No. 749,232. PATENTED JAN. 12, 1904.

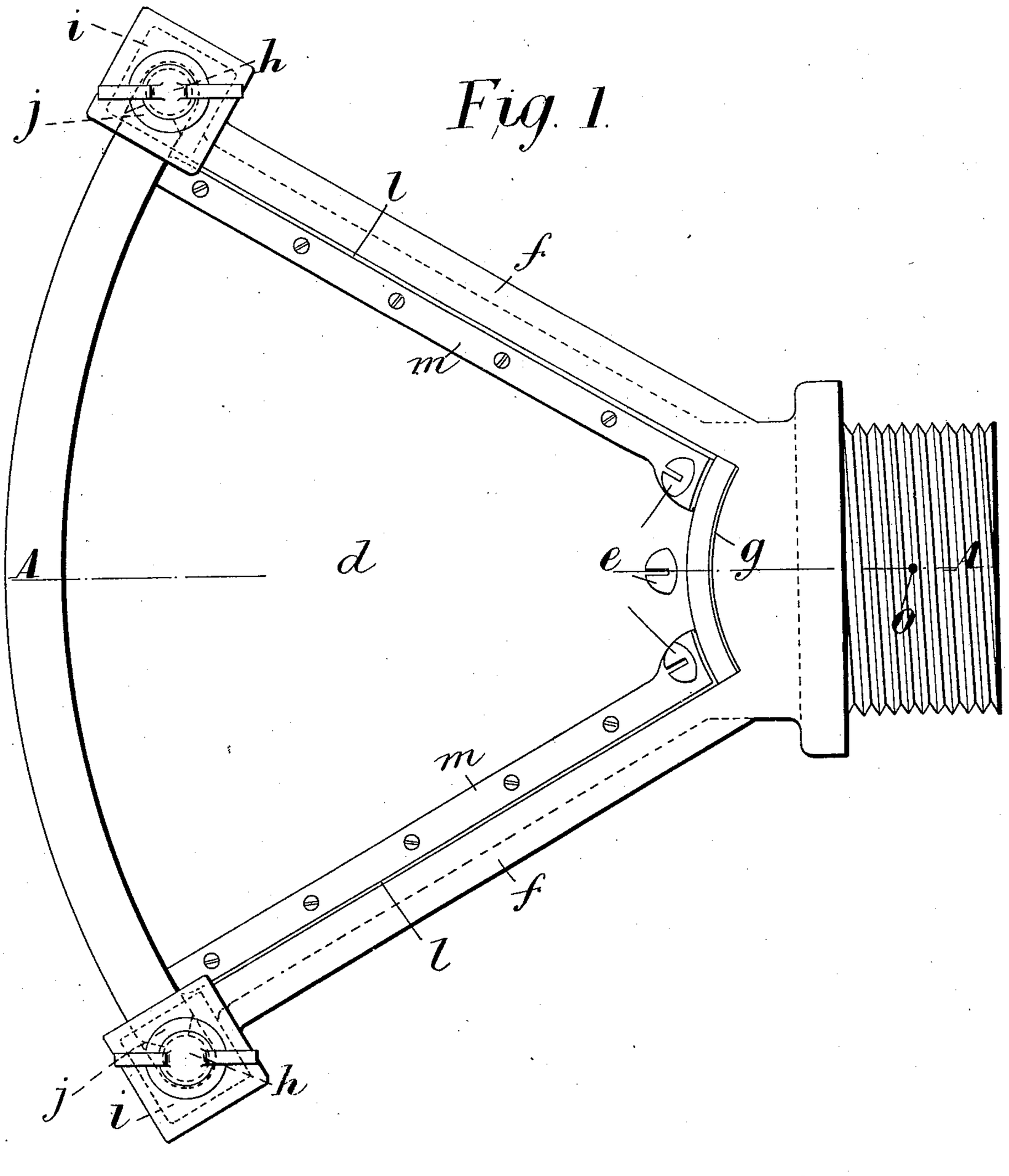
E. SHAW.

NOZZLE FOR DISCHARGING LIQUIDS.

APPLICATION FILED DEC. 18, 1902.

NO MODEL. 4 SHEETS—SHEET 1.

Fig. 1.



