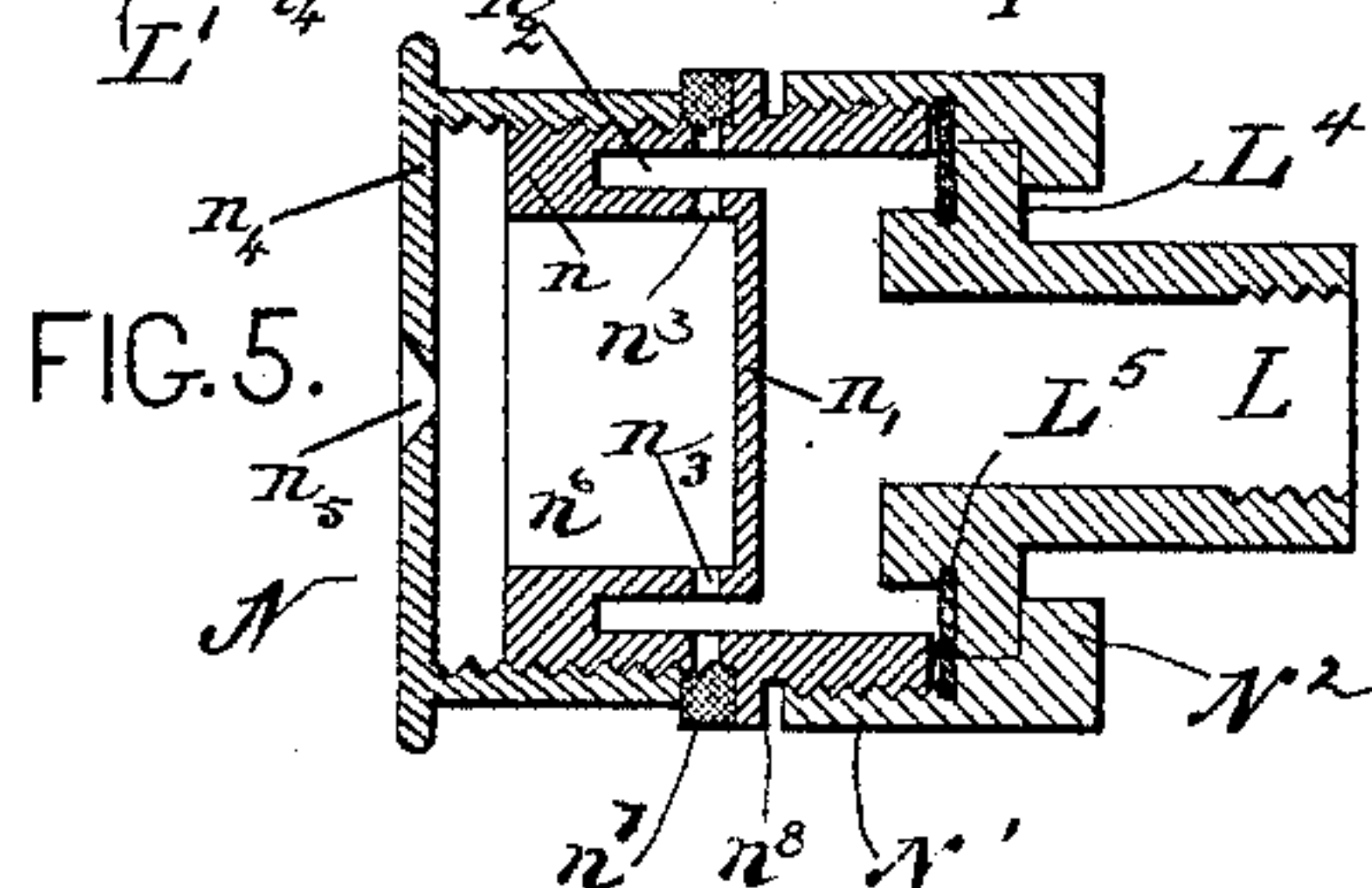
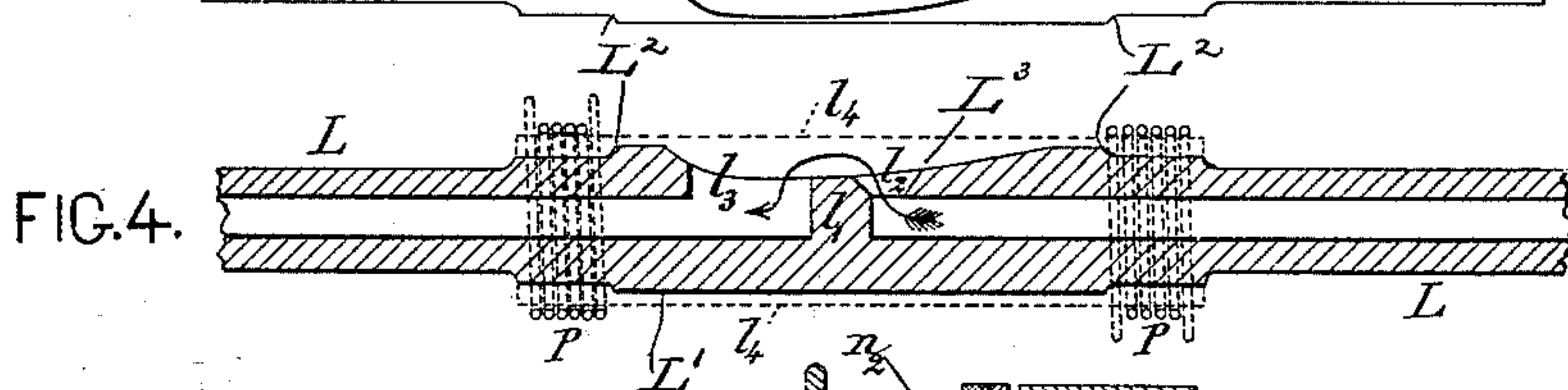
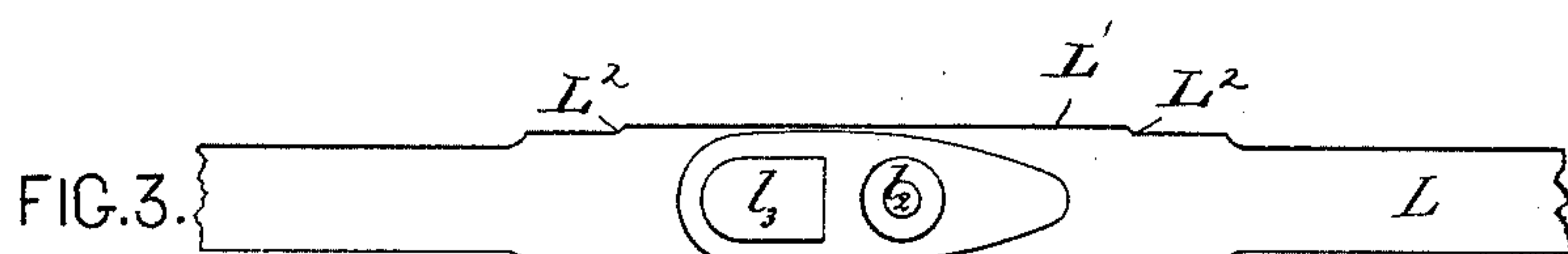
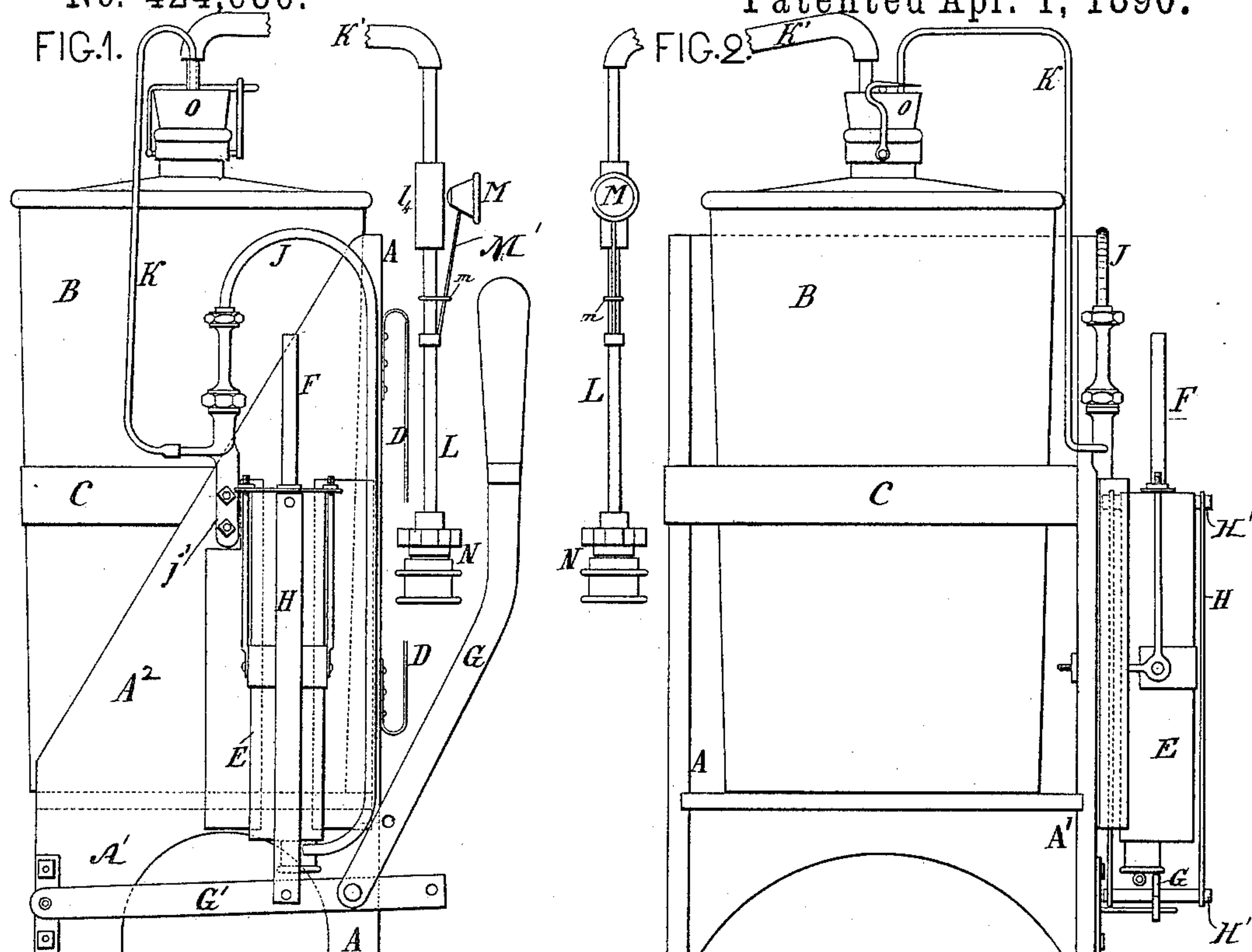


(No Model.)

L. P. LASMOLLES & J. E. FRÉCHOU.
APPARATUS FOR ATOMIZING LIQUIDS FOR DESTROYING DISEASE
IN GRAPE VINES.

No. 424,680.

Patented Apr. 1, 1890.



Witnesses:
C. Sedgwick
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UNITED STATES PATENT OFFICE.

LUCIEN PIERRE LASMOLLES AND JEAN EMILE FRÉCHOU, OF NÉRAC, FRANCE.

APPARATUS FOR ATOMIZING LIQUIDS FOR DESTROYING DISEASE IN GRAPE-VINES.

SPECIFICATION forming part of Letters Patent No. 424,680, dated April 1, 1890.

Application filed August 2, 1889. Serial No. 319,571. (No model.) Patented in France May 28, 1888, No. 190,810.

To all whom it may concern:

Be it known that we, LUCIEN PIERRE LASMOLLES and JEAN EMILE FRÉCHOU, of Nérac, Department of Lot-et-Garonne, France, have
5 invented a new and Improved Apparatus for Atomizing Liquids for Destroying Disease in Grape-Vines, (for which Letters Patent have been obtained in France in the name of Lucien Pierre Lasmolles, dated May 28, 1888, No.
10 190,810,) of which the following is a full, clear, and exact description.

This invention consists in an apparatus for atomizing liquids, constructed and arranged as hereinafter described and claimed.

15 The invention has for its object to provide an effective portable apparatus for atomizing liquids, and to that end comprises in its general features a frame, a liquid-chamber supported in the frame, and the various parts of
20 the atomizer connected therewith.

* Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

25 Figure 1 is a side elevation of the invention, partly broken away. Fig. 2 is a front view. Fig. 3 is a detail plan view of the regulator. Fig. 4 is a longitudinal section of the same, and Fig. 5 is a longitudinal section of the at-
30 omizing-nozzle.

A is a wooden frame, which holds the glass cylinder or chamber B to contain the liquid to be atomized, which chamber may be covered with wicker-work, and is held in the frame by
35 the band C thereof, the chamber resting on the base A'. The band C extends from side to side of the shell-like portion A² of the frame A, and to the latter are secured hooks or catches D, which may be engaged with straps
40 on a person carrying the apparatus hung on the back.

Upon the frame A is mounted the cylinder E of an air-pump, having a piston-rod F, operated by a lever mechanism G, connected
45 with piston F by rods H. The rods H are connected with the lever-bar G' and with the piston-rod F by means of lugs H', which project from the extremities of the rods, and which fit into mortises in such a way that
50 when the rods are put in place they are firmly

held by these shoulders and retain their position.

J is a metal tube mounted on the frame A by means of the bracket j' and connecting with the cylinder E. The tube J is connected
55 with the chamber B by means of a rubber tube K, passing through a stopper O in the receptacle and extending to the bottom of the latter. A second rubber tube K' extends from the bottom of the receptacle B inside of
60 the same, up through the stopper O, and is connected to a metallic tube L. The tube L is provided with a stop-cock constructed as follows:

The tube L is formed with the enlargement 65 L', having the shouldered ends L². One side of the enlargement L' is formed with an oblong cavity L³, in the wall of which is an opening l² and a larger opening l³, the openings l² and l³ communicating with the interior of
70 tube L and being located on either side of a diaphragm l', diverting the course of the passage-way in tube L through the openings l² and l³, as shown by the arrow in Fig. 4. This is effected by a rubber tube l⁴ drawn over the
75 enlarged portion L' of tube L and held in place by coiled springs P, encircling the shouldered ends L². By this means the liquid passing through tube L will pass out of opening
80 l² beneath rubber tube l⁴ into opening l³ and through the tube L to its mouth.

To stop the flow of liquid through tube L, a cone-shaped knob M, mounted on the outer end of a swinging arm M', secured to tube L, is located adjacent to the outside of rubber
85 tube l⁴ and opposite the opening l², so as to be pressed against the rubber tube l⁴ and close the opening l². The knob M is held in closed position by means of a ring m, encircling the tube L and arm M' and sliding thereon to close
90 the arm M' toward tube L or to release it.

N indicates the atomizing-nozzle, which is constructed as follows: An exteriorly-threaded cap n is screwed into an interiorly-threaded ring N', held on the outer end of tube L by a
95 flange N² on the ring N' engaging a flange L⁴ on the tube L. A packing-ring L⁵ is located between the inner end of cap n and the flange N². The cap n is formed with an inwardly-projecting chamber n⁶, having a bottom n', serv- 100

ing as a partition in the passage of liquid through the nozzle N, the chamber n^6 forming, with the threaded sides of cap n , a passage-way or groove n^2 , and having openings n^3 , connecting the interior of chamber n^6 with the interior of nozzle N, adjacent to the end of tube L.

The nozzle N is closed by a cap n^4 , screwed onto the cap n and abutting against a packing-ring n^7 , bearing against a flange n^8 on the cap n . The cap n^4 is provided with an opening n^5 for the passage of a jet of atomized liquid.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. An atomizing apparatus for killing disease in grape-vines, comprising the frame A, provided with means for connection with a strap, the liquid-reservoir B, removably secured in the frame, an air-pump mounted on the frame, mechanism for operating the pump, the pipe J, leading from the pump, the tube

K, leading from the pipe J to the reservoir, the tube K', leading from the reservoir and provided with a stop-cock, and the atomizing-nozzle N, substantially as herein shown and described.

2. In an atomizer, a tube L, with flange L^4 at its outer end, interiorly-threaded ring N' , with flange N^2 engaging flange L^4 , the exteriorly-threaded cap n , engaging ring n' and having a flange n^8 , inwardly-extending chamber n^6 , with apertures n^3 and passage-way n^2 , and the cap n^4 , screwed onto cap n and having aperture n^5 , substantially as shown and described.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

LUCIEN PIERRE LASMOLLES.
JEAN EMILE FRÉCHOU.

Witnesses:

BOUSQUET, GASTON,
DEC DON, GUILLAUME.