

No. 611,784.

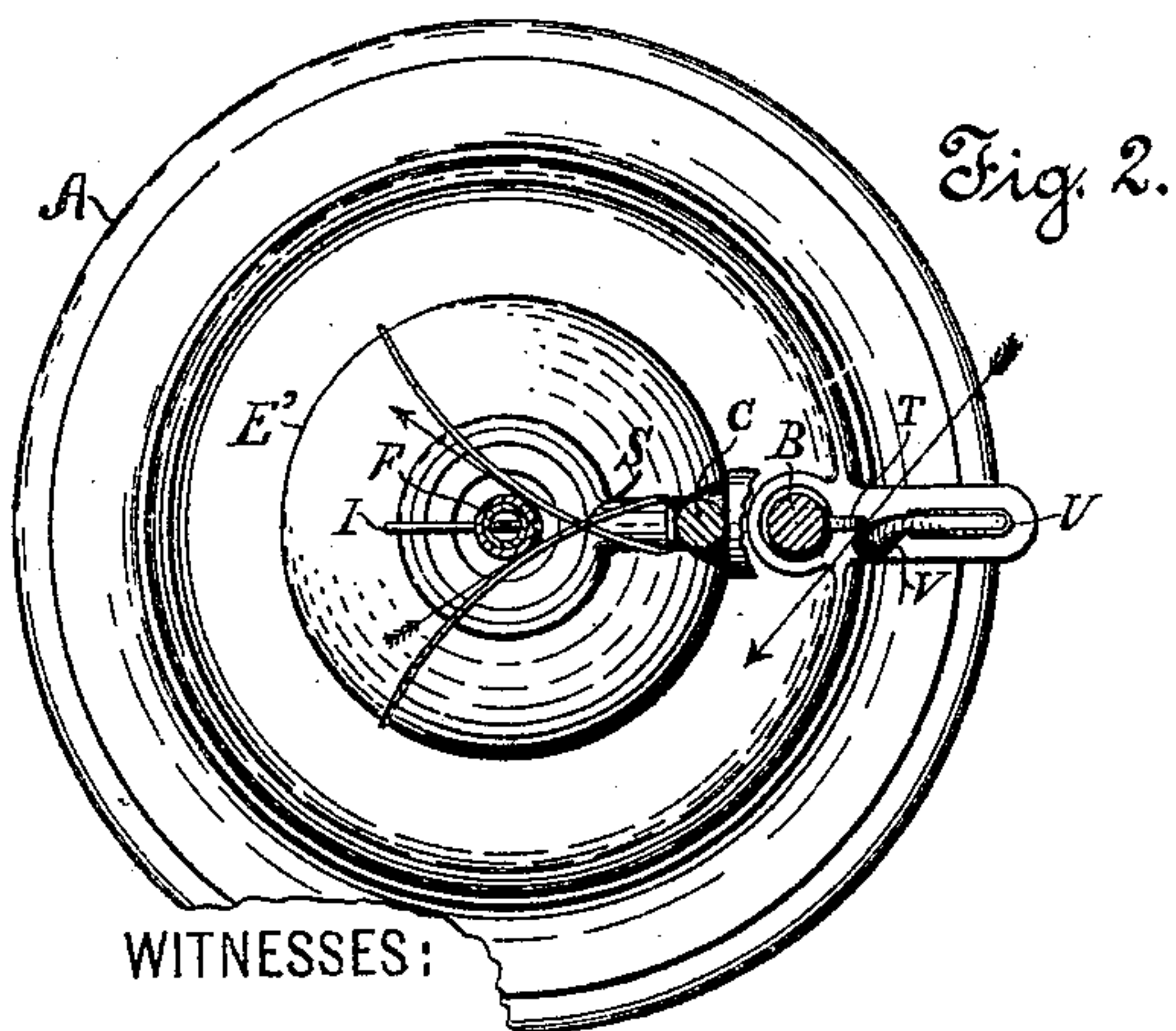