Witnesses.
Chas. P. Wright Jr.
Alice H. Hoffman

Inventor,
Edward Shaw,
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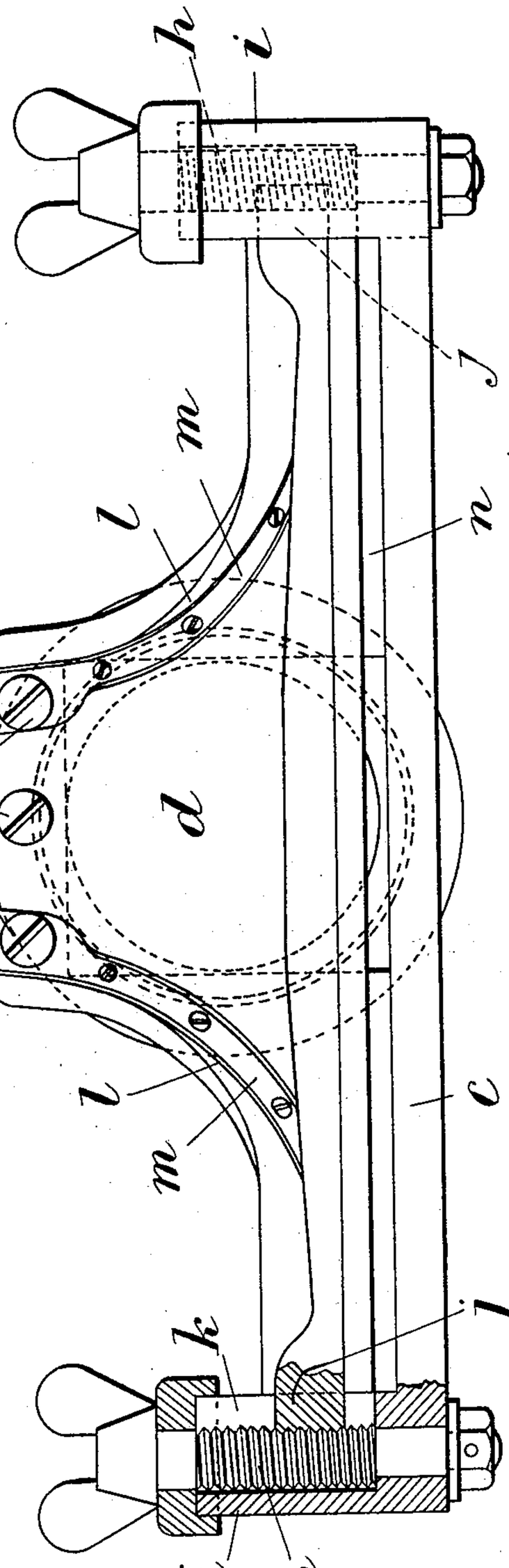
NO MODEL. 4 SHEETS—SHEET 2.

Fig. 2.



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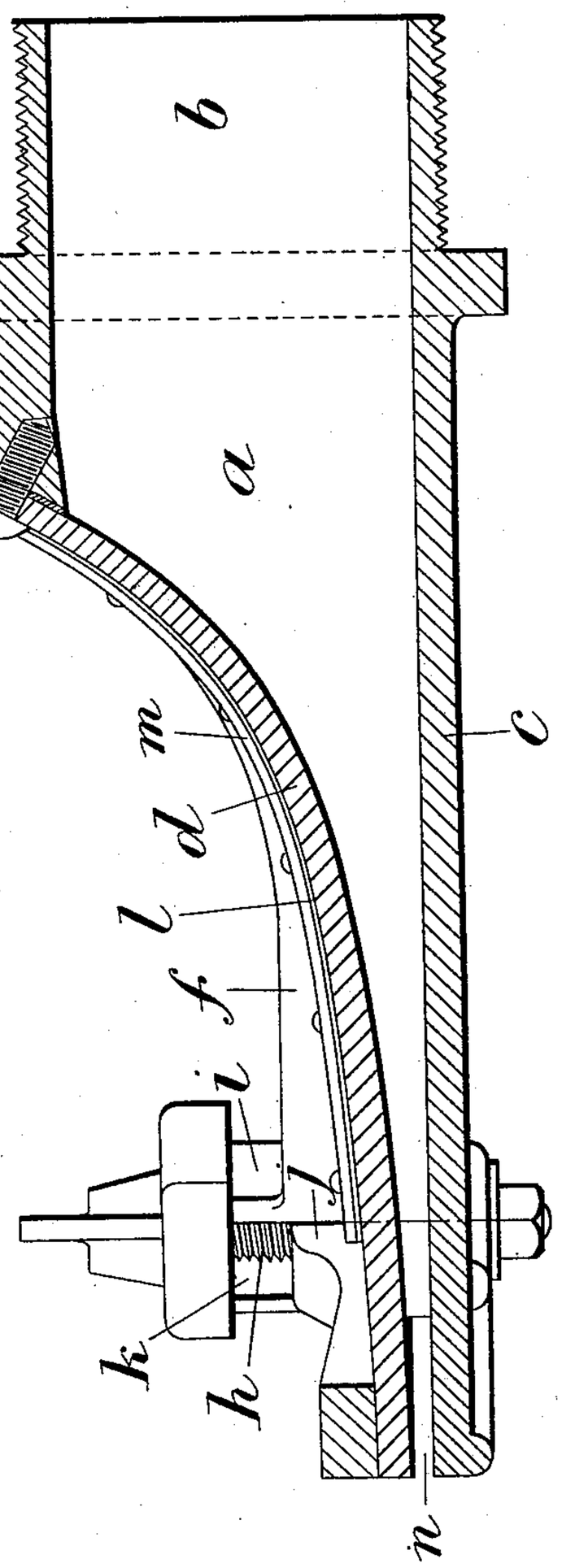
NO MODEL. 4 SHEETS—SHEET 3.

