

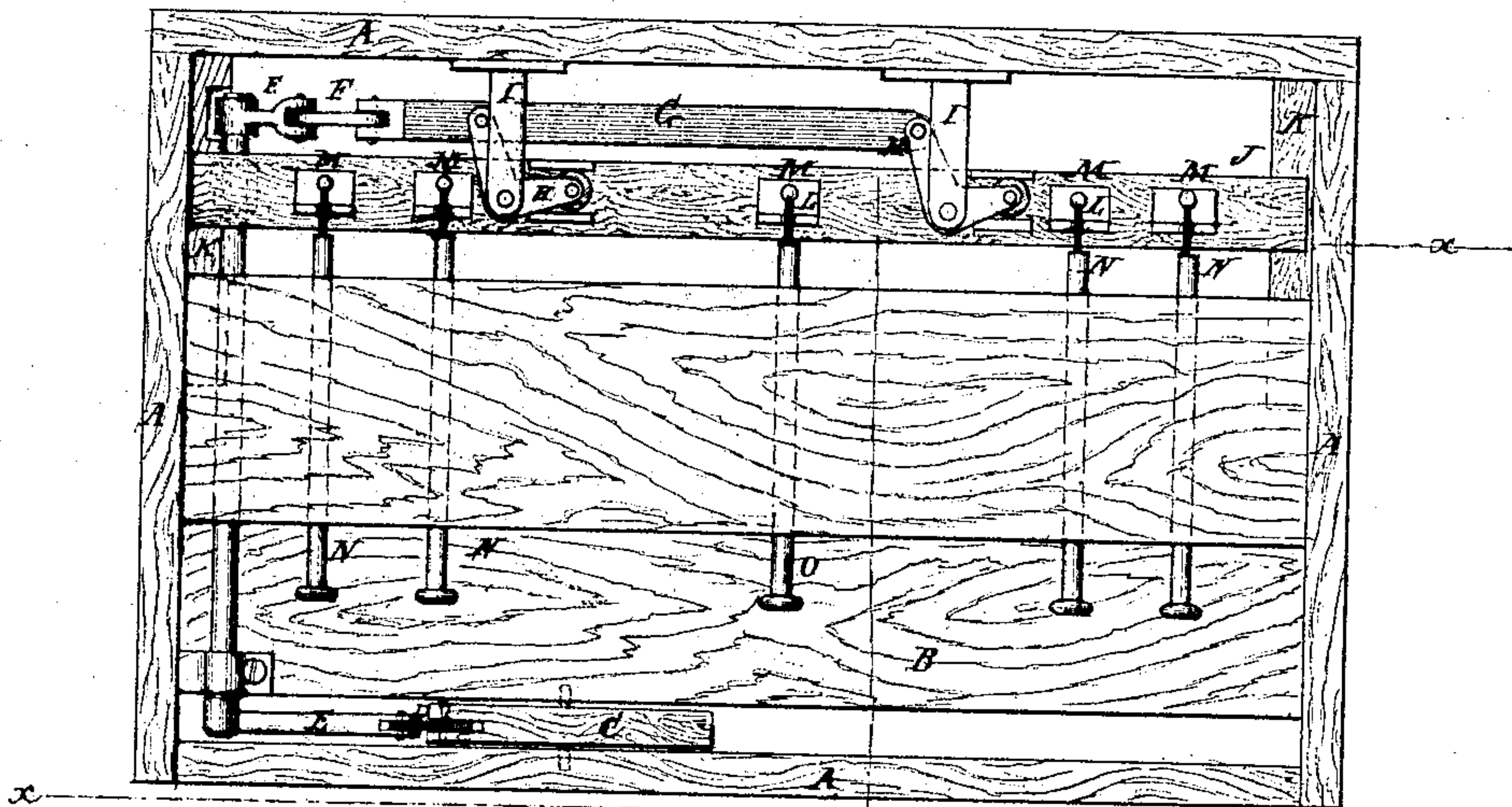
*H. A. Clifford,*

*Organ Action.*

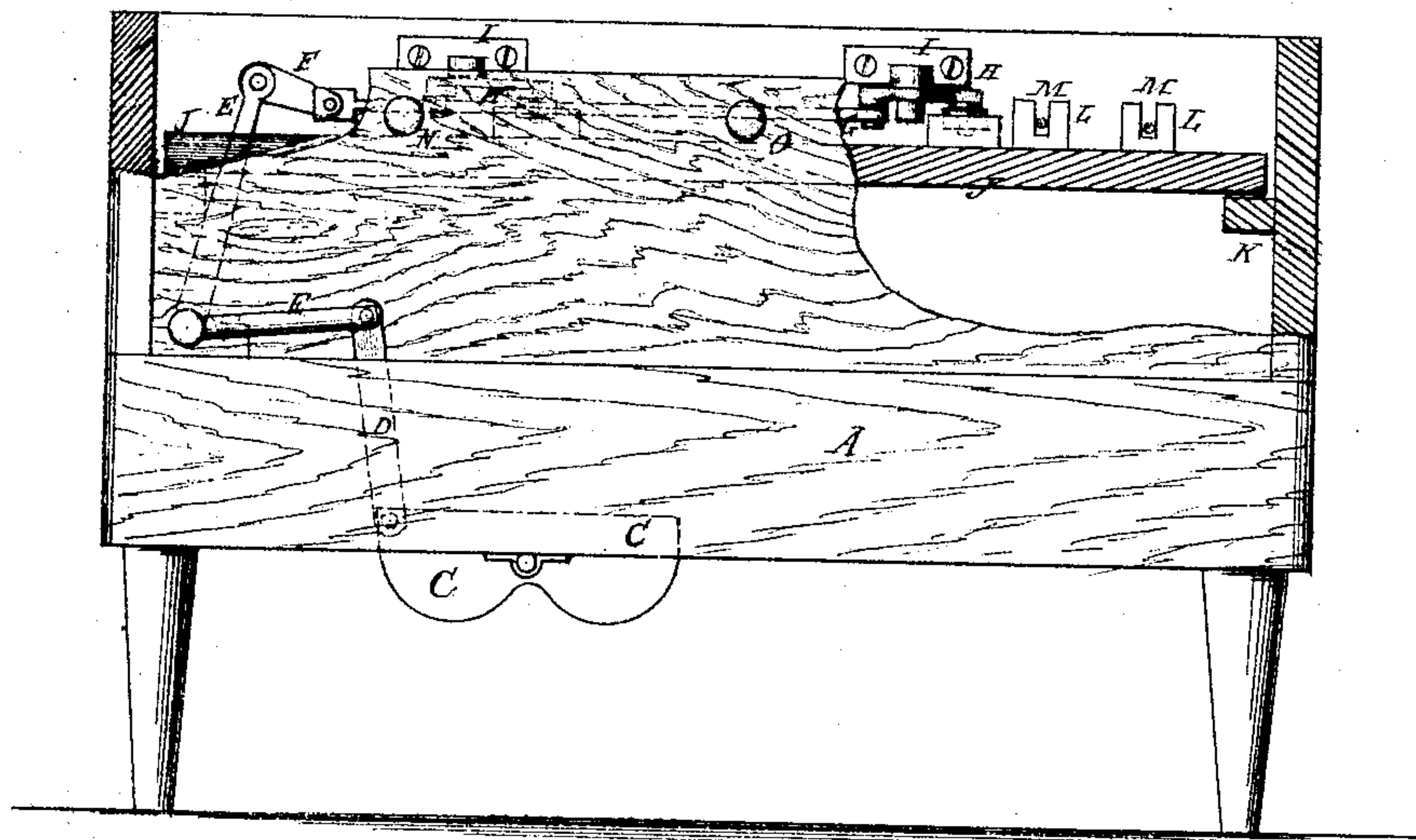
*No. 105,909.*

*Patented Aug. 2. 1870.*

*Fig. 1.*



*Fig. 2.*



**Witnesses:**

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# UNITED STATES PATENT OFFICE.

