

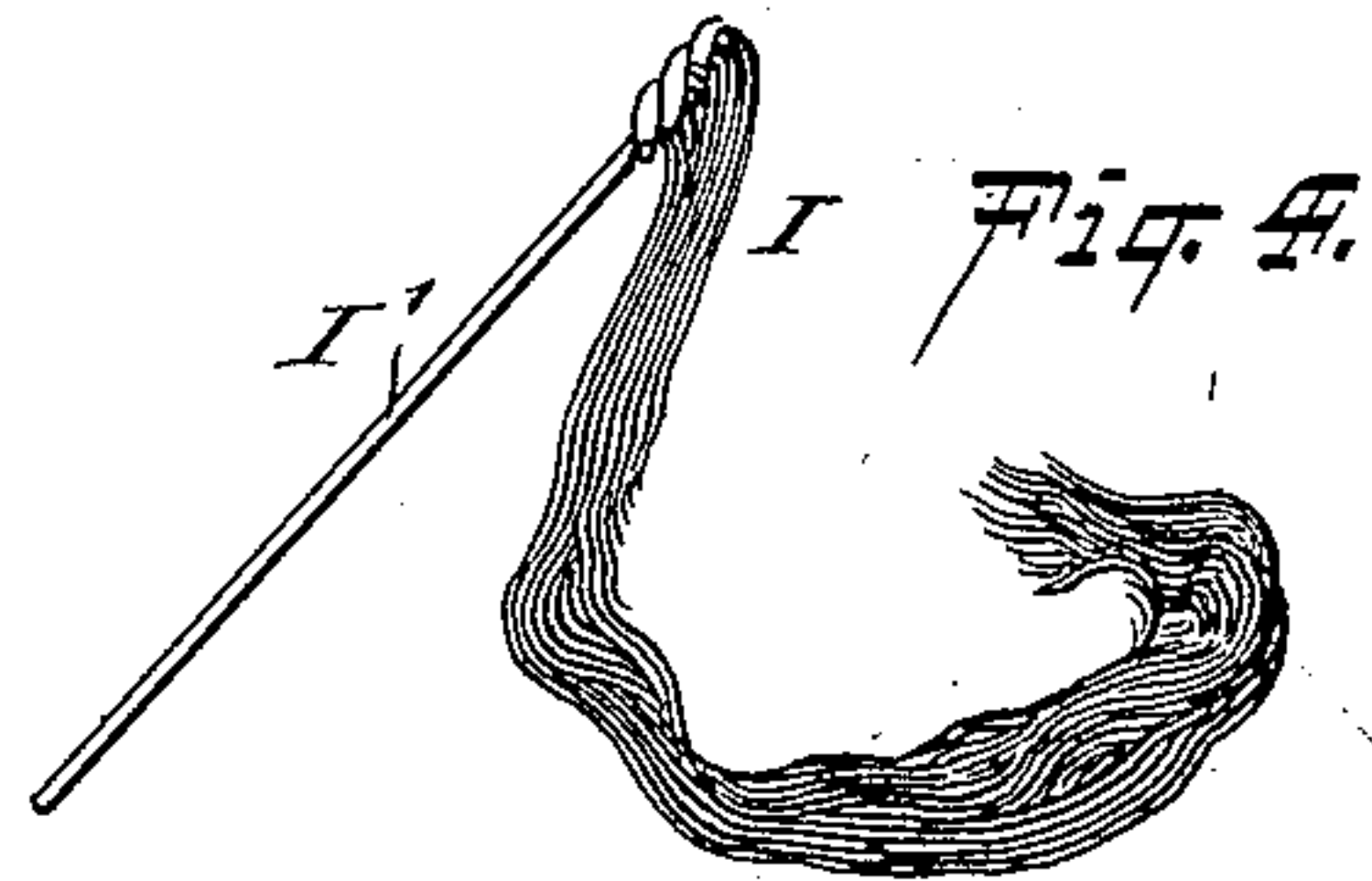
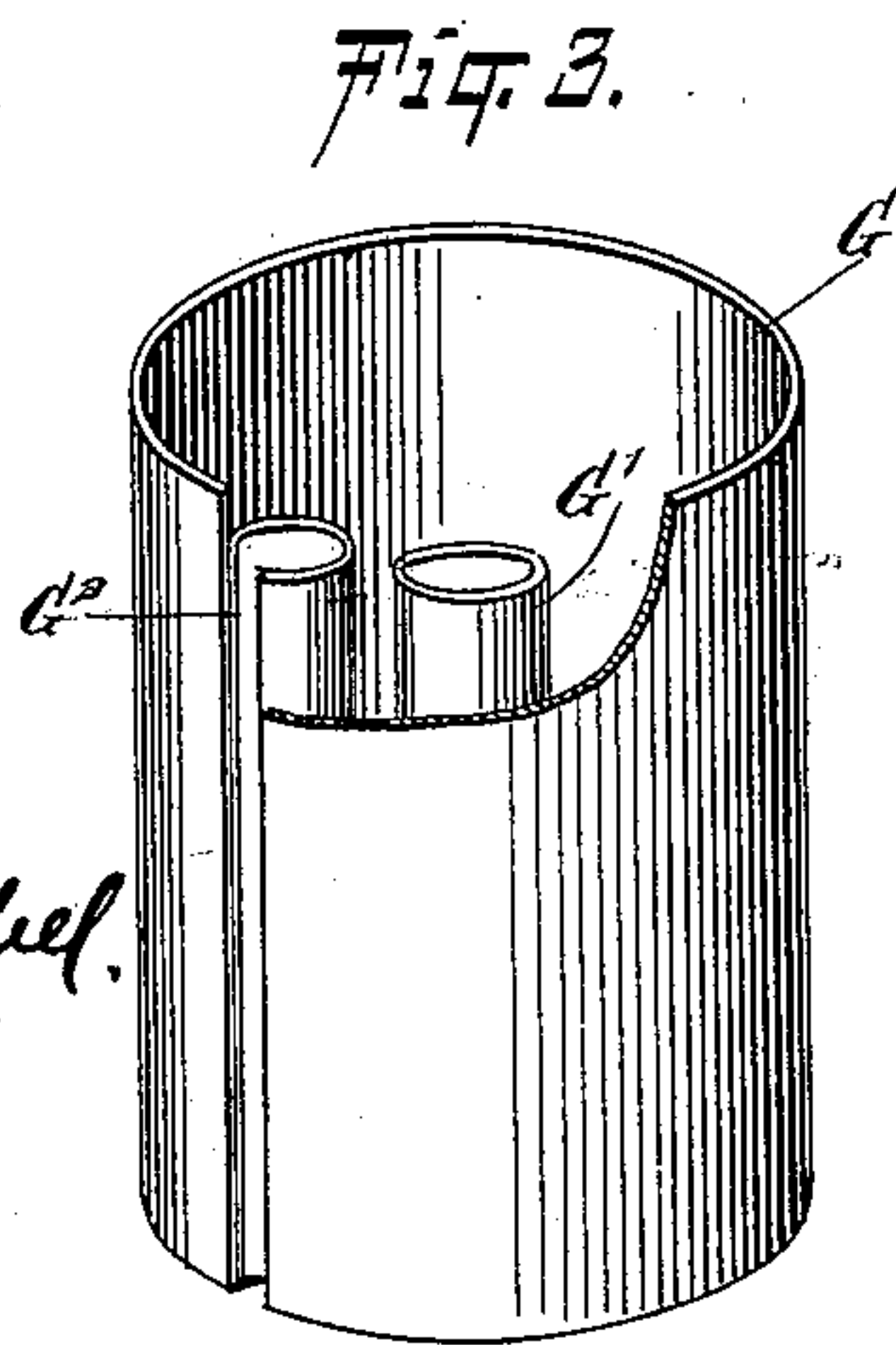
