(No Model.)

J. P. CAULFIELD.

REED ORGAN.

No. 492,189. Patented Feb. 21, 1893.

Fig. 1.

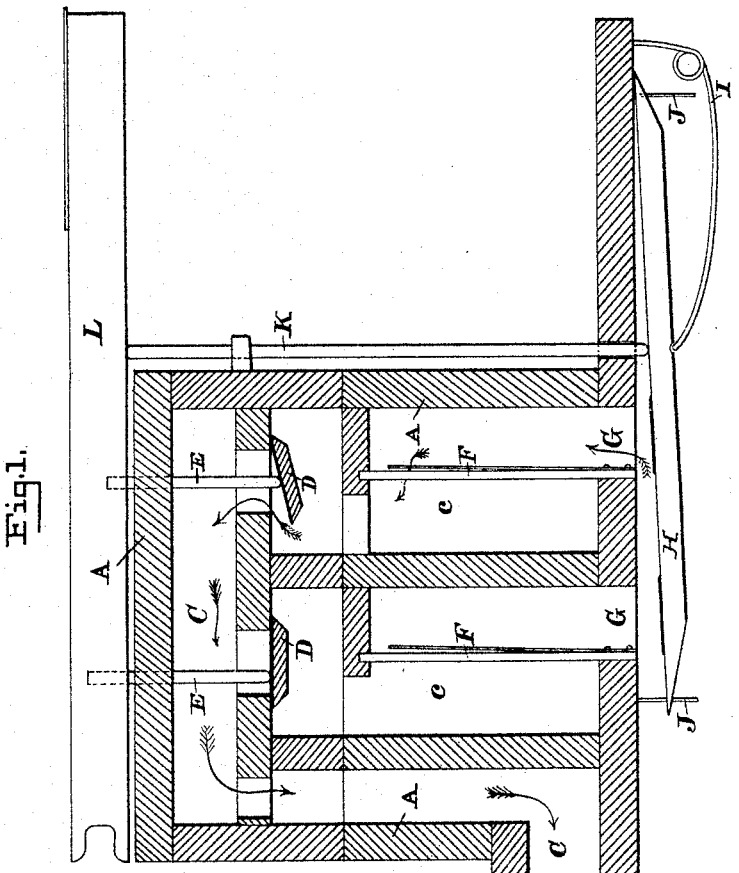
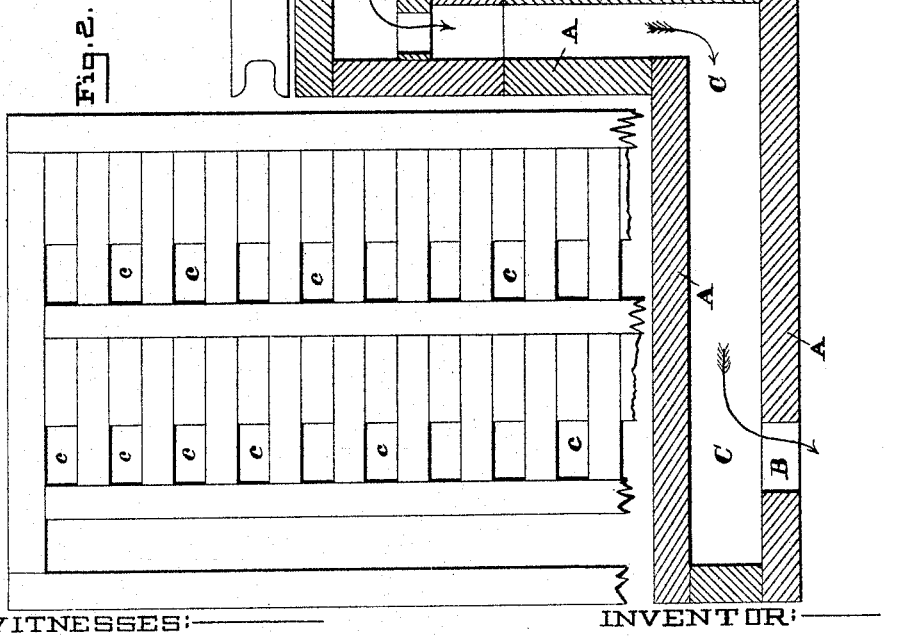


Fig. 2.



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INVENTOR:

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UNITED STATES PATENT OFFICE.

JAMES P. CAULFIELD, OF BALTIMORE, MARYLAND.

REED-ORGAN.

SPECIFICATION forming part of Letters Patent No. 492,189, dated February 21, 1893.

