

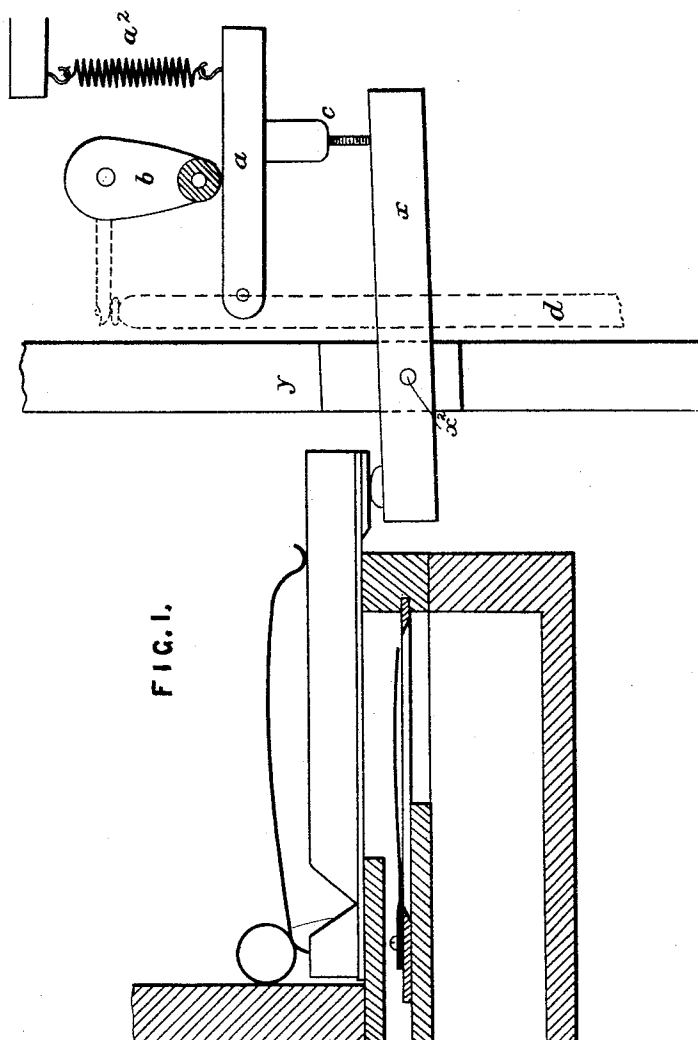
(No Model.)

3 Sheets—Sheet 1.

J. B. HAMILTON.
ORGAN.

No. 461,242.

Patented Oct. 13, 1891.



Witnesses

George Baumann

John Revell

Inventor

James B. Hamilton

By his Attorney

Harvey and Harvey

(No Model.)

3 Sheets—Sheet 2.

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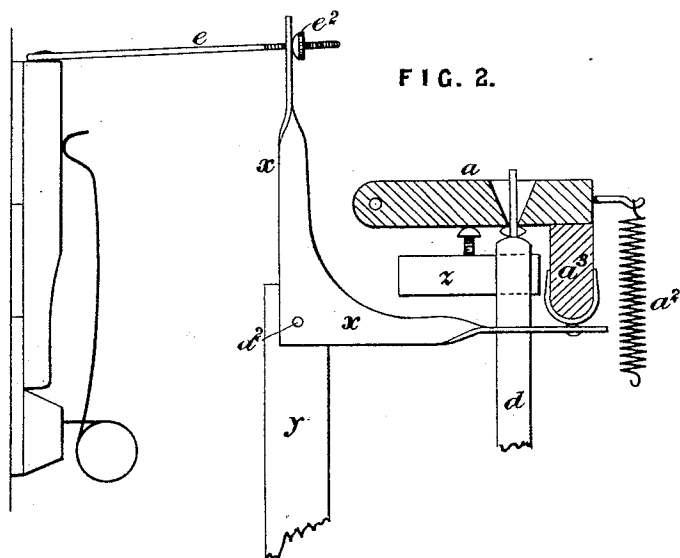


FIG. 2.