Fig. 3.



Witnesses
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NO MODEL. 4 SHEETS—SHEET 4.

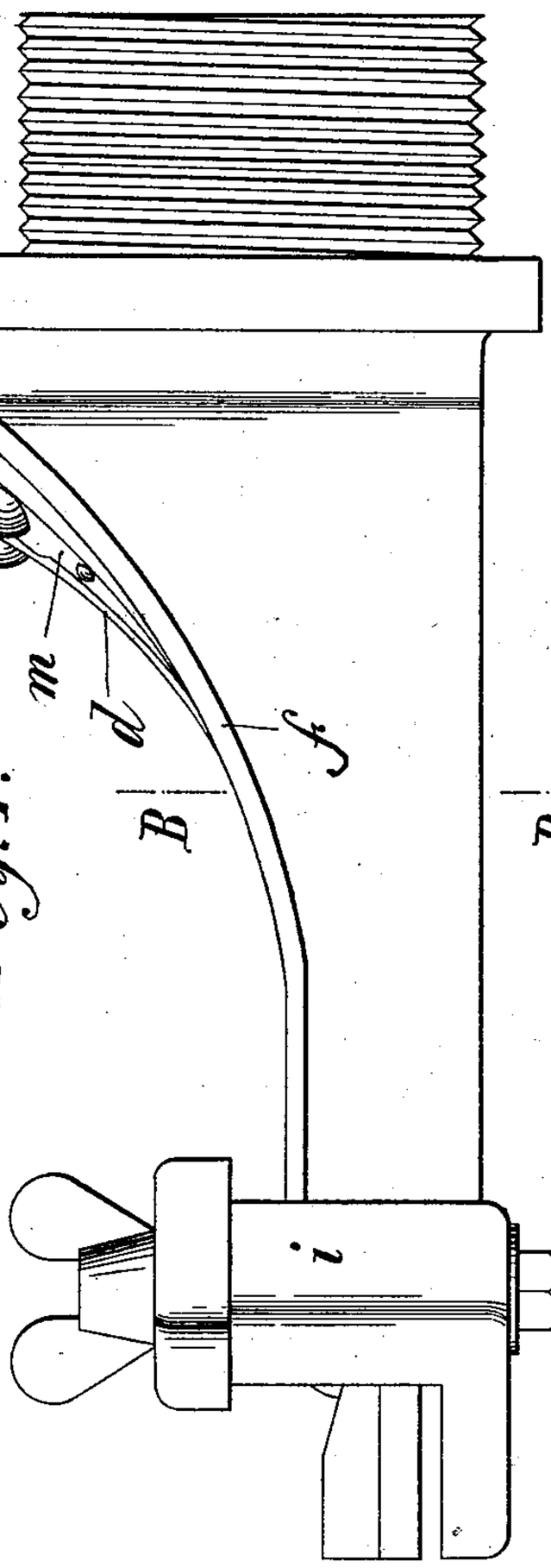

Fig. 4.

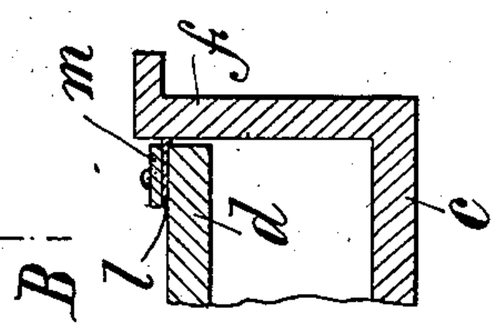

Fig. 5.

