A. SMITH.

VALVES FOR BELLOWS.

No. 181,111. Patented Aug. 15, 1876.

Fig. 1.

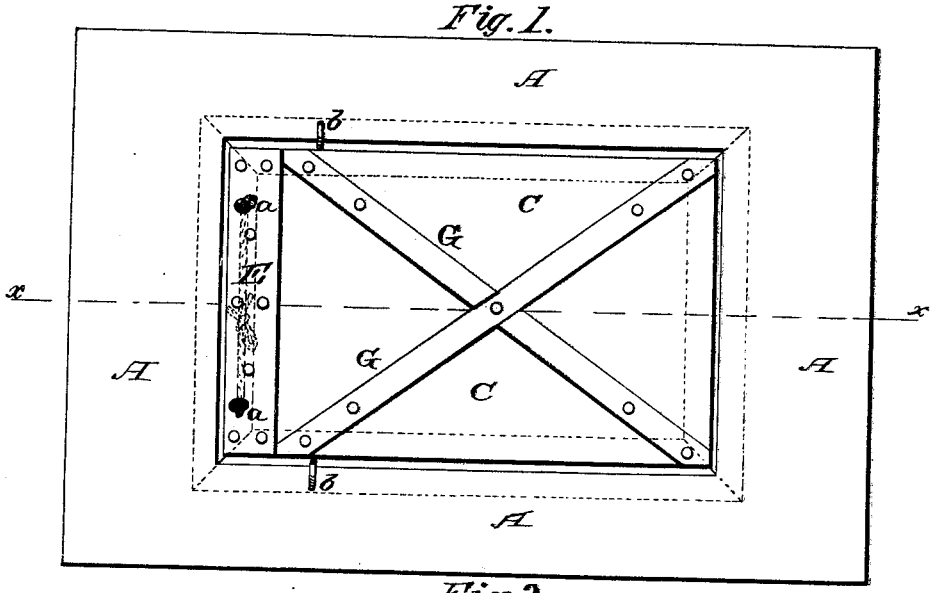


Fig. 2.

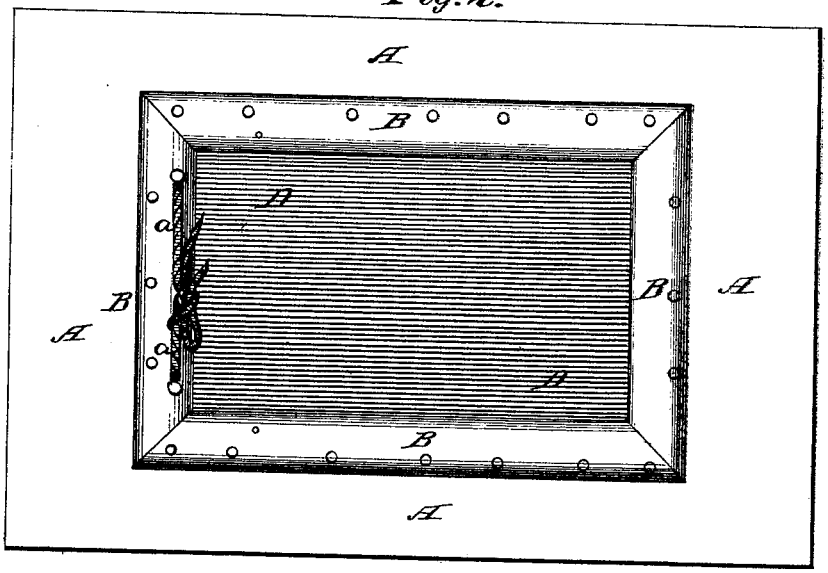
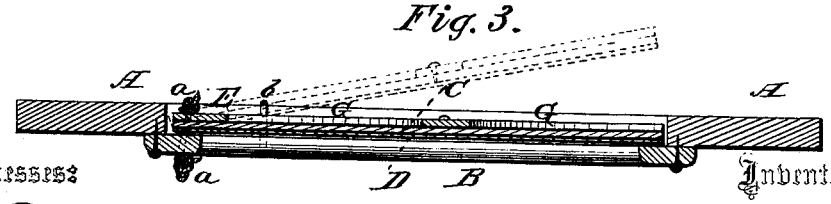


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

ALVAH SMITH, OF GREEN BAY, WISCONSIN.

IMPROVEMENT IN VALVES FOR BELLOWS.

Specification forming part of Letters Patent No. **181,111**, dated August 15, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, ALVAH SMITH, of Green Bay, in the county of Brown and State of Wisconsin, have invented certain new and useful Improvements in Blacksmith's-Bellows Valves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a valve and valve-seat for blacksmith's bellows, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a plan view of my invention. Fig. 2 is a bottom view of the same; and Fig. 3 is a longitudinal section through the line *x x*, Fig. 1.

A represents a portion of the middle or bottom plank of an ordinary blacksmiths' bellows, through which is cut a suitable opening for the valve. On the under side of this plank is secured a frame, B, of cast-iron or wood, to form the valve-seat. The valve C is made of any elastic wood, about one-eighth of an inch thick, covered on the bottom or face with sheep-skin D, or felt, or other suitable soft, stout, and tough material, securely tacked and clinched to the wood part C of the valve. Across the top of the valve, at the back end, is a cleat, E, securely nailed to it, and strengthening cleats G G run diagonally across the top of the valve, tacked and clinched to it, which gives the valve sufficient strength without interfering with the elasticity of the valve.

The valve, as thus constructed, is light and elastic; the least breath of air raises it sufficient to fill the bellows quick and easy; the least move shuts it down, and, it being so elastic, the pressure of air upon the top of it presses it down to its seat perfectly tight, so that there can be no leakage of wind, and, consequently, no explosion of gas in the bellows.

The valve is fastened with strings *a a*, which gives it a free action and quick movement. The least touch of the pole moves it, and causes it to act, working without the least check or hindrance, and catches every particle of wind, and holds it.

By setting the valve in a frame fastened to the bottom of the plank a smooth surface is secured for the valve-seat, and the valve itself is brought nearer to the outer surface, and gives the air better action upon it. On each side of the valve is a guide, *b*, for keeping it in proper place.

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

1. In a blacksmith's bellows, the frame B, secured to the under side of the plank A around the valve-opening, and having the valve resting thereon within the opening, substantially as and for the purposes herein set forth.

2. The blacksmith's-bellows valve herein described, consisting of the elastic wooden plate C, with covering D, back cleat E, and diagonal cleats G G, and attached to the seat by strings *a a*, substantially as and for the purposes herein set forth.

3. The guides *b b*, in combination with the plank A, frame B, and valve C D, for the purpose described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

ALVAH SMITH.

Witnesses:
GEORGE B. SMITH,
DOMINICK HUNT.