(No Model.)

G. B. KELLY.

REED ORGAN STOP ACTION.

No. 260,577. Patented July 4, 1882.

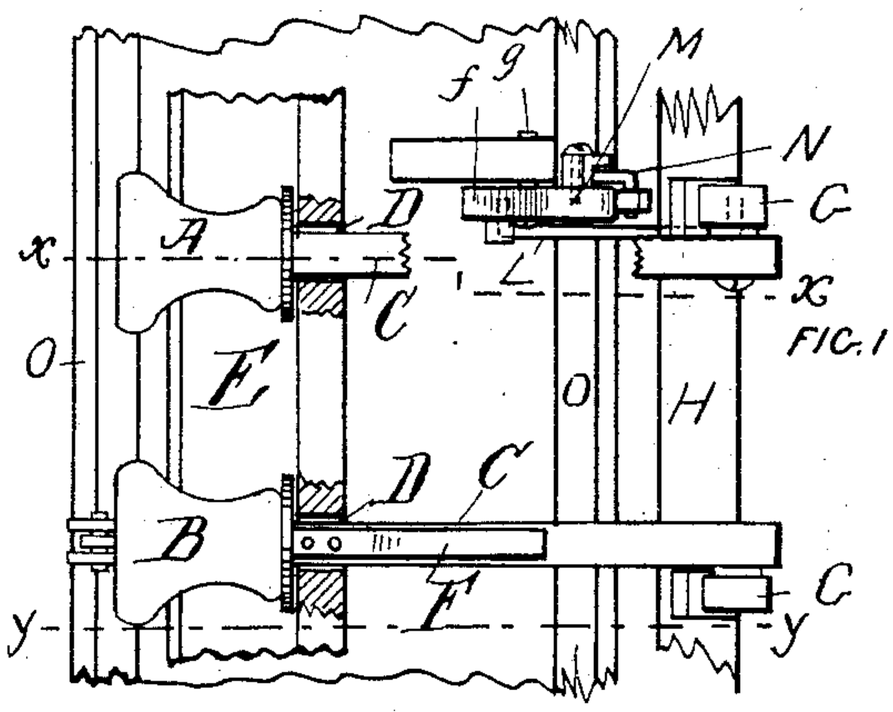

FIG. 1

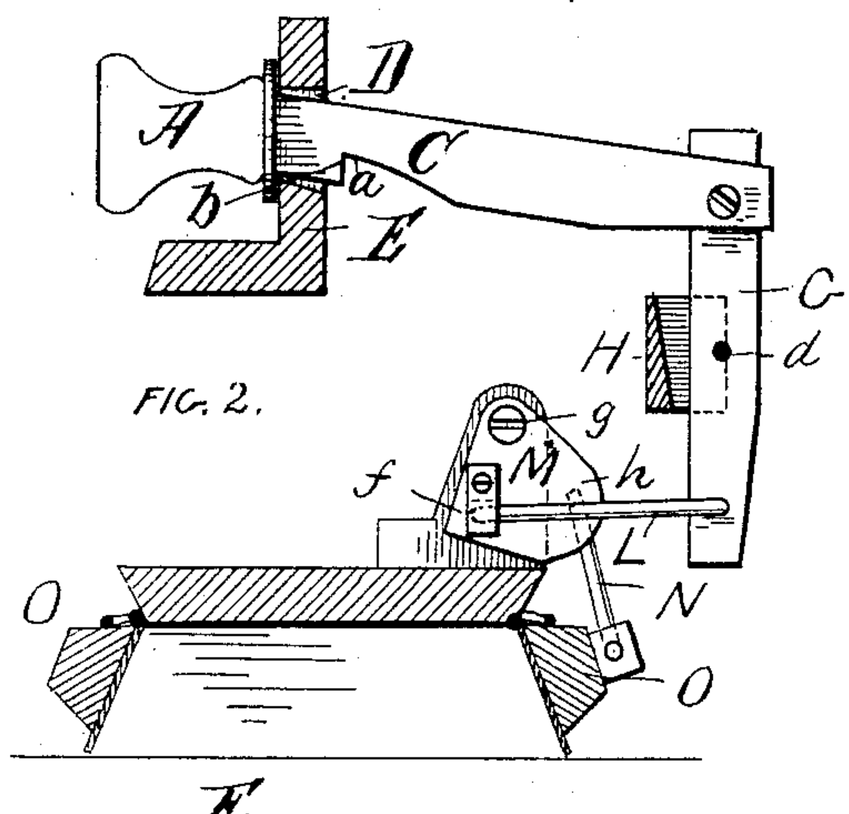

FIG. 2.