Witnesses:
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Alice H. Ehmling.

Inventor.
Edward Shaw,
By A. Pattison,
Atty.

No. 749,232. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

EDWARD SHAW, OF LONDON, ENGLAND, ASSIGNOR, BY MESNE ASSIGNMENTS, TO AMERICAN STREET FLUSHING MACHINE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

NOZZLE FOR DISCHARGING LIQUIDS.

SPECIFICATION forming part of Letters Patent No. 749,232, dated January 12, 1904.

Application filed December 18, 1902. Serial No. 135,815. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SHAW, a subject of the King of Great Britain and Ireland, residing in the city of London, England, have invented Improvements in Nozzles for Discharging Liquids, of which the following is a specification.

This invention has reference to improvements in liquid-discharging nozzles hereinafter set forth, and more particularly specified in the claims, objects being to provide a nozzle whereby liquid can be delivered in a more or less flat sheet-like form and to enable the thickness of the liquid sheet to be varied as may be desired.

With the object of enabling a nozzle to deliver liquid in a more or less flat sheet-like form the passage through it is made of gradually-increasing width and decreasing depth or thickness from the inlet to the outlet of the nozzle, the nozzle being so constructed that the cross-sectional area of its passage decreases from the inlet to the outlet in such wise as to increase to the required extent the velocity of the liquid issuing from the wide shallow outlet end of the nozzle.

With the object of enabling the liquid sheet to be varied in thickness the walls of the passage through the nozzle, which are of increasing width toward its outlet, are adjustable relatively to each other.

In the accompanying drawings, Figure 1 is a plan; Fig. 2, a front view, partly in section; and Fig. 3, a section on the line A A, Fig. 1. Fig. 4 is a side elevation of a nozzle embodying my invention. Fig. 5 is a detail sectional view showing the water-tight joint between the movable top plate *d* and the side walls *f* on the line B B of Fig. 4.

The nozzle is in the form of a fan-shaped box or chamber *a*, merging at its narrow end into a tubular inlet *b*. The bottom *c* is flat, and the top *d* is upwardly curved to a gradually-decreasing radius toward the inlet. The top plate or cover *d* of the box or chamber may be secured in a water-tight manner to the inlet portion of the nozzle by screws *e*, as shown, and adapted to fit between the side walls *f* of the nozzle. *g* is rubber packing. The wide forward end of this plate or cover *d* may be caused to approach or recede from the bottom of the nozzle—for instance, by the manipulation of screws *h*, that are held longitudinally in slotted tubular lugs *i*, formed on or in the side walls *f* and that engage correspondingly-threaded lateral extensions *j*, projecting from the top plate or cover *d* into the lugs through the slots *k*. A water-tight joint may be made between the top plate or cover *d* and each side wall *f* in any convenient manner—for instance, by means of a rubber or leather strip *l*, secured upon the top plate or cover and expanded against the side wall by a metal clamping-bar *m*.

The outlet-aperture *n* of the nozzle is curved to a radius struck from a point *o* within the inlet portion *b* of the nozzle, the side walls *f* of which are in planes radial thereto.

Nozzles according to this invention are specially suitable for use with street watering and washing apparatus of the kind in which the water is discharged from a reservoir under air-pressure.

What I claim is—

1. A liquid-discharge nozzle comprising a fan-shaped chamber with an inlet and an outlet and having its bottom fan-shaped wall flat and its top fan-shaped wall curved outwardly from the bottom toward the inlet and movable toward and from the bottom, and means for making a water-tight joint between said movable top wall and the side walls of the chamber, substantially as described.

2. A liquid-discharging nozzle comprising a fan-shaped chamber with an inlet and an outlet and having its bottom fan-shaped wall flat and its top fan-shaped wall curved outwardly from the bottom toward the inlet and

movable toward and from the bottom, means for making a water-tight joint between said movable top wall and the side walls of the chamber, rotatable screwed studs fixed longitudinally to the chamber and extensions on the movable top engaging therewith, substantially as and for the purpose specified.

Signed at 75-77 Cornhill, London, England, this 28th day of November, 1902.

EDWARD SHAW.

Witnesses:
PERCY E. MATTOCKS,
HENRY MAYKELS.