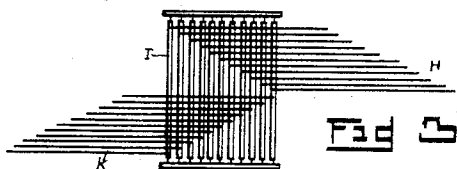
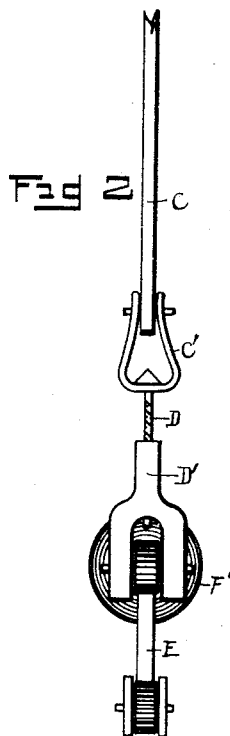
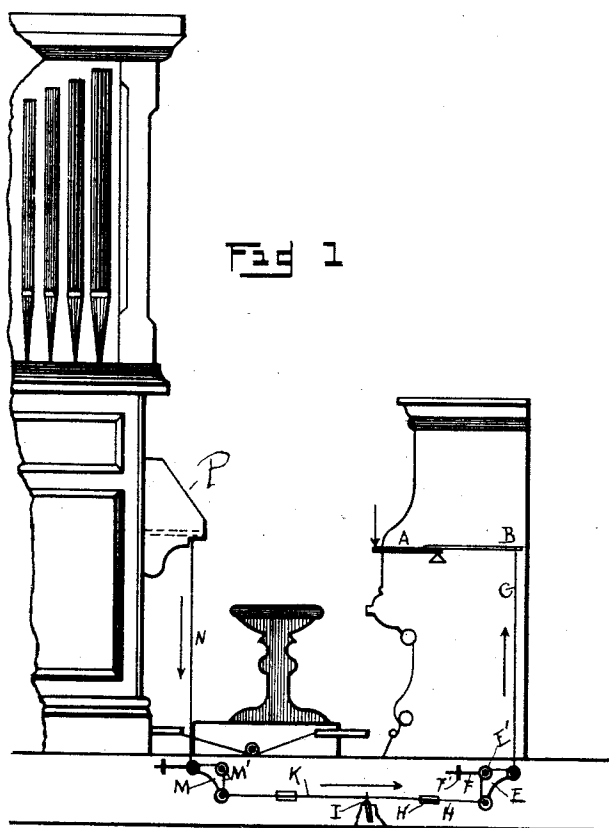


(No Model.)

J. A. HULTMAN.
ORGAN.

No. 470,868.

Patented Mar. 15, 1892.



WITNESSES:

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ORGAN.

SPECIFICATION forming part of Letters Patent No. 470,868, dated March 15, 1892.

Application filed May 21, 1891. Serial No. 393,516. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. HULTMAN, of Omaha, in the county of Douglas and State of Nebraska, have invented certain useful improvements in Organs; and I do hereby declare that the following is a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention has relation to a new and novel improvement in organs, and comprises an auxiliary keyboard which may be placed in any position and place, so that the organist may face any desired direction.

The object of this invention is to provide a mechanical device that may be placed in one part of a hall, church, or cathedral and brought into connection with an organ at a distance, so as to operate the same, as will be described more fully hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 shows a side elevation of my auxiliary keyboard as attached to an organ. Fig. 2 shows a detail of the bell-cranks and connecting-rods, while Fig. 3 illustrates a top view of the switch-board.

A represents my auxiliary keyboard, which may be dumb; or, if desired, a smaller organ may be employed, the keys of which have been provided with extending arms B. These arms B are simply notched at their outer ends and encompassed by a suitable stirrup forming the termination of the lever-rods C. The lever-rods may be thin well-seasoned wooden strips or small steel rods. I prefer making them of wooden strips, to the lower end of which I pivot the stirrup C', within which is swiveled the screw D, working within the threaded stem of the crank-toggle D', as shown more clearly in Fig. 2.

At a suitable point below the keyboard A are arranged a series of bell-cranks E, mounted upon a horizontal shaft E'—one for each key—within the auxiliary board A. Extending from the pivotal point each crank is provided with a threaded arm F, upon which is screwed the counterpoise F'. Extending horizontally from each lower crank-arm is a

leading-rod H, provided intermediately with a turn-buckle H', which is connected to one of the pivoted switch-bars I, as shown in Fig. 1. These switch-bars are preferably of wood, pivoted in a series, as shown in Fig. 3, and provided with two projecting pins, one adapted to receive the extending end of the leading-rod H, the other the extending end of the follower K, also provided with an intermediate turn-buckle, as illustrated.

At a suitable point below the keyboard of the organ to be operated is a second series of bell-cranks M, also provided with an extending arm and counterpoise, which are held upon the horizontal shaft M' and connected by the lever-rods N to the organ, as shown. The rods N are held upon the cranks M, as described.

In assembling the parts the keys are given nice adjustment, first, by means of the swiveled screws; second, by means of the turn-buckles, and, finally, the whole mechanism is adjusted by means of counterpoised weights, as illustrated in Fig. 1.

Of course each dummy key has its independent connection to the organ.

The operation of my device is as follows: When one of the keys upon the auxiliary board A is depressed, the arm B is carried upward, as is the connected rod C, and as this rod is connected to one arm of the bell-crank E this crank is operated into the desired direction. Now this crank is in connection with the pivoted switch-bar I, which as the crank operates reciprocates and thus draws the follower K forward, operating the crank M and the connected key of the organ P, as will be clearly understood by referring to the drawings.

All the parts are simple, light, and well proportioned and capable of the finest adjustment.

The stops and pedals may be operated as are the keys. The rods H and followers K may be of any suitable length, and, if desired, may be in the shape of wire cables.

Having thus described my said invention, what I claim as new, and desire to secure by United States Letters Patent, is—

1. The combination, with an organ, of an auxiliary keyboard, said auxiliary keyboard

comprising a series of vertical adjustable connecting-bars, counterpoises, bell-cranks pivoted to said bars, and a series of horizontal leading-rods, said rods being connected to a
5 series of pivoted switch-bars, followers connected to said switch-bars, a second series of counterpoised bell-cranks, and adjustable connecting-rods uniting said bell-cranks to the keyboard of an organ, all of said effects
10 being arranged to operate substantially as and for the purpose set forth.

2. The combination, with an organ, of an auxiliary keyboard comprising the following

instrumentalities, to wit: the adjustable bars C, counterpoised cranks E, leading-rods H, 15 and pivoted switch-bars I, the adjustable followers K, counterpoised cranks M, and connecting-rods N, all of said effects being combined and arranged to operate substantially as and for the purpose set forth. 20

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. HULTMAN.

Witnesses:

G. N. SUES,

GEO. W. HOLBROOK.