

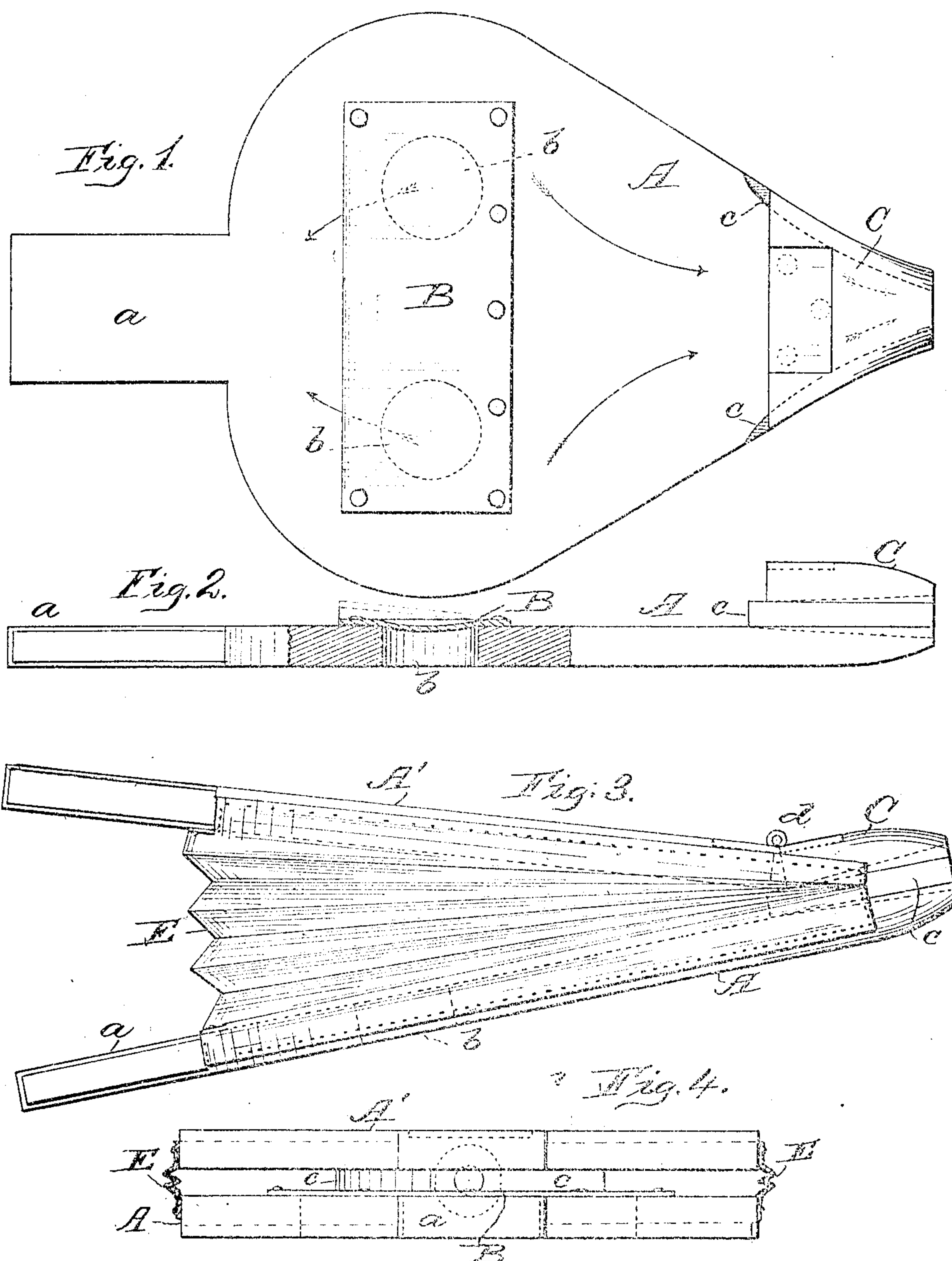
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HAND BELLOWS.

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UNITED STATES PATENT OFFICE.

JOHN H. FECKER AND CHARLES C. JELLEFF, OF PIQUA, OHIO.

HAND-BELLOWS.

No. 878,387.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, JOHN H. FECKER and CHARLES C. JELLEFF, citizens of the United States, and residents of Piqua, in the county of Miami and State of Ohio, have invented new and useful Improvements in Hand-Bellows, of which the following is a specification.

This invention relates more particularly to the construction of hand bellows such as are used by molders, the purpose being to provide a bellows with a valve that is constructed so that sand will not obstruct its operation, the bellows being also constructed so that the vent or air discharge end may be readily placed in the openings in molds, such vent being fixedly attached to one of the sections of the frame, as will hereinafter more fully appear.

In the accompanying drawings, which illustrate our invention, Figure 1, is a plan view showing the inner side of the frame of the bellows which carries the air discharge and the valve. Fig. 2, is a side elevation partly in section of the frame shown in Fig. 1. Fig. 3, is a side elevation of the complete bellows, and Fig. 4, is an end view.

The portion or frame A, of the bellows which is usually grasped by the right hand of the workman, in addition to its handle *a*, has in line with its wider portion an air inlet opening or openings *b, b*, which are well covered by a flexible diaphragm, preferably a rectangular piece of leather that is tacked along three of its sides to the board or frame A. The valve B, which is fastened to the inner side of the frame has its free or unattached edge, positioned toward the end of the frame from which the handle projects, so that any sand or dust which may collect in the aperture or openings through the board will be quite a distance from the movable portion of the diaphragm, so that there will be no liability of sand or dust being drawn into the bellows.

The side edges of the board or frame farthest from the handle *a*, has attached thereto strips *c, c*, such strips carrying a block C, which has therein a recess for the reception of the leaf of a hinge *d*, which connects the other frame of the bellows to the block. The block C and the strips *c, c* may be formed

of a single piece, and such block and the end of the frame A may be recessed to provide a vent or discharge opening which is cylindrical in cross section, the inner walls of the vent opening substantially paralleling the circular end of the discharge or vent opening.

The section or frame A' is secured to the block by a hinge, and to the frames there is attached the usual folded or creased casing E, and in use when the frames are moved apart air will be drawn into the bellows, passing through the openings and under the valve and movement of the frames toward each other will force the valve over the openings. The surface of the valve being large in comparison with the area of the openings covered thereby provides a valve that is very sensitive and positive in action, and one that does not project materially within the bellows.

The device herein set forth is particularly adapted for molders use, not only for blowing through the filling opening of the flasks to remove ash, but also in blowing loose particles of dust or sand from molds and castings.

We claim.

1. A molder's hand bellows comprising a board or side section having an air inlet opening, a flap valve attached to the board about its sides and along the edge nearest to the air exit opening, a pair of converging strips attached to the board, a block of less length than the strips attached thereto to partially overlie the same, a board hinged to the block, and a bellows casing, substantially as shown.

2. Hand-bellows provided with a nozzle that is shaped to adapt the bellows for use by molder's, such bellows comprising similarly shaped boards, one of the boards having therethrough a valved air inlet opening, a discharge nozzle provided with discharge strips that extend beyond the point where one of the boards is attached to the other board, and a bellows casing, substantially as shown and for the purpose set forth.

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