

No. 612,295.

Patented Oct. 11, 1898.

M. E. WOODLING.

INHALER

(Application filed Dec. 27, 1897.)

(No Model.)

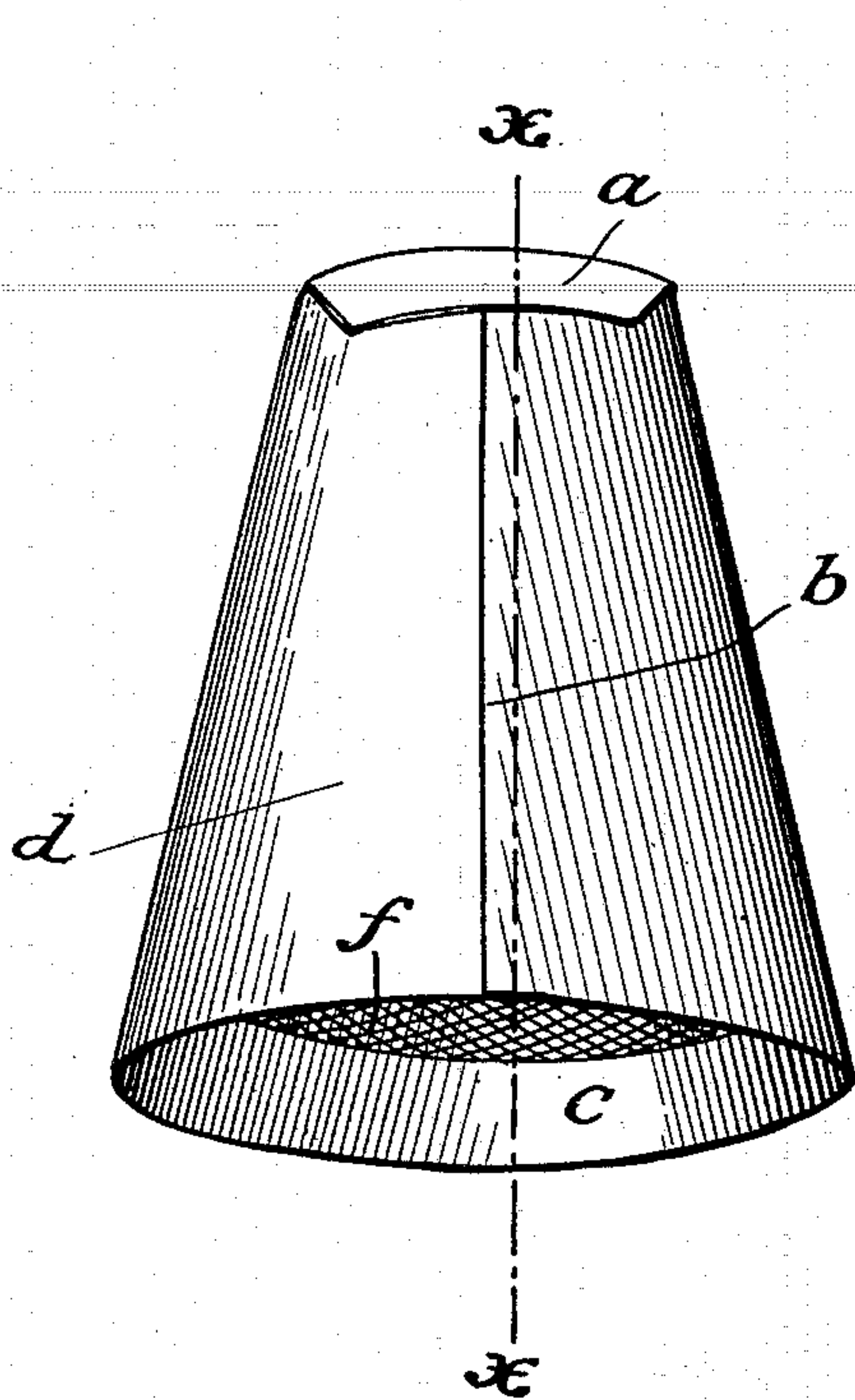


Fig. 1.