Application filed October 28, 1892. Serial No. 450,239. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. CAULFIELD, of the city of Baltimore and State of Maryland, have invented certain new and useful Improvements in Reed-Organs, of which the following is a specification.

The chief object of my invention is to so arrange the reeds, the reed-cells, and the reed-pallet or valve, with respect to each other that there will be no horizontal plane for the lodgment of dirt or loose matter in proximity to the valve-openings which lead to the reeds, whereby all liability is avoided of dirt being drawn into the reed, or lodging on the pallet or valve.

Figure 1 is a vertical section of air-chest, reed-boards, and various valves and connecting parts used in my invention. Fig. 2 is a top-view of a section of the reed-boards or lower section of the air-chest.

The letters A designate the outer frame of the air-chest, which is connected with the bellows at the opening, B.

C C is an air-channel leading from the bellows through the upper section of the air-chest. *c c* are also air-channels leading to the various reeds and separated from the main channel by the partition and stop-valves, D D. The pins, E E, passing through the top of the air-chest, are for the purpose of pressing open the stop-valves, and are adapted to co-operate with any suitable draw-stop action.

The reeds, F F, are in a vertical position, and are inserted in the reed-cells through the opening, G G, from the under side of the air-chest.

The pallets or reed-valves, H, close the reed-cells on the outer and under side of the air-chest, and are held in position by the spring, I. The pins, J, guide the pallets to their seats.

The pitman-rods, K, and the key, L, operate on the reed-valves in the usual manner.

The direction of the air-current is indicated by arrows.

My preferred way of making the lower section of the chest, which comprises the reed-boards, is to make a separate channel for each note and a separate tube for each reed. By placing a sufficient number of partitions across the chest, these channels are formed, and the channels are divided into tubes by narrow blocks of wood, which may be glued therein. Fig. 2 shows a top view of the reed-board made on this principle, the upper section of the chest being removed.

The advantage of dividing the chest into channels is that it avoids leakage between the notes and produces a better tone.

One of the most general causes of trouble in the ordinary organ is the accumulation of dust and dirt, or the depositing of trash by mice, roaches or other vermin, in proximity to the reeds. These reeds are often horizontal and on the top of the chest, and when the stops are drawn, are entirely exposed. Hence, in using the organ, the air-currents tend to draw this dirt or trash into the reeds, thereby causing them to be silent; or should it pass through the reeds, it is frequently caught on the pallets, thus holding them open and producing a continuous and undesirable sound. The pallets are often placed on the inside of the chest and require an expert to reach them. By placing the reeds in a vertical position, as in my invention, with the pallets on the outside, underneath the air-chest, it will be seen that there is no place for mice or roaches to get a footing, and all dirt or foreign matter must fall from the reeds and find a level below, thus obviating the above disadvantages. And should the pallets become displaced by any means, they can be easily adjusted by any person without taking the organ apart.

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

1. The combination with the air-chest of reed-boards F placed vertically therein; stop-valves inside the chest and dividing the air-channels between the reeds and the bellows, thus shutting the air off from the reeds; pins resting upon the said stop-valves and adapted to press open the same; reed-valves placed on the under side of the air-chest and closing the valve to the reed-cells on the outside; keys and pitman-rods adapted to press down the said reed-valves; all the said parts being constructed and arranged to operate substantially as and for the purpose specified.

2. The combination with the chest of the vertical reed-boards provided with a separate tube or cell for each reed, and having their inductive openings in the under side of the chest; reed-valves closing these inductive

openings on the outside; keys and pitman-rods adapted to open the said reed-valves; stop-valves inside the chest, adapted to admit or shut off the air from the various sets of reeds; all of these parts being constructed and arranged to operate substantially as and for the purpose specified.

3. In a reed organ the combination of the vertical reeds F, reed cells which have at their lower ends, air-inlets or openings G, accessible on the outside, and pallets or valves H on the under and exterior side and closing the said inlets or openings on the outside, as and for the purpose set forth.

4. In a reed organ, the combination of the vertical reeds F; reed-cells which have at their lower ends air-inlets or openings G, accessible on the outside; pallets or valves H on the under and exterior side, to close the said reed-cell openings; air-chest channels C above and on the upper side of the reed-cells; and reeds, and stop-valves D inside the chest and above the upper end of the reeds, as shown and described.

In testimony whereof I hereunto set my hand and attach my seal this 24th day of October, 1892.

JAMES P. CAULFIELD. [L. S.]

Witnesses:
I. PARKER DAVIS,
A. O. BABENDREIER.