(No Model.)

J. H. CHASE.

VALVE FOR BELLOWS.

No. 385,999. Patented July 10, 1888.

Fig. 1.

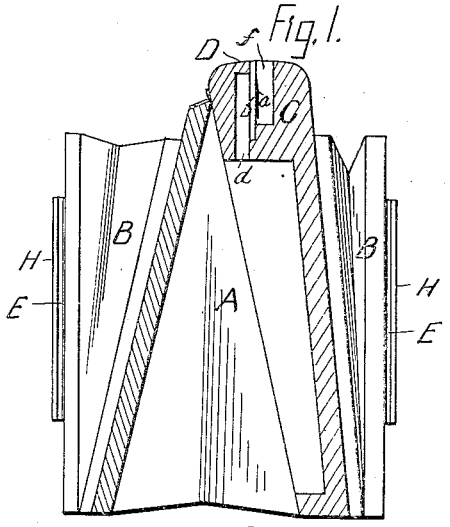


Fig. 2.

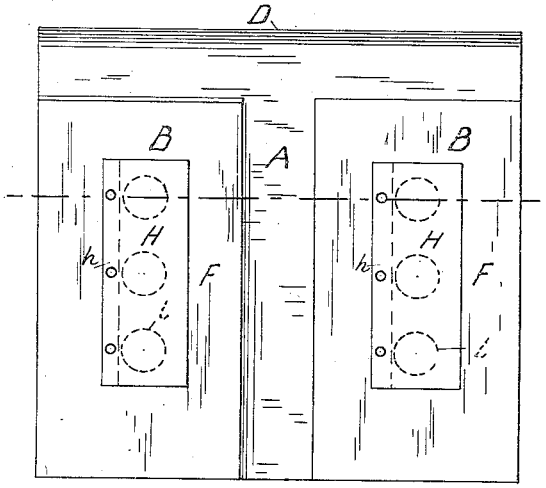
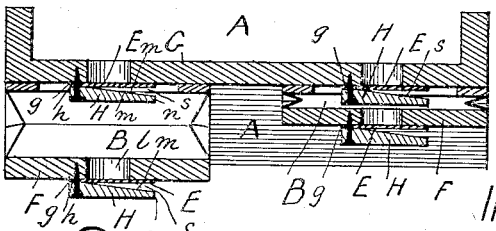
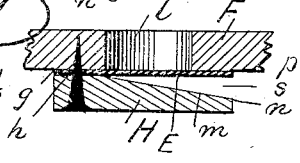


Fig. 3.



Witnesses.
Wm. S. Bellows.
Frank B. Mitchell.

Fig. 4.



Inventor,
J. Herbert Chase,
per Brown Bros.
Attorneys.

UNITED STATES PATENT OFFICE.

J. HERBERT CHASE, OF MONTREAL, QUEBEC, CANADA.

VALVE FOR BELLOWS.

SPECIFICATION forming part of Letters Patent No. 385,999, dated July 10, 1888.

Application filed August 19, 1882. Serial No. 69,781. (No model.)

To all whom it may concern:

Be it known that I, J. HERBERT CHASE, of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Valves for Bellows, of which the following is a full, clear, and exact description.

This invention relates to improvements in the valves of the bellows of musical instruments, being particularly applicable to mechanical musical instruments in which a perforated music-sheet is used to control the operation of the reeds or other sound-producing devices; and the invention consists of a flexible valve for the bellows of musical instruments, made of a piece of leather or other flexible material, and secured at and along only one edge to the board making one side or wall of the bellows, and as so secured more than covering and having a seat against said board at and about the air passage or passages thereof, to which it is intended to act as a valve in combination with a fender, which is attached to said bellows at and along one edge, and is beveled outwardly on its under or inner side to allow of the proper movement of the valve in the operation of the bellows and of the passage of air through said air-passages of the bellows from or to the outside of the fender, as the case may be, all substantially as hereinafter fully described, and for the purposes set forth.

In the accompanying plate of drawings this invention is illustrated in connection with a bellows and its exhausters arranged for a mechanical musical instrument of the kind before mentioned.

Figure 1 is a vertical section of such bellows with its exhausters in elevation. Fig. 2 is a front elevation of Fig. 1, and Fig. 3 a detail cross-section of Fig. 2. Fig. 4 is a detail cross-section.

A, in the drawings, represents the reservoir-bellows having exhausters B arranged in pairs upon each side thereof, and all for operation in the usual manner of bellows for musical instruments.

a is a reed located in a separate reed-chamber, *b*, of a reed-board, C, having communication at *d* with the bellows A, and *f* is an air-passage leading from the reed *a* to the surface D of the reed-board C, on which surface is arranged to travel a perforated music-sheet, all as ordinarily in mechanical musical instruments.

E is a valve attached to board F of each exhauster B, and to board G of bellows A, all of which in their operations open outwardly.

Each valve E is made of a strip of leather or other suitable flexible material, and it is secured with tacks or other suitable fastening devices at and along one edge, *g*, together with one edge, *h*, of a fender, H, made of wood or of other suitable material, to the side or board F of the exhaust-bellows B.

The valve E is of suitable size to more than cover and to have a seat at and about the air passage or passages *l* in the exhaust-bellows board F and leading into the bellows.

The fender H is outside of the valve, and it is of a size to substantially cover the valve in its length and width. The fender on its inner face, *m*—that is, its face toward the valve E—and from its confined edge *h* in a direction toward and preferably to its unconfined opposite edge *n*, is made with a bevel, (see Figs. 3 and 4,) thus giving an open space, *s*, between the inner face, *m*, of the fender H and the outer face of the valve E, with the valve on its seat, which space is to be made sufficient for the proper play of the valve at its free and unconfined portion to and from its seat on the bellows. The fender is also open at and along all of its edges, except at that edge attached to the bellows, as aforesaid, which, with the space *s* aforesaid, affords ample opportunity for the circulation of the air desired.

A flexible valve, E, secured at one edge and covered by a fender H, as described, obviously is free to move as required. It is always in position to act instantly on the slightest change in direction or degree of pressure of air. Its expansion and contraction from atmospheric changes are free to occur without detriment to its efficiency. It is not liable in operation to wrinkle or buckle. It is always in position by the pneumatic pressure to secure a perfect and close seat against the bellows. It is quiet in operation. It can be made of quite thin and very flexible or pliable material.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent, is—

A valve for the bellows of a wind musical instrument, composed of a flexible strip secured at one edge, in combination with a fender which covers said strip secured at one edge, and which is beveled outwardly on its under or inner side, leaving an open space between it and said strip, substantially as and for the purpose specified.

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

J. HERBERT CHASE.

Witnesses:
TOM D. GIBSON,
H. L. RANDALL.