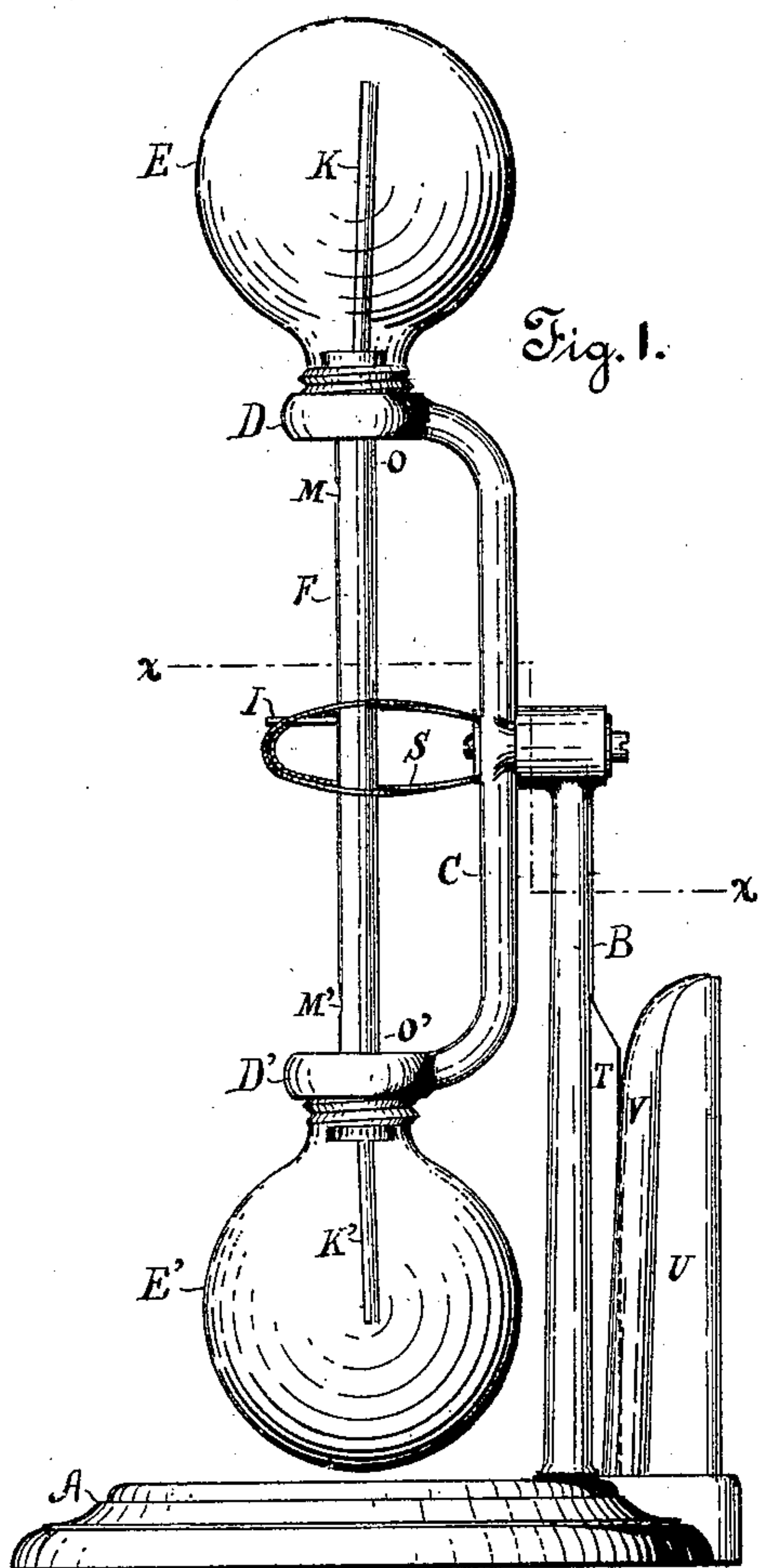
Patented Oct. 4, 1898.

