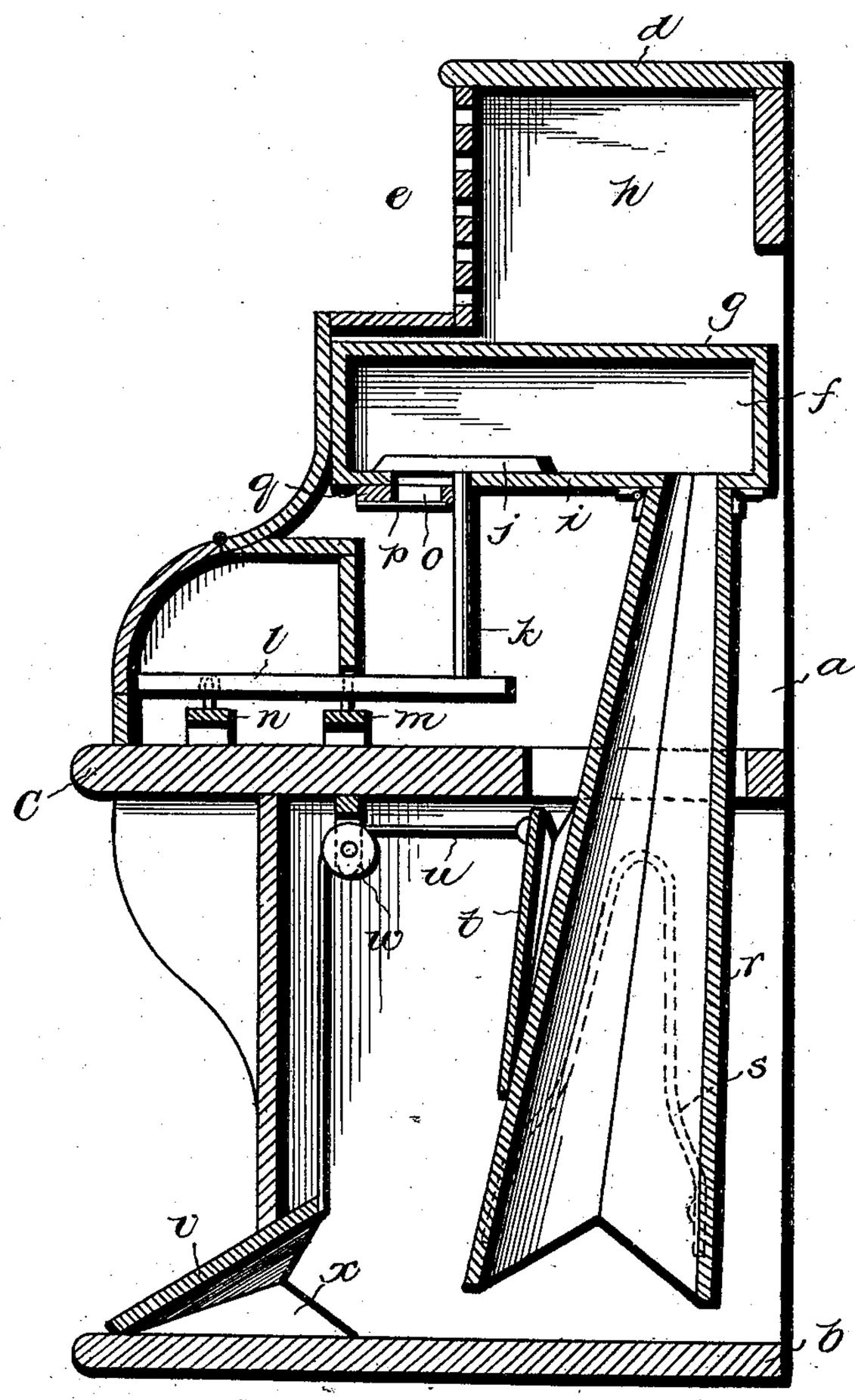
No. 690,726. Patented Jan. 7, 1902.

L. D. HICKMAN.

ORGAN.

(Application filed May 22, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

LOGAN D. HICKMAN, OF WICHITA, KANSAS.

ORGAN.

SPECIFICATION forming part of Letters Patent No. 690,726, dated January 7, 1902.

Application filed May 22, 1901. Serial No. 61,414. (No model.)

To all whom it may concern:

Be it known that I, LOGAN D. HICKMAN, a citizen of the United States, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Organs; and I do hereby declare the following to be 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.