HENRY A. CLIFFORD, OF ROCKVILLE, CONNECTICUT.

## STOP-ACTION FOR CABINET-ORGANS, &c.

Specification forming part of Letters Patent No. **105,909**, dated August 2, 1870.

*To all whom it may concern:*

Be it known that I, HENRY A. CLIFFORD, of Rockville, in the county of Tolland and State of Connecticut, have invented a new and Improved Action for Stops on Cabinet-Organs, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a detail top view of my improved apparatus as attached to an organ. Fig. 2 is a front view of the same, parts being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved attachment for cabinet-organs and other suitable instruments which shall be so constructed that the whole power of the instrument can be brought on instantly by a slight movement of the knee, thus preventing any break in the music caused by delay in drawing the stops, and which will enable the power to be thrown off by another slight movement of the knee; and it consists in the construction and combination of the various parts of the attachment, as hereinafter more fully described.

A represents the case of the instrument, and B the key-board.

C is a board, block, or plate, which is pivoted at its middle part and extends a little below the front of the instrument. The middle part of the lower edge of the piece C is notched or hollowed out, leaving the end parts of said lower edge projecting, as shown in Fig. 2, so that either end may be operated with the knee as may be required.

To the end of the upper edge of the piece C is pivoted the end of a short connecting bar or link, D, the outer end of which is pivoted to the end of the rod E, which passes along the front to the end of the instrument, where it is bent at right angles and passes along the end of the instrument to its rear side, where it is again bent at right angles and projects upward, as shown in Figs. 1 and 2.

To the upper end of the rod E is pivoted

one end of a short connecting rod or link, F, the other end of which is pivoted to the end of the rod or bar G, which extends along the inner side of the rear part of case A, and to which are pivoted the ends of two or more bent or elbow levers H. The levers H are pivoted at their angles to brackets or supports I, attached to the rear part of the case of the instrument, as shown in Figs. 1 and 2.

To the other ends of the levers H are pivoted small friction-rollers, which work in recesses formed upon or in the bar J, by attaching small plates to the front and rear edges of said bar, or in any other convenient manner. The bar J extends longitudinally across the instrument, and its ends rest and slide upon cleats or bars K, attached to the ends of the case A.

To the upper side of the bar J are attached small angle-plates L, the upwardly-projecting parts of which are slotted vertically to receive the small screws M, attached to the rear ends of the stops N, said screws M being made of such a length that there may be a space of about two inches between the rear ends of the stops and the heads of the screws, as shown in Fig. 1, so that each stop may be operated independently of the others when desired. By this construction, by pressing one end of the piece C slightly upward with the knee the whole power of the instrument may be put on, and by pressing the other end of said piece slightly upward the stops will be taken off, the various parts of the attachment being so balanced and arranged that when left free the bar J will take the position shown in Fig. 1, so that either of the stops may be operated independently by hand when required.

O is an extra stop connected with the bar J, so that the stops may be operated by hand when it is desired to put on or take off the full power of the instrument. The bar J need be only connected with such stops as increase the power of the instrument. It need not be connected with fancy stops.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In cabinet-organs, the combination, with the stops and a train of mechanism connected therewith, of the centrally-pivoted and cen-

trally-recessed plate C, arranged a little below the front of the instrument, for the purpose specified.

2. The combination of the piece C, connecting rod or link D, bent rod E, connecting rod or link F, bar G, bent or elbow levers H, sliding bar J, angle-plates L, and screws M with

the stops of the instrument, substantially as herein shown and described, and for the purpose set forth.

HENRY A. CLIFFORD.

Witnesses:

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