure perfect action and avoid an excess of
25 wood is specified as follows:

A B C represent the stop-box, and L the stop.

P O N is the crank-lever, operated by the stop, and Q Q are the bearings to said lever.

30 E' is the reed-board, and S the tube-board, of an ordinary reed-organ.

G G are mutes hinged to the tube-board at F.

I I are the wire springs, which cross each other, and their ends J' are secured to the
35 mutes and the ends J to the tube-board, as is the custom.

D D are the ends of the section.

E E represent how the ends of the mutes

have been projected through the ends of the section, and K shows the wood crank by which
40 the mute has been opened.

Instead of mutes which project through the ends D, I employ mutes which are fitted to operate wholly between said ends D, and the mute is opened by a crank-lever T U V W.
45 The portion U hooks into the connecting-rod R. T is the crank.

V serves as a shaft and has its bearing in the end D, and W is the arm which fits in a
50 rabbet in the end of the mute and by that means opens the mute when the stop L is drawn out.

In order that the crank-lever may work properly, the axis of the shaft portion V should coincide substantially with the axes of the
55 hinges F. By this means there is no lost motion in the movement of the mute and there is no communication through the ends D. Only one mute has a connection with the crank-lever T U V W; but it is evident that
60 such lever applied in like manner will operate any other mute in the instrument.

I claim as new and desire to secure by Letters Patent of the United States—

A stop-action for reed-organs, consisting of
65 a crank-lever formed in one piece with a hook portion U, crank portion T, shaft portion V, and a lever portion W, in combination with a mute whose end is rabbeted to receive the lever portion W, a connecting-rod R, engaging
70 the hook, and a crank-shaft operated by the stop, as and for the purpose specified.

JOHN A. HILLSTROM.

Witnesses:

G. L. CHAPIN,

C. O. HILLSTROM.