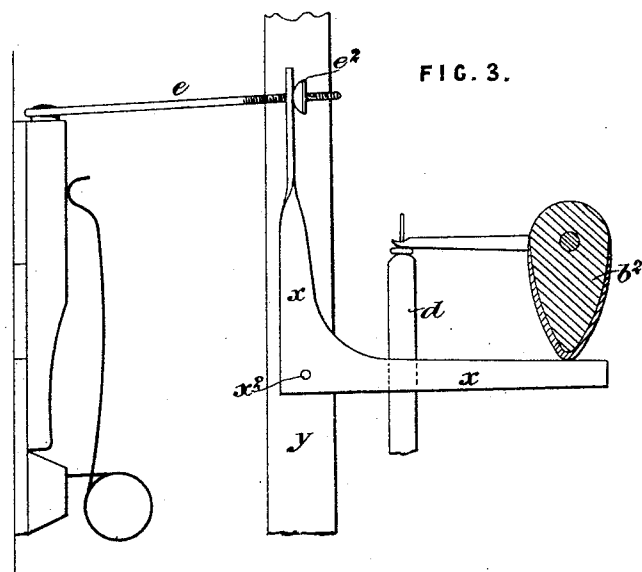


FIG. 3.

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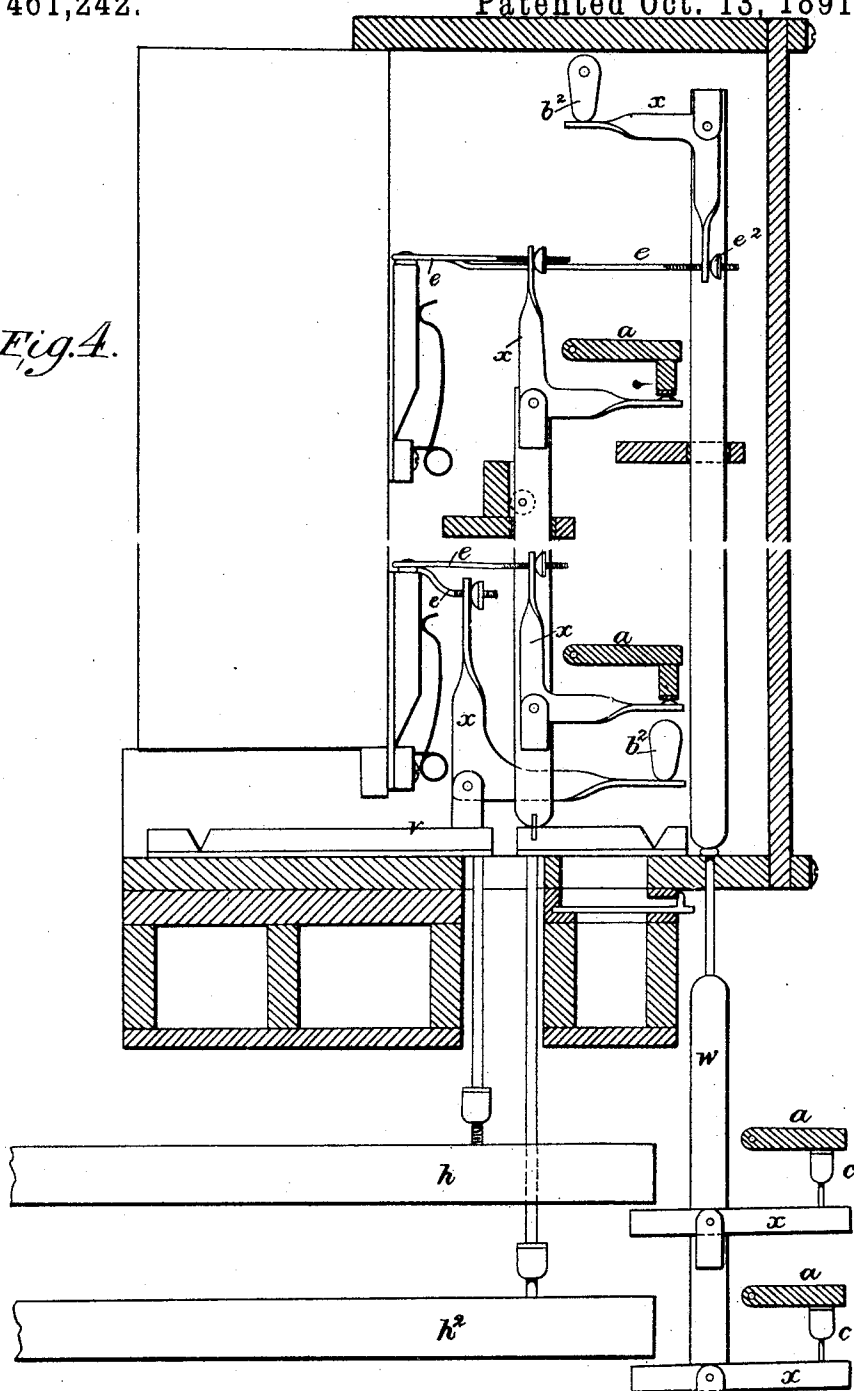
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Fig. 4.