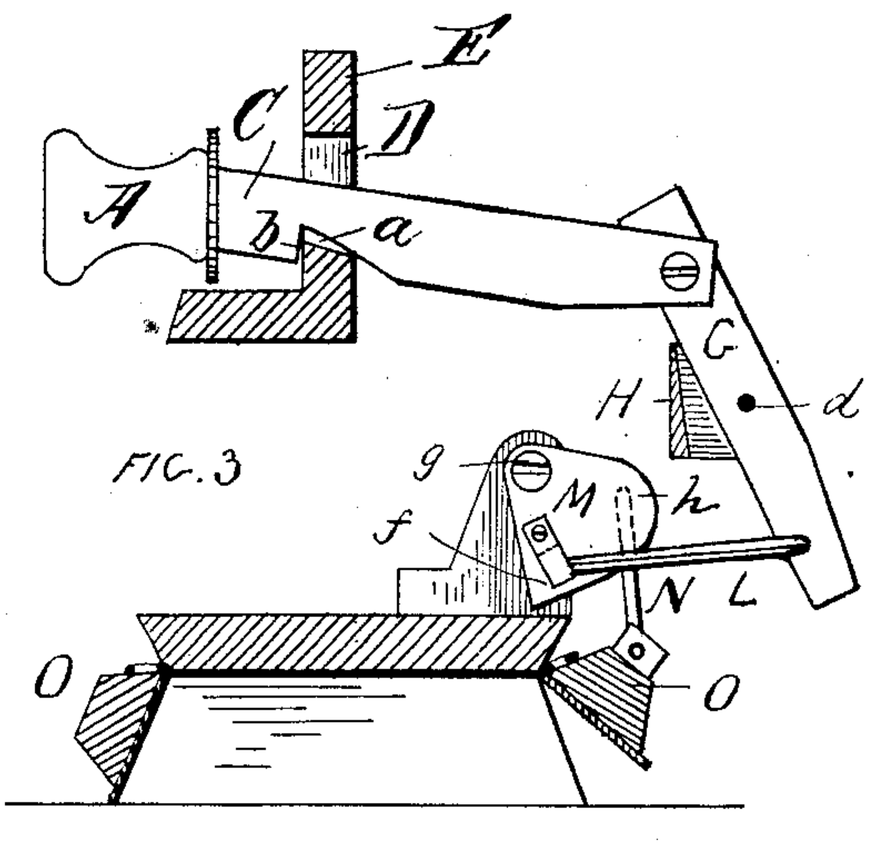

FIG. 3

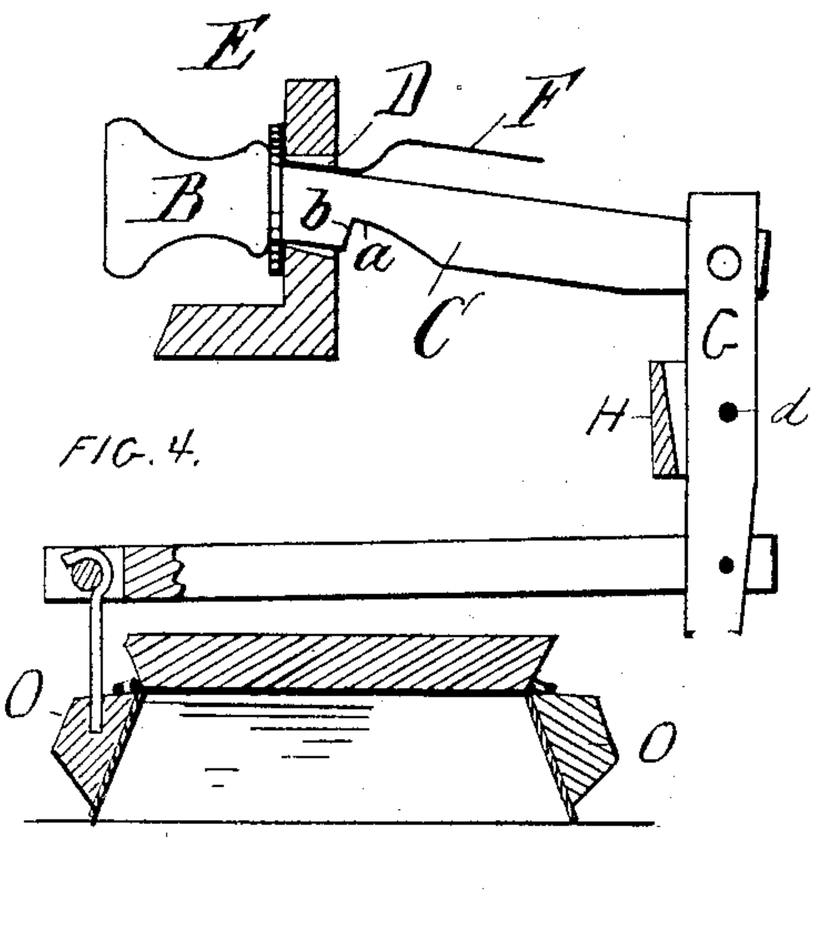

FIG. 4.

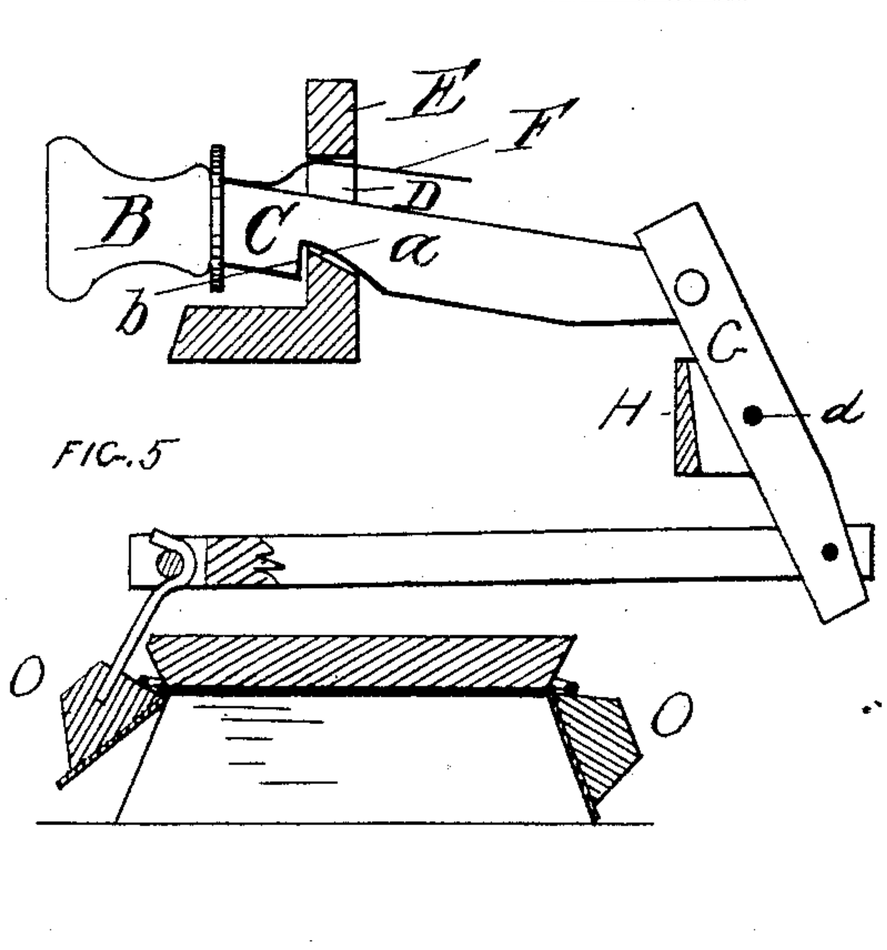

FIG. 5

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UNITED STATES PATENT OFFICE.

GEORGE B. KELLY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE MASON & HAMLIN ORGAN COMPANY, OF SAME PLACE.

REED-ORGAN STOP-ACTION.

SPECIFICATION forming part of Letters Patent No. 260,577, dated July 4, 1882.

Application filed December 16, 1881. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. KELLY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Stop-Actions for Reed-Organs, of which the following is a full, clear, and exact description.

This invention consists in the construction of the shank or bar to the stop-knob and its arrangement otherwise, all as hereinafter fully described, to enable it to be readily secured against movement when drawn out to open the valve or mute with which it is connected, and thus hold such valve open, and to be readily released for the valve or mute to be closed under the action of its spring.

