

(No Model.)

2 Sheets—Sheet 1.

C. W. DUNN, Sr.
HAND BELLOWS.

No. 584,154.

Patented June 8, 1897.

Fig. I.

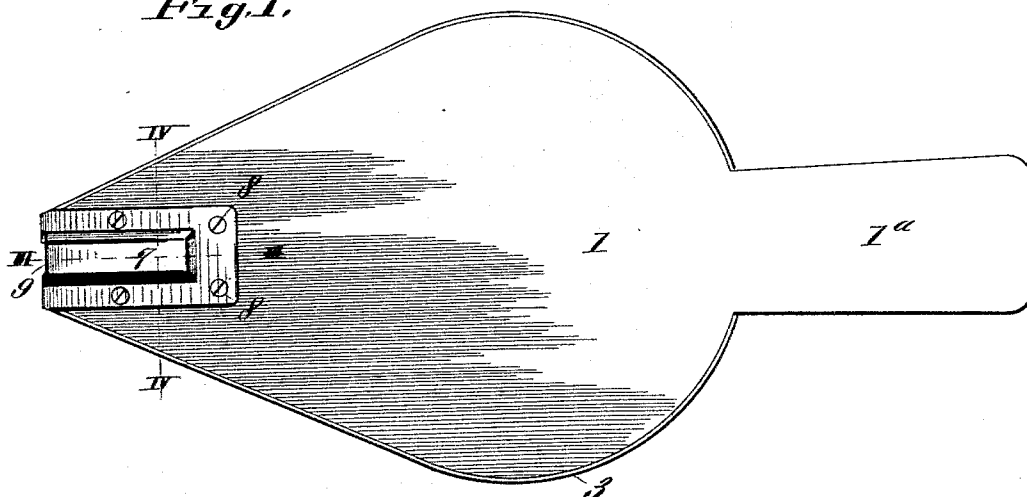


Fig. II.

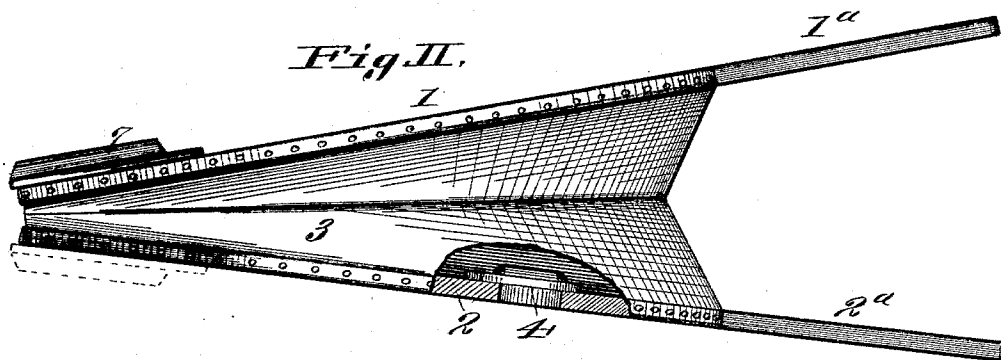


Fig. III.

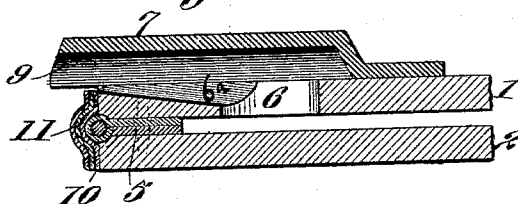
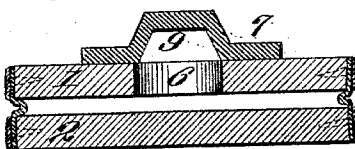


Fig. IV.



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H. Finley

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By *Knight, Bro*

attys

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Fig. V.

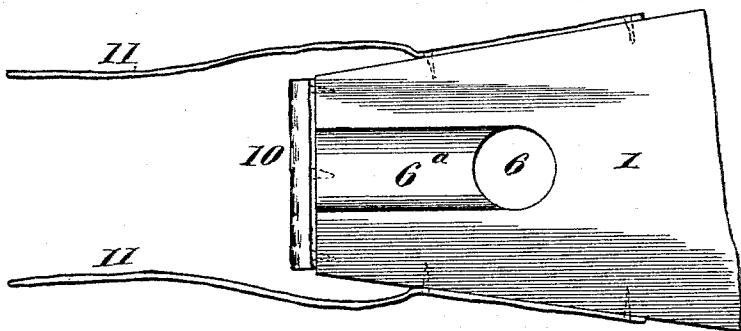


Fig. VI.

