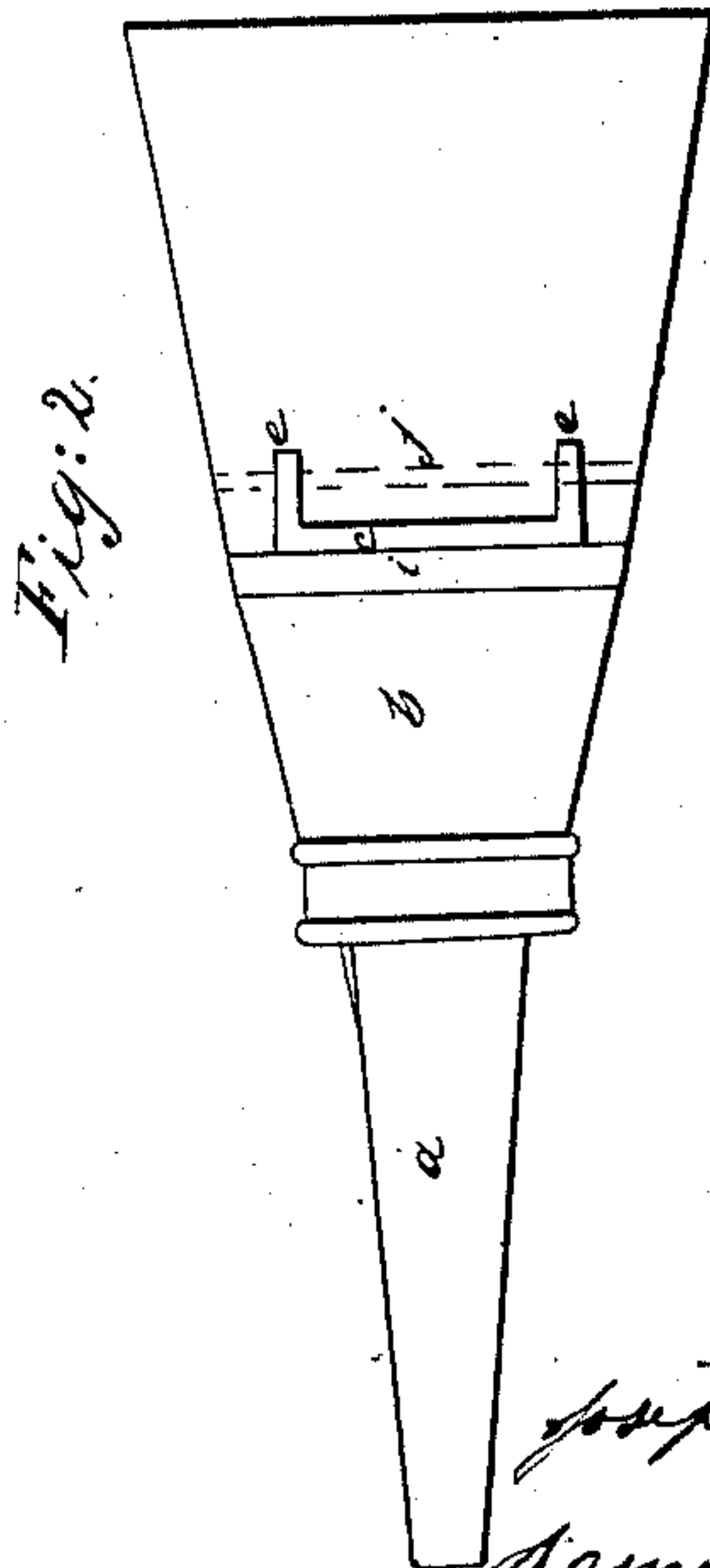