The invention also consists of mechanism, hereinafter described, which connects the shank or bar of the stop-knob to the valve or mute of the stop, and through which, by pulling upon the knob, the valve is opened against its spring and allowed to close upon the reaction of its spring when the knob is released to permit of the same.

In the accompanying plate of drawings, Figure 1 is a plan view, showing two stop-knobs having their bars or shanks both constructed and arranged and one of them connected to its valve in accordance with this invention. Figs. 2 and 3 are vertical sections on line *x x*, Fig. 1, showing in the one the stop-valve or mute as closed and in the other as opened and the shank to the stop-knob secured against movement. Figs. 4 and 5 are vertical sections on line *y y*, Fig. 1, and otherwise similar in character to Figs. 2 and 3, but showing the combination of a spring with the shank to the stop-knob, as and for a purpose which will hereinafter fully appear.

In the drawings, A and B represent two stop-knobs of an organ. Each knob has a shank or bar, C, and each bar passes through an opening, D, for it in the name-board E. Each opening D is of a shape to guide the stop-bar which passes through it, and is elongated in a vertical direction to permit such bar to be raised and lowered therein. Each stop-bar C has a notch, *a*, in its under side or edge, which makes a shoulder, *b*, located as to the length of the bar, and shaped to be capable of being placed, by drawing out and lowering the bar in its guide-opening D, into contact and engagement at its shoulder *b* with the front of the name-board E, and all in a manner to then hold the bar against an inward or return movement. This engagement of the stop-bar C with the name-board E is broken by simply lifting the bar in its guide-opening sufficiently for its shoulder to clear the lower edge of such opening.

Each stop, through its shank or bar, as will hereinafter appear, is connected to its appropriate valve or mute O, so that when pulled out and secured as described the valve will be opened and held opened, (this movement being against the ordinary spring to such valve or mute,) and so that when the shank is released, as described, the valve will be set free to be closed by its spring, by which closing of the valve through said connecting mechanism the stop is returned to its normal position of rest upon the name-board E.

Two arrangements of connecting mechanism for the shank or bar C of a stop-knob and the valve or lid of such knob are shown in the drawings, and one of these mechanisms constitutes a part of this invention. This mechanism consists of a vertical lever, G, of the first order, having its fulcrum *d* in a fixed horizontal cross-rail, H, and at its upper end hung to the inner end of the stop-bar C, and at its lower end hung to one end of a horizontal pitman-rod, L, which at its other end is connected to one arm, *f*, of a bell-crank lever, M, turning upon a fixed center pin, *g*, and connected at its other arm, *h*, to a vertical rod, N, which in turn is hung to the valve or lid O belonging to the stop-knob C.

With the arrangement of connecting mechanism above described, by the outward pull of the knob the valve is opened against its spring, and when interlocking the knob-shank, as has been described, the valve is so held opened, and by releasing this interlock of the shank, as above explained, the valve is free to be closed by its spring. In this arrangement of connecting mechanism the opening of the valve is in a direction against and opposite to the

line of movement of the stop-shank when being drawn out.

Under the notched construction of the stop shank or rod C above described, to interlock it the operator must himself pull the shank down into engagement. To avoid this trouble I have combined with the stop-shank C and its guideway D a bent spring, F, which, as shown, is fastened at one end to the upper edge of the shank, and in its length it is made of a shape and bend to operate against the upper edge of the guideway D as the shank is drawn out, to force said shank in a downward direction, and thus automatically secure its engagement specified with the board E.

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

1. In organs, the stop-knob A and its shank or bar C, having notch *a* and shoulder *b*, in combination with the board E, having guideway D for stop-bar C, and with the spring F, all substantially as described, for the purpose set forth.

2. The combination of the organ stop-bar C, a vertical lever, G, a bell-crank, M, a pitman, L, connecting the lever with the bell-crank, and a rod, N, connecting the bell-crank to an arm of the stop-valve, all substantially as and for the purpose described.

3. In an organ, the stop-knob A and the shank or bar having notch *a* and shoulder *b*, in combination with the board E, having guideway D for stop-bar C, and with the spring F, said stop-bar C being hung to a vertical lever, G, connected by a pitman-rod, L, to a bell-crank, M, in turn through a rod, N, connected to an arm of the stop-valve, substantially as described, and to operate as specified.

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

GEORGE B. KELLY.

Witnesses:
EDWIN W. BROWN,
WM. S. BELLOWS.