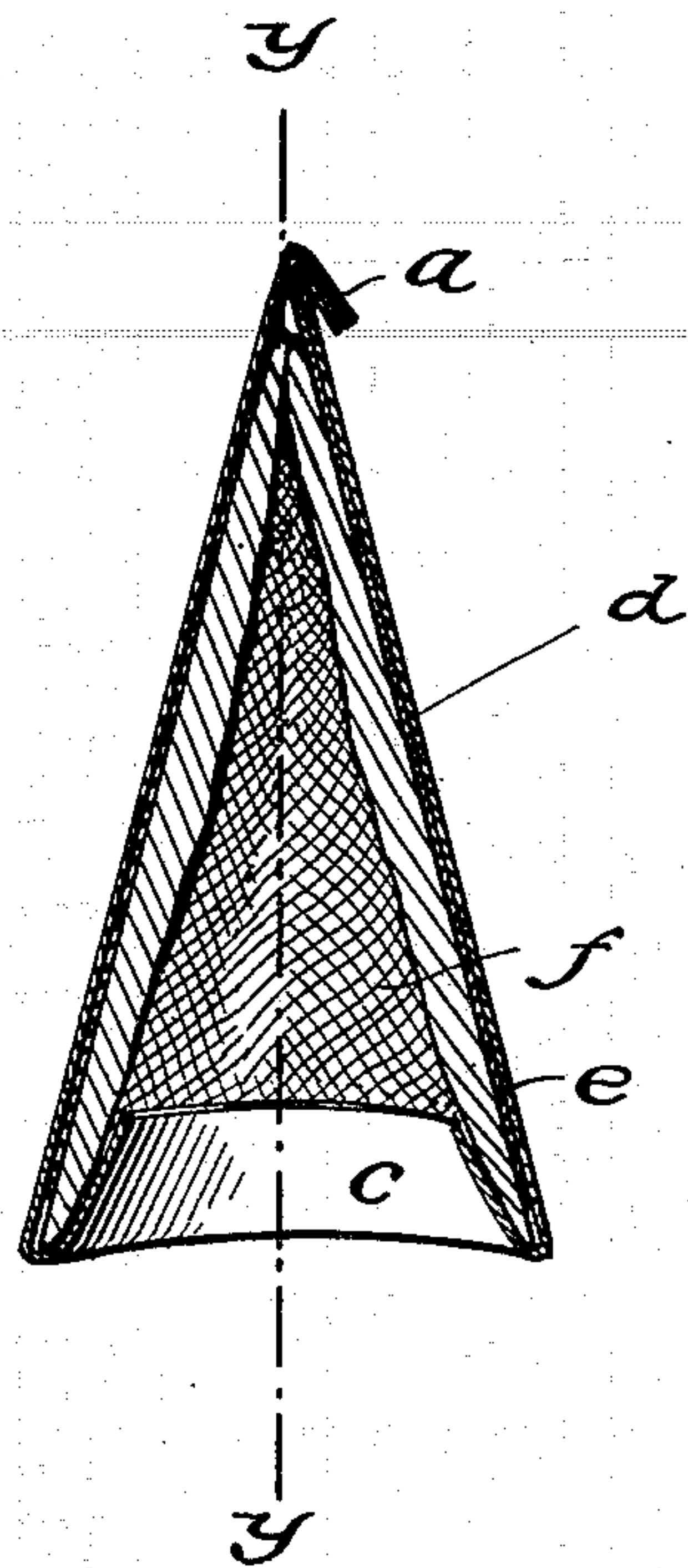


Fig. 2.