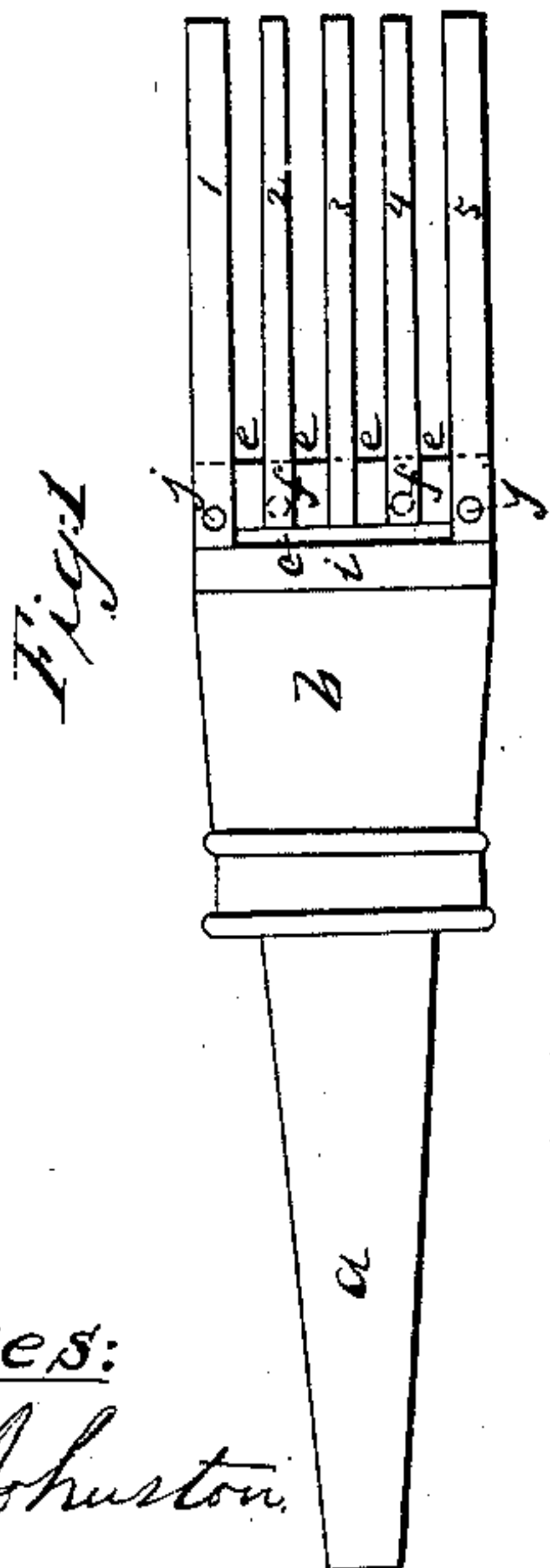
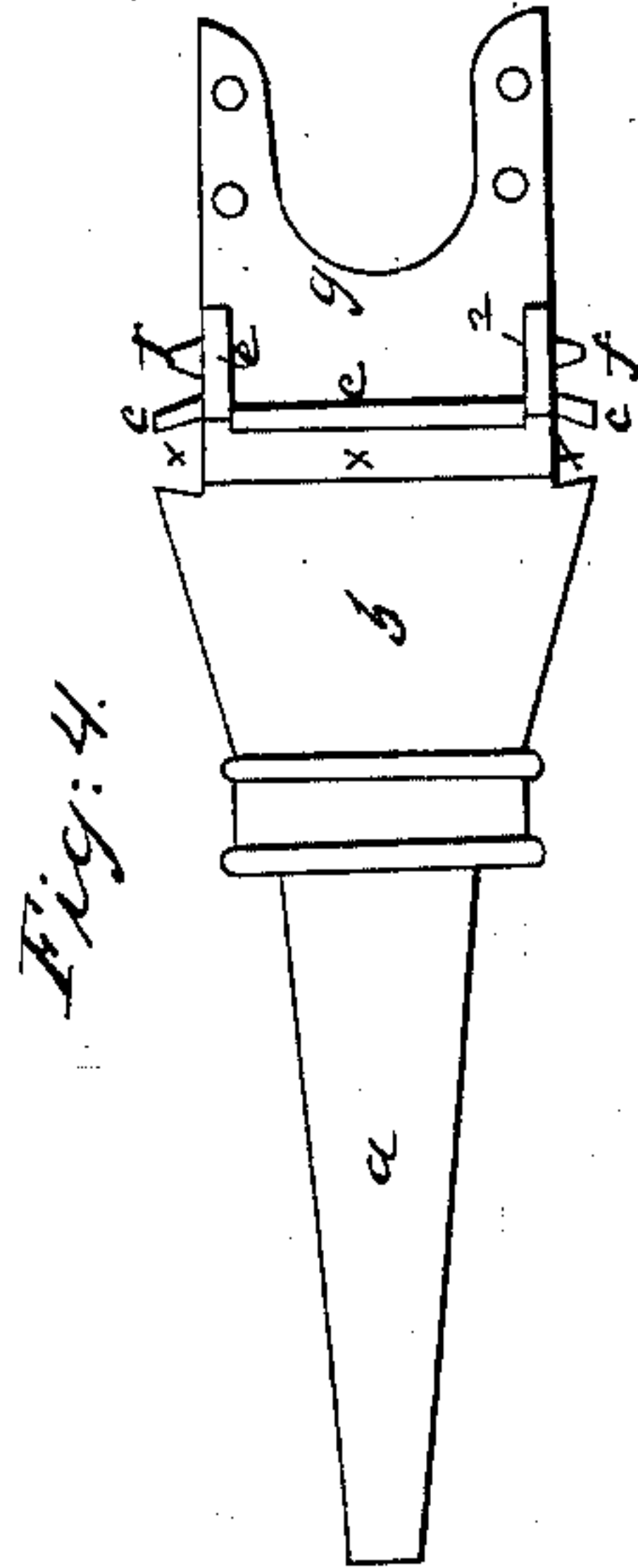