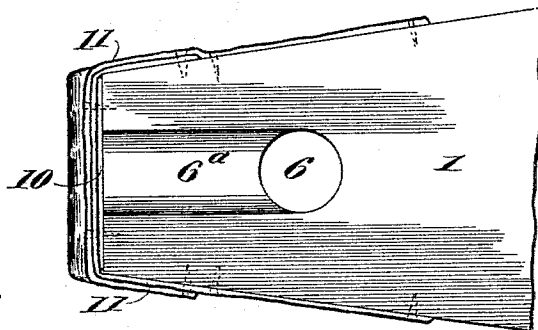
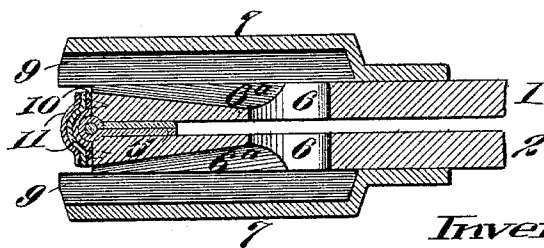


Fig. VII.



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Inventor:
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UNITED STATES PATENT OFFICE.

CHARLES W. DUNN, SR., OF QUINCY, ILLINOIS.

HAND-BELLOWS.

SPECIFICATION forming part of Letters Patent No. 584,154, dated June 8, 1897.

Application filed January 8, 1897. Serial No. 618,427. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. DUNN, Sr., a citizen of the United States, residing at Quincy, Adams county, State of Illinois, have invented a certain new and useful Improvement in Hand-Bellows, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to an improvement in hand-bellows, the improvement consisting in a novel arrangement and construction of the head or mouth end of the bellows.

My invention consists in features of novelty hereinafter fully described, and pointed out in the claim.

Figure I is a top view of my improved bellows. Fig. II is a side view, a portion of the lower part of the bellows being shown broken out in section to afford a view of the inlet-valve. Fig. III illustrates a longitudinal section, taken on line III III, Fig. I, through the head or mouth end of the bellows. Fig. IV illustrates a cross-section taken on line IV IV, Fig. I. Fig. V is a detail inner view of one of the bellows-boards, showing the flexible strips previous to attachment that fold over the hinge at the mouth end of the bellows to inclose said hinge. Fig. VI is a similar view to Fig. V, showing the flexible strips folded over the hinge and attached. Fig. VII is a longitudinal section of the mouth end of the bellows, illustrating the employment of openings in both of the bellows-boards and a conducting-plate over each of said openings and also illustrating in section the hinge and the flexible strips located over said hinge.

In the drawings, 1 and 2 respectively designate the top and bottom boards, joined by a flexible connection 3, as usual.

4 designates the inlet-valve, and 1^a and 2^a the operating-handles on the boards 1 and 2. The boards 1 and 2 are connected to the head end of the bellows by a leaf-hinge 5, located between them. In one of the boards 1 or 2 is an opening 6, from which a channel 6^a leads to the mouth of the bellows, as illustrated in Figs. III and IV, or there may be an opening in each board, as illustrated in Fig. VII.

Over the opening 6 and channel 6^a, whether there be but one or both of the boards provided with such openings and channels, a conducting-plate 7 is attached to the exterior of the board, being secured by screws 8 or other suitable means of fastening. Each conducting-plate 7 is provided with a channel 9, closed at the rear end and open at the outer end. The air enters the bellows through the inlet-valve 4, as in the ordinary form of bellows, and is on the compression of the bellows forced out through the opening 6, the channel 6^a, and the channel 9 in the conducting-plate 7. Where two openings 6 and two conducting-plates are employed in and on the two boards of the bellows, the blast of air through the channels of the two boards are concentrated as they emerge at the mouth ends of the channels 9.

In Fig. II, I have shown one conducting-plate 7 in full lines and one conducting-plate in dotted lines, thus illustrating the employment of either a single or double mouth outlet.

Over the hinge 5, by which the boards 1 and 2 are connected at their head ends, I attach a flexible cover 10, that incloses the outer edge of the hinge. Attached to the edges of the boards 1 and 2 are flexible strips 11, that are folded over the head ends of the boards and over the hinge 5 and its cover 10. These strips overlap each other, and their ends are brought around against the opposite edges of the boards from that of their first attachment and said ends there attached. This arrangement effectually incloses the hinged joint and hinge and prevents any leakage of air at such joint.

I claim as my invention—

In a hand-bellows, the combination of boards flexibly connected, a hinge located between and connecting said boards at the head or mouth end of the bellows, a covering for said hinge, and strips attached to the edges of said boards, and extending over said hinge and covering, substantially as described.

CHARLES W. DUNN, SR.

In presence of—

M. TRAVILLA,

GEO. E. ROSENTHAL.