My invention relates to improvements in organs, and is more especially applicable to reed-organs, as will readily be apparent.

The principal objects of my said invention are, first, to improve the quality of tone and at the same time increase the volume of tone of an organ of given dimensions; second, to arrange the valves, reeds, and wind-chest in such manner that dust or the like cannot collect about these parts; third, to increase the bellows capacity of the instrument without altering the outside dimensions of the same, and, fourth, to provide a more solid base for the keyboard.

In reed-organs as heretofore constructed the wind-chest, from which all sound is transmitted, has been invariably placed either beneath the keyboard and there covered up with the keys and other mechanisms and parts that obstruct the transmission of the sound vibrations or is placed in some obscure part of the instrument, where the sound vibrations are much decreased or muffled. In these same organs the valves, reeds, and other vital parts of the organ are located upon the upper side of the wind-chest and as a consequence dust and the like collect upon the reeds and between the valves, greatly impairing the tone of the instrument, the dirt or other obstructions that fall into the valves preventing the same from fully closing, causing the reeds to "sing," and the dust upon the reeds frequently prevents them from sounding properly, causing them to remain silent.

In order that my invention may be more fully understood, reference will be had to the accompanying drawing, which represents a transverse vertical section of an organ constructed in accordance with my invention.

a represents the case of the organ, provided with the base *b* and the keyboard-support *c*.

d is the top of the organ, and *e* is a perforated front board located in the upper portion of the instrument.

f is the wind-chest, the upper side of which is bounded by the hollow sound-box *h*.

The under side *i* of the wind-chest *f* carries the valve *j*, the valve-stem *k* of which rests upon the inner end of the key *l*.

m is a rail carrying the pivots upon which the keys rock, and *n* is a rail carrying guides for preserving the alinement of the keys. These rails *m* and *n* are mounted upon the solid keyboard-base *c*, giving a firm and level base for the keys.

o is the orifice in the under side of the wind-chest, between the valves *j* and the reed *p*. These reeds are arranged upon the board *q* upon the under side *i* of the wind-chest.

r is the main bellows, the upper end of which is connected to the under side of the wind-chest *f* and is provided with the spring *s* for closing the bellows.

t is a secondary bellows, to which the webbing *u* is attached.

v represents the pedals, to which the free end of the webbing *u* is attached, said webbing passing over the pulley *w*.

x is an auxiliary bellows beneath the pedals *v*, which may be employed in conjunction with the main and secondary bellows *r* and *t*.

It will be seen that the upper side of the wind-chest *g* has perfect freedom in its vibration, and the sound produced by these vibrations is allowed to escape from the upper part of the instrument instead of the bottom, as heretofore. Before passing from the instrument, however, the sound passes into the sound-chamber *h*, formed above the wind-chest, which materially intensifies the resonance of the wind-chest, giving a fullness to the tone that cannot be secured by the old type of instrument. Moreover, the volume of the sound is greatly increased without destroying the purity of the tone. This is due to the fact that the top and bottom of the wind-chest do not support any of the mechanisms or parts of the instrument, but are perfectly free to vibrate, minimizing all neutralizing or counter vibrations that might arise.

Access may be had to the various parts of the organ for purpose of repair, &c., with the

utmost facility, the objections heretofore encountered in removing parts of the instrument for this purpose being eliminated.

It is obvious that my invention may be applied to any reed-organ, it being understood that I do not limit myself to any particular form of organ. It is also obvious that many modifications may be made in the details shown without departing from the spirit of my invention.

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

In an organ, the combination with the case, and a keyboard and bellows mounted therein; of a horizontally-disposed wind-chest mounted in the upper portion of said case above said keyboard and bellows, reeds mounted upon the under side of said wind-chest, valves also mounted in the under side of said wind-chest, said valves having depending stems adapted to be actuated from said keyboard, said valves controlling openings in the under side of said wind-chest communicating with said reeds, a chamber formed above said wind-chest, a perforated board extending from the upper side of said wind-chest to the top of the organ-case and forming the front of said chamber, a tight casing extending from the bottom of said perforated board to the keyboard, and a hinged lid in the bottom of said casing adapted to expose said keyboard when opened, said casing and lid protecting said wind-chest and its reeds and valves from dust and the like, substantially as described.

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

LOGAN D. HICKMAN.

Witnesses:

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