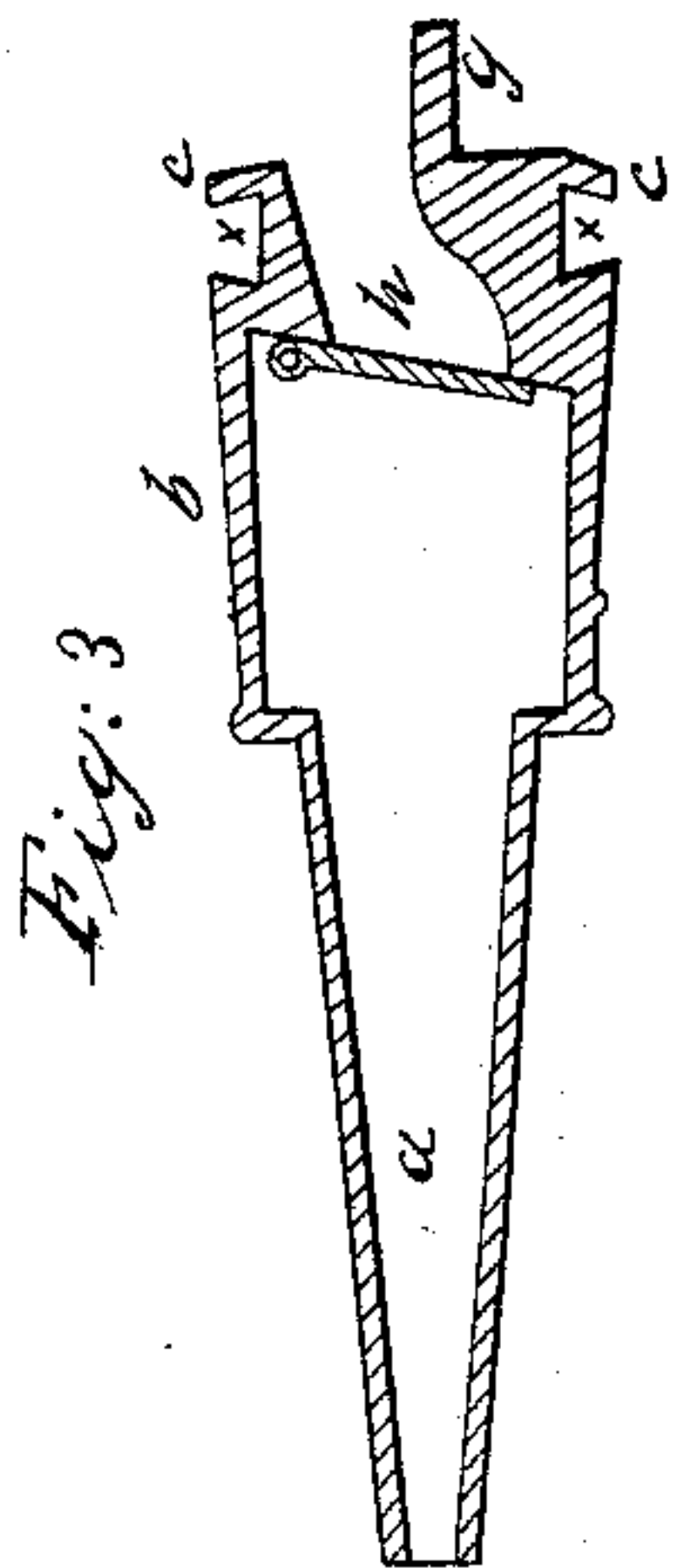