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UNITED STATES PATENT OFFICE.

JAMES BAILLIE HAMILTON, OF LONDON, ENGLAND.

ORGAN.

SPECIFICATION forming part of Letters Patent No. 461,242, dated October 13, 1891.

Application filed January 13, 1891. Serial No. 377,587. (No model.)

To all whom it may concern:

Be it known that I, JAMES BAILLIE HAMILTON, gentleman, a subject of the Queen of Great Britain and Ireland, and residing at 14 Upper Cheyne Row, London, in the county of Middlesex, England, have invented certain Improvements in Pipe or Reed Organs and Like Musical Instruments, of which the following is a specification.

My invention relates to pipe or reed organs and like musical instruments, and has for its object to provide efficient and ready means to connect or disconnect the various ranks or stops of the instrument with the key-board by means of the main action-rods. In the case of a pipe-organ these action-rods are generally horizontal, and in the case of a reed-organ they are generally vertical. In all cases each stop is furnished with its own separate series of valves and the connection with the action-rod is, according to my invention, effected by an intermediate lever. I use by preference a lever for each stop, each said lever being centered or slung upon the main action-rod itself, one end or arm operating the valve and the other end or arm being acted upon or not, as hereinafter described, according to whether the particular stop to which it belongs is on or off. My invention applies equally to "pressure" or exhaust wind. I have represented it as applied to pressure-wind.

Figure 1 shows a straight lever, and Fig. 2 shows a bent or "bell-crank" lever for the purpose described.

The connection or disconnection of the ranks or stops is effected by opposing or not the natural action of the ends of the levers which are disconnected with the valve. In the case of Fig. 1 this is effected by a hinged board or obstructer *a*, controlled from the stop-action through the rod *d*, operating a cam *b*, the regulation being effected by screw-buttons *c*, borne upon one end of the lever *x*, centered at x^2 to the action-rod *y*, the other end of the said lever *x* bearing on the valve, as shown. When the cam *b* is in the position shown on the action-rod *y* rising, the button *c* being obstructed by the board or obstructer *a*, the valve is opened. If, however, the cam *b* be turned up clear of the board *a*, the said

board is raised by the spring a^2 , and the valve is not operated.

In the case of Fig. 2 the hinged board or obstructer *a* is actuated directly from the stop-action through the rod *d*, regulation being effected on the pull-wires *e* by the button e^2 . The board *a* on being pulled down by a spring or springs a^2 and its descent limited by the screw-button represented on the block *z*, the projection a^3 from the board *a* bears on one end of the lever *x*, centered at x^2 to the action-rod *y*, the said lever in this case being a bell-crank lever, the other end of which is connected to the valve by the wire *e*.

In the case of Fig. 3 the connection is effected by the action of a continuous-cam roller b^2 , which is controlled from the stop-action rod *d*, as in the case of Fig. 1, the regulation being effected as in Fig. 2 and a similar lever *x* being used.

Fig. 4 represents the section of so much of a two manual and pedal organ, as is necessary to illustrate the application of the foregoing methods, and the corresponding parts are marked with the same reference-letters. In the "great organ" the method represented in Fig. 2 is employed, the "swell organ" having an ordinary valve worked by a "sticker" or push-action, which is the action adopted throughout this figure and in Figs. 1, 2, and 3.

The pedal-action (one rod of which is shown at *w*) can exercise an independent control of the upper stop of the great organ by an inverted form of the arrangement, Fig. 3, having an independent pull-wire in connection with the valve, as shown.

The swell-organ valve *v* can have an independent control of the lower stop of the great organ by having also an independent pull-wire in connection with it, as shown.

Another application of the straight lever mounted on the action-rod, as in Fig. 1, is shown in connection with the main pedal-action rod *w*, as affecting its relation with either of the two key-boards *h h^2*, thus enabling one single row of pedal-action rods *w* to affect its own notes as well as those of the manuals.

In all the figures corresponding parts are marked with the same reference-letters.

I claim as my invention—

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In pipe or reed organs or like musical instruments, the combination of levers carried by the action-rods themselves, one arm operating the valves and the other arm being acted
5 upon by an obstructer brought or turned into the obstructing position when the stop is to be brought into action.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses:

JAMES BAILLIE HAMILTON.

Witnesses:

CHAS. MILLS,

EDWD. GEO. DAVIES,

Both of 47 Lincoln's Inn Fields, London.