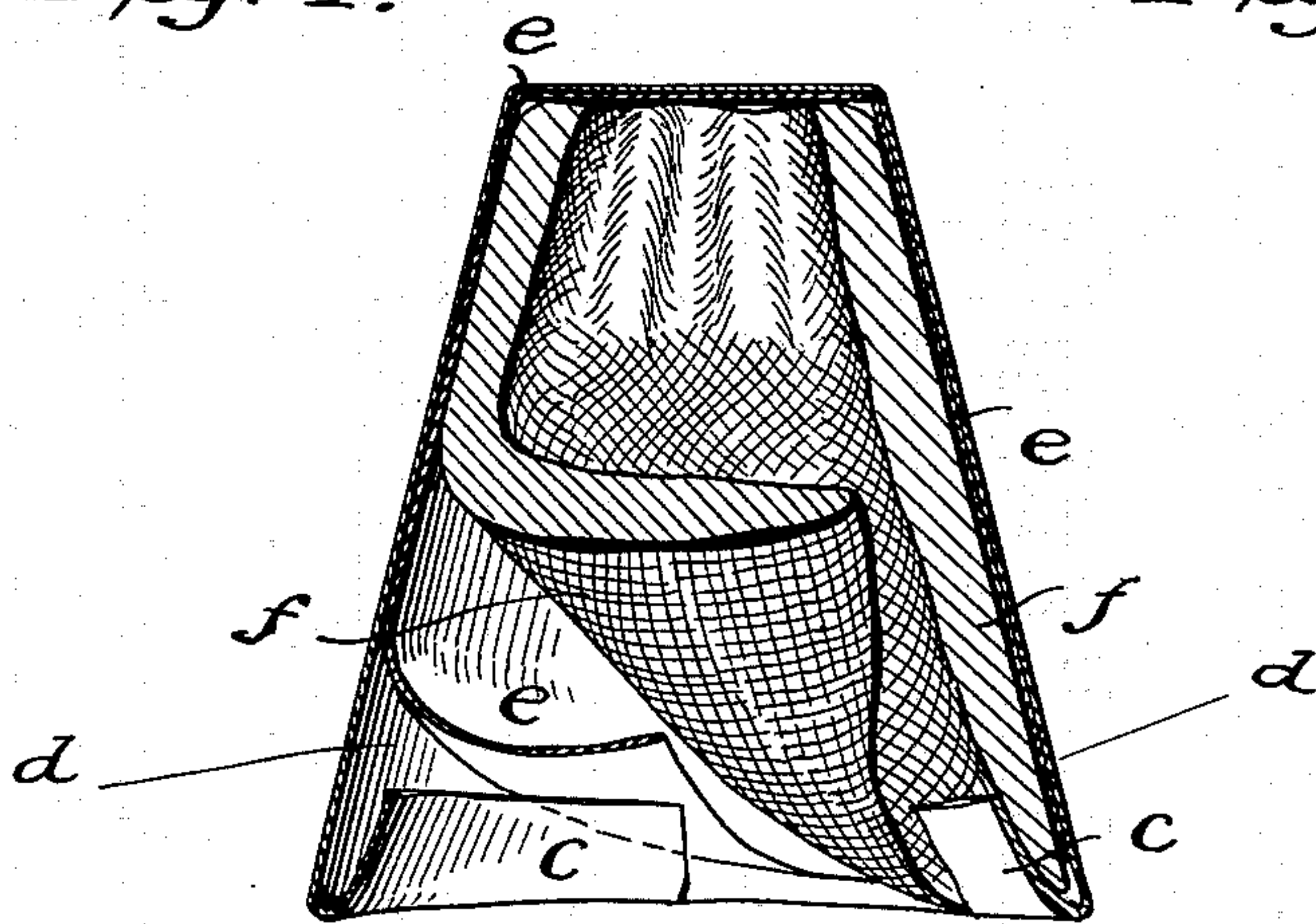


Fig. 3.

Witnesses;  
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# UNITED STATES PATENT OFFICE.

MARVIN E. WOODLING, OF MINNEAPOLIS, MINNESOTA.

## INHALER.

SPECIFICATION forming part of Letters Patent No. 612,295, dated October 11, 1898.

Application filed December 27, 1897. Serial No. 663,788. (No model.)

*To all whom it may concern:*

Be it known that I, MARVIN E. WOODLING, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Ether-Inhaler, of which the following is a specification.

My invention relates to improvements in inhalers used in the production of anesthesia. While it may be used in the administration of chloroform and other anesthetics, it is especially designed for the administration of ether.

My objects are, first, cleanliness—a clean cone (or inhaler) for each patient; second, convenience—always ready, light, and occupying small space in the pocket or case; third, cheapness—so cheap that it will be thrown away after having been used once, thus guarding against filth and disease-germs, any permanent inhaler being costly and difficult or impossible to clean. These and other objects in view, all tending toward improving and simplifying devices or instruments of this character, which will become apparent in the course of the following description, are obtained as follows: It consists of an outer shell or cone proper constructed of paper or other cheap material, which may be made impervious to ether, or preferably in this case with a layer of tissue-paper impervious to ether (as wax or parchment-paper) inside and a lining, into which the anesthetic is poured and vaporized, constructed of gauze, lint, lintine, toweling, or other suitable material, gauze being preferred in this instance. Good strong paper, as manila, may be used for the shell very satisfactorily without the protective.

Figure 1 represents the complete cone. Fig. 2 represents a section through line  $xx$ , Fig. 1. Fig. 3 represents a section whose plane is at right angles with that of Fig. 2, through the line  $yy$ .

$a$  represents the folded apex;  $b$ , sealed side;  $c$ , mouth of cone folded in;  $d$ , outside

paper cone;  $e$ , impervious paper lining;  $f$ , gauze lining or absorbent.

The apex of truncated cone is sealed flat at  $a$ . The sides are sealed together at  $b$ . This gives a hollow truncated cone closed except at the base or mouth and so shaped as to hold the lining when it is pressed into the apex, which may be still farther rolled down at the option of the surgeon and grasp the lining still firmer. The mouth of the cone is folded in at  $c$ , forming a trough, which holds lining which rests in it more securely and also catches any surplus ether, which is reabsorbed into the lining instead of running out and over the face of the patient, and also affords a smooth surface in contact with the face.

The gauze lining  $f$  is cut rectangular the length equal to the circumference of mouth of cone and the width equal to depth of cone that it may give more bulk and surface, being corrugated as it nears the apex.

These cones may be of any desired size and changes in proportions and in details of construction and shape be resorted to without sacrificing any of the advantages or departing from the spirit of the invention—as, for instance, the wax paper may be rectangular or disk-shaped. Again, the apex of the cone may vary in shape and size relative to its mouth.

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

A device or instrument of the character set forth (an ether cone or inhaler) comprising an outer shell, made of paper so formed and constructed as to form a hollow truncated cone, completely closed except at the base or mouth which is folded in, a layer of impervious paper, inside of the shell, a lining of gauze inside of both, the whole forming an ether-inhaler for the purposes and substantially as described.

MARVIN E. WOODLING.

Witnesses:

W. B. HAUSER,

JNO. M. BRADFORD.