*J. B. & J. A. Maxwell,*

*Bellows.*

*N<sup>o</sup> 27,062.*

*Patented Feb. 7, 1860.*



*Witnesses:*  
*James J. Johnston.*  
*George P. Stebbins.*

*Inventor:*  
*Joseph B. Maxwell.*  
*James A. Maxwell.*

# UNITED STATES PATENT OFFICE.

JOSEPH B. MAXWELL AND JAMES A. MAXWELL, OF ALLEGHENY, PENNSYLVANIA.

## BELLOWS.

Specification of Letters Patent No. 27,062, dated February 7, 1860.

*To all whom it may concern:*

Be it known that we, JOSEPH B. MAXWELL and JAMES A. MAXWELL, of the city and county of Allegheny, in the State of Pennsylvania, have invented a new and Improved Bellows; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of our invention consists in making the nozzle and nozzle head of bellows in one piece, and in furnishing the nozzle head with a self acting valve, flanges, lugs, pivots and attachment plate; the whole being arranged and constructed in the manner hereinafter described.

To enable others skilled in the art to make and use our invention; we will proceed to describe its construction and operation.

In the accompanying drawings, Figure 1, is a side view and Fig. 2, is a top view of the bellows. Fig. 3, is a cut or sectional view, and Fig. 4, is a top view of the nozzle head and nozzle of the bellows.

The part or body of the bellows which is attached to the nozzle head, is constructed in the usual way; but, the nozzle head and nozzle is made or cast in one piece, and is secured to the body of the bellows in the manner hereinafter described.

(a) is the nozzle, (b) is the nozzle head, (c) are flanges which are used for the purpose of forming the dovetail recess marked (x), (e) are lugs or flanges which are furnished with pivots (f), through these lugs or flanges pass two rods (j). The lugs or flanges (e), rods (j), and pivots (f), answer as hinges for the frame work of the body of the bellows, (h) is the self acting valve, (g) is the attachment plate to which the division board (3) of the frame work is secured; by means of screws or bolts.

The frame pieces (2 and 4) are secured to the nozzle head by means of the pivots

(f) on the lugs or flanges (e) and holes in the end of the pieces suited to the size and form of the pivots. The top and bottom boards (1 and 5) of the frame work are secured to the nozzle head by means of the rods (j) which passes through the ends of the boards and through the lugs or flanges (e). The recess (x) is filled up with strips of wood; these strips are represented in Figs. (1 and 2) and marked (i). The joint formed at the point where the nozzle head and frame work is united must be covered with a band of leather or other suitable material one edge of which should be tacked to the strips (i) in the recess (x), the other edge of the band should be tacked to the frame work of the bellows. The self acting valve (h) is used for the purpose of preventing the fire from entering the body of the bellows when ceasing their action.

The advantages of our improvement are as follows.—First. The nozzle head is not liable to part and split open. Second, The cast iron nozzle head and its self acting valve will protect the internal part of the body of the bellows from fire. Third, The nozzle and nozzle head will not be injured by use and the repairing of the body of the bellows. Fourth It will cost less to manufacture bellows when our improvement is used in their construction.

Having thus described our improvement in bellows, what we claim as of our invention and desire to secure by Letters Patent of the United States is.

The arrangement of the flanges (c), attachment plate (g), recess (x), lugs or flanges (e), pivots (f), and self acting valve (h), as herein described and for the purpose set forth.

JOSEPH B. MAXWELL.  
JAMES A. MAXWELL.

Witnesses:

JAMES J. JOHNSTON,  
ALEXANDER HAYS.