G. S. HILL.

MOISTENER FOR GUMMED SURFACES.

(Application filed Mar. 16, 1898.)

(No Model.)



WITNESSES:

A. S. Diven
C. Tracy Stagg

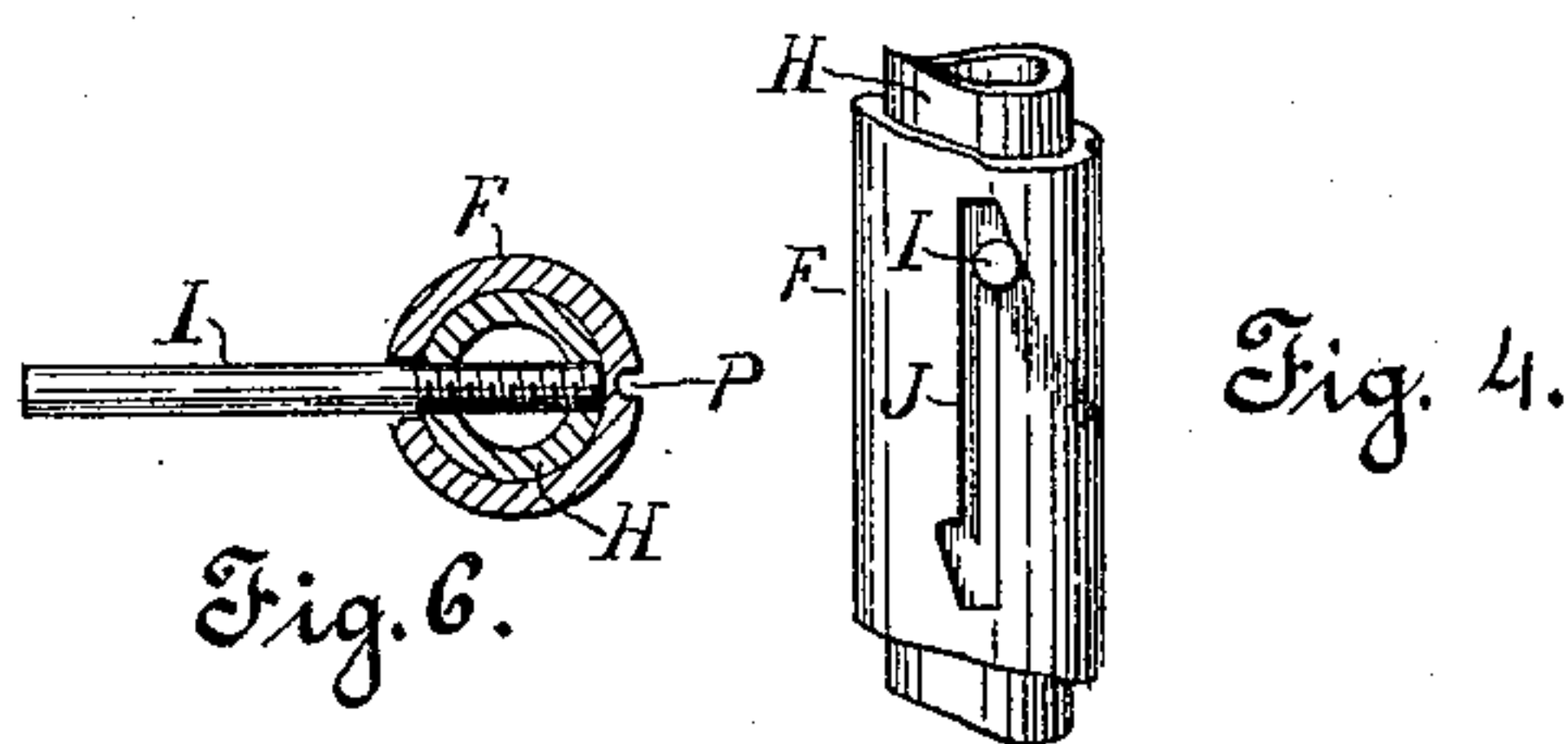
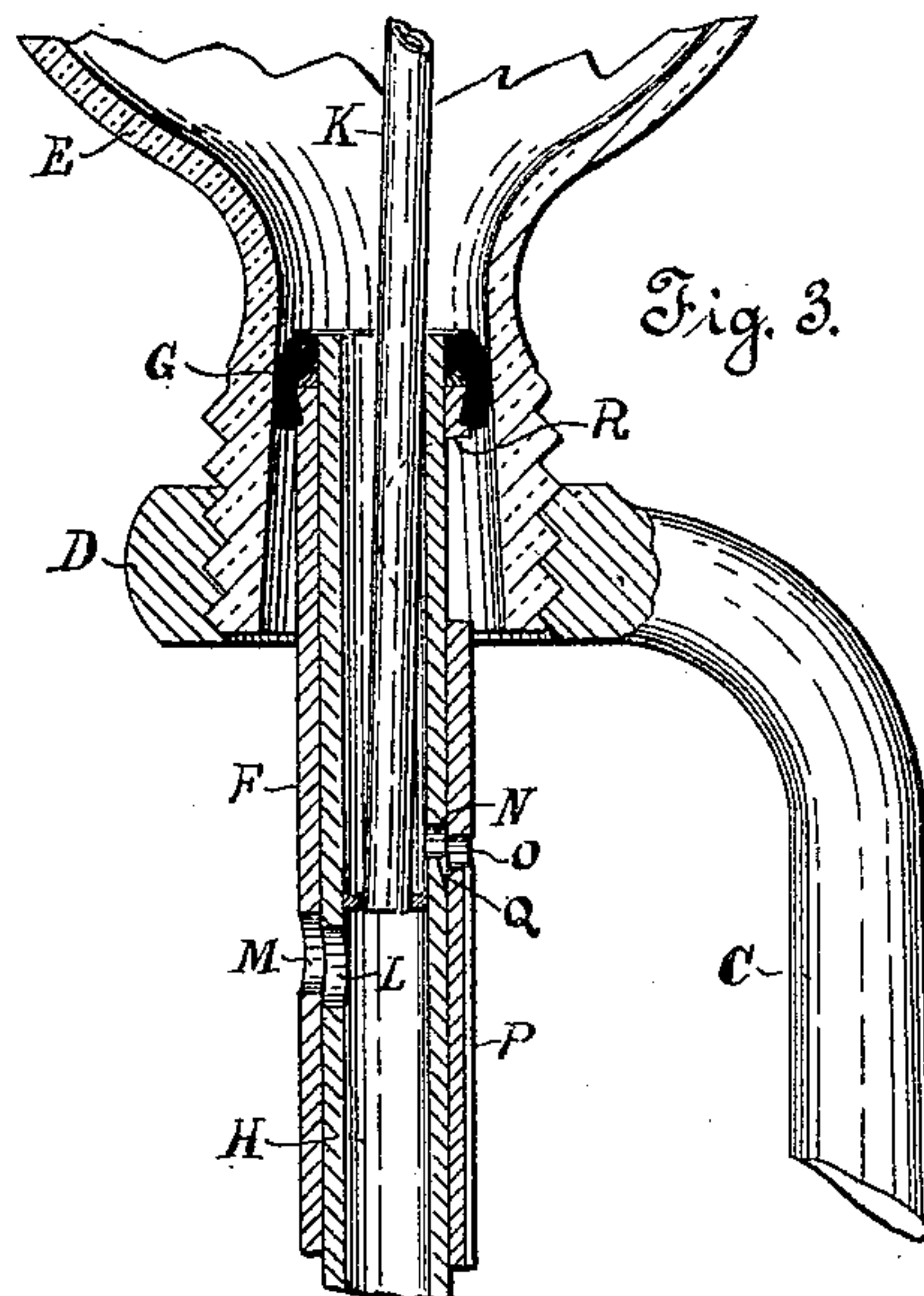
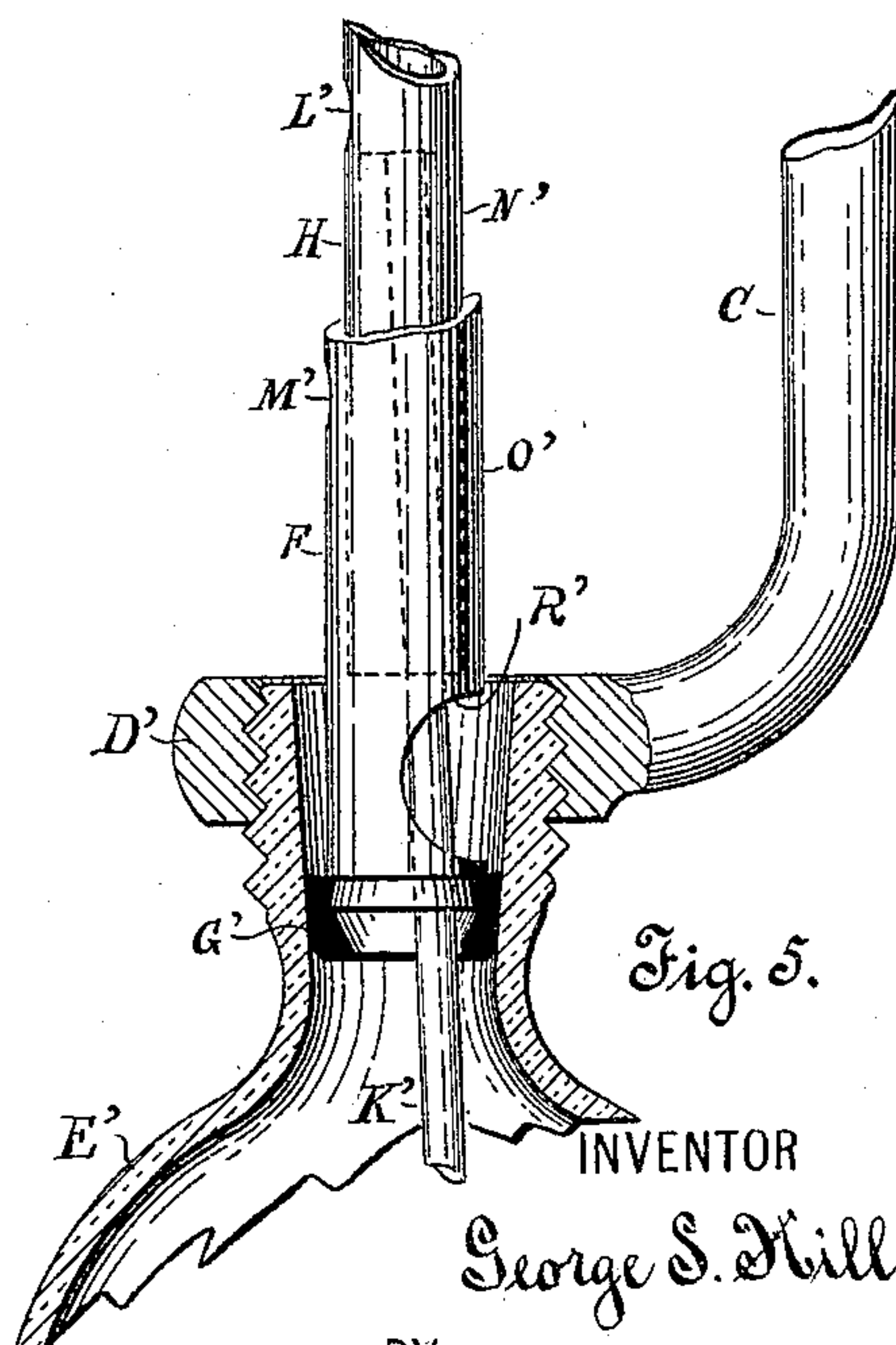


Fig. 6.



INVENTOR
George S. Hill
BY
Eugene Diven
ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE S. HILL, OF SAYRE, PENNSYLVANIA.

MOISTENER FOR GUMMED SURFACES.

SPECIFICATION forming part of Letters Patent No. 611,784, dated October 4, 1898.

Application filed March 16, 1898. Serial No. 674,016. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. HILL, a citizen of the United States, residing at Sayre, in the county of Bradford and State of Pennsylvania, have invented a new and useful Improvement in Moisteners for Gummed Surfaces, of which the following is a specification.

My invention relates to improvements in the device for moistening the gummed surfaces of envelopes, labels, and the like, as described in Letters Patent of the United States No. 532,459, issued to me on the 15th of January, 1895, for apparatus for moistening gummed surfaces; and the objects of my improvements are, first, to provide a simple and cheap device whereby the gummed surfaces may be brought into contact with a steady stream of clear liquid, either water or a mucilaginous solution, and, second, to provide the device with an attachment for sealing envelopes. I accomplish these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the device; Fig. 2, a plan view sectioned on the line $x x$ in Fig. 1, and Figs. 3, 4, 5, and 6 details showing the construction of the device.

Similar letters refer to similar parts throughout the several views.

From a heavy base A rises a standard B, to which is pivoted an arm C, having at its ends the screw-threaded sockets D D', into which are screwed the glass globes E E' or other suitable liquid-receptacles. The necks of these globes are formed with an internal taper, so that when the tube F is placed between the globes and they are screwed toward one another the necks will engage rubber packing-rings G G' and form thereby a tight joint between the globes and the ends of the tube F. Within the tube F is a tube H, closely fitted therein and adapted to be reciprocated by means of the stud I, which projects through a slot J in tube F, said slot being notched at the ends, as shown in Fig. 4, to designate the proper adjustment for the stud I. At each end of the inner tube H small tubes K and K' are fastened, the inner ends of these tubes being brazed to the tube H with a solid joint, so as to prevent the liquid from flowing through said tube, and the

outer ends of the tubes K and K' project into the globes E and E'. Just inside of the point of jointure of the tubes K K' with tube H vent-holes L and L' are provided, and corresponding holes M and M' are provided in the tube F, with which the holes L and L' are made to register at the proper times. At points slightly outside of the point of jointure of the tubes K K' and H small vent-holes N N' are provided, and these vents are adapted to be brought into alinement with corresponding vents O O' at the back of tube F. Between the vents O O' a longitudinal groove P is cut in the tube F. From each of the vents N N' a short tapering groove Q is cut in the tube H. At the end of the tube F where it enters the necks of the globes E E' large holes R R' are provided, through which the liquid which flows down the groove P enters into the lower globe. At the center of arm C, where it is pivoted to B, is attached a pair of spring-wires S, which cross one another and press against the sides of the tube F, as shown more clearly in Fig. 2.

The operation of the moistener is as follows: One of the globes, as E, having been filled with water, it is screwed into its socket when in its lower position, with the tube F in position between the two globes, and when the joints at the ends of the tube F are made tight the stud I is brought into the adjustment shown in Fig. 4 and the arm C turned until the globe which is filled is brought up- permost. The liquid will then descend into tube H and through the vents N and O and down the groove P, and from the groove P it will flow down through the opening R and into the lower globe E'; the tube K' being arranged in a slanting position, so as to rest against the edge of the tube F, whereby it receives the liquid that flows down through the opening R' and carries it steadily to the bottom of the globe E', thus avoiding an accumulation of liquid at the end of the tube F until it falls therefrom in drops. In order that the liquid may flow from the upper globe E, an air-vent must be provided to break the vacuum, and this is accomplished through the vents L and M and the tube K. By pushing the stud I up or down between the upper notch and the top of the slot J the amount of opening between the vents N and O may be

adjusted so as to govern the flow of liquid down the groove P, this adjustment being accomplished by means of the tapering groove Q, it being quite evident that when the stud 5 is in its uppermost position the vent N will have passed above the vent O, causing the liquid to pass from N to O through the constricted passage formed by the groove Q. After the liquid has passed from the globe E 10 into the globe E' the stud I is drawn down into its lower position, and the globe E' is then turned into its uppermost position, after which the liquid will flow back into the globe E. In thus changing the positions of the 15 globes care must be taken to first adjust the stud and by it the inner tube II. Otherwise the liquid will flow through the opening R in a large stream.

The packing-ring, as it will be noticed in 20 Fig. 3, extends beyond the end of the tube F, and when the inner tube H is pushed out its end is engaged by the packing-ring and a tight joint formed thereby, so that the liquid cannot flow down between the tubes H and 25 F. The ends of the tube F are notched, as shown, to receive and hold the packing-rings.

In moistening an envelop the flap is thrown out and pushed around the tube F, as indicated by the arrow, being guided around and 30 in contact with the groove P by means of the pair of spring-guides S, and in the same manner labels or other gummed surfaces may be slipped around back of the tube in contact with the groove and the water flows down 35 therethrough, the amount of flow down the tube being regulated according to the requirements of the surface to be moistened. The tube F is made of any desirable length, and the device may be made to accommodate a 40 label or gummed surface of considerable size and will effectually moisten the entire surface.

For sealing envelops I provide at the back of the standard B a rib or tongue T, and opposite it, in the standard U, I fasten a rubber 45 lip V, which laps over the tongue at one side thereof and presses tightly against it. In using the sealer after the flap of the envelop has been moistened it is folded over into place and the entire envelop drawn through be- 50 tween the tongue and the lip in a diagonal direction, or, in other words, in a direction tangent to the lip where it laps upon the tongue, as indicated by the arrow. A pressure is thus put upon the flap and it is effec- 55 tually sealed against the envelop for its entire length.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. A moistener for gummed surfaces comprising two oppositely-disposed vessels, a rod 60 running from one vessel to the other, a vent at each end of the rod communicating with the interior of said vessels, a passage along the outside of the rod communicating with said 65 vents and along which liquid is conducted from one vessel into the other, means for ad-

justing the vent-openings to regulate the flow of liquid, and a support by which the vessels are held in vertical alinement.

2. A moistener for gummed surfaces comprising two oppositely-disposed vessels, a 70 vented tube running from one vessel to the other, along the outside of which liquid is conducted from one vessel into the other, an inner tube provided with air-inlet and liquid- 75 discharge vents, corresponding with similar vents in the outside tube, means for adjusting said inner tube to regulate the flow down the outer tube, and a support by which the vessels are held in vertical alinement. 80

3. A moistener for gummed surfaces comprising two oppositely-disposed vessels, a tube running from one vessel to the other and 85 having an outlet and inlet vent at each end whereby liquid is conducted from one vessel into the other along the outside of the tube, means for controlling said vents, and a swing- 90 ing arm to which said vessels are attached and whereby their relative position and the flow of liquid from one to the other is reversed.

4. A moistener for gummed surfaces comprising two oppositely-disposed vessels, a swinging support to which the vessels are at- 95 tached, a tube running from one vessel to the other, and having an outlet and inlet vent at each end whereby liquid is conducted from one vessel into the other along the outside of the tube according to which vessel is upper- 100 most, an inner tube provided with vents corresponding with the outlet-vents of the outer tube, smaller air-inlet tubes attached at each end of the inner tube inside of the outlet-vents, air-inlet vents in the inner and outer tubes communicating with the air-inlet tubes, and means for shifting and adjusting the in- 105 ner tube to bring the proper vents into alinement with one another according to the relative positions of the vessels.

5. A moistener for gummed surfaces comprising two oppositely-disposed vessels hav- 110 ing screw-threaded inwardly-tapering necks, a support therefor provided with threaded sockets, a vented tube running from one vessel to the other, along the outside of which liquid is conducted from one vessel into the 115 other, and rubber packing-rings at the ends of the tube engaged by the necks of the vessels when they are screwed toward one another.

6. The envelop-sealer comprising an up- 120 right provided with a lateral rib or tongue, and a flexible rib held in a support opposite the tongue and lapping against one side thereof, the upper portion of the lip bending away from the tongue to allow for the insertion of 125 an envelop.

In testimony whereof I have affixed my signature in presence of two witnesses.

GEORGE S. HILL.

Witnesses:

L. B. DENISON,
GRANT B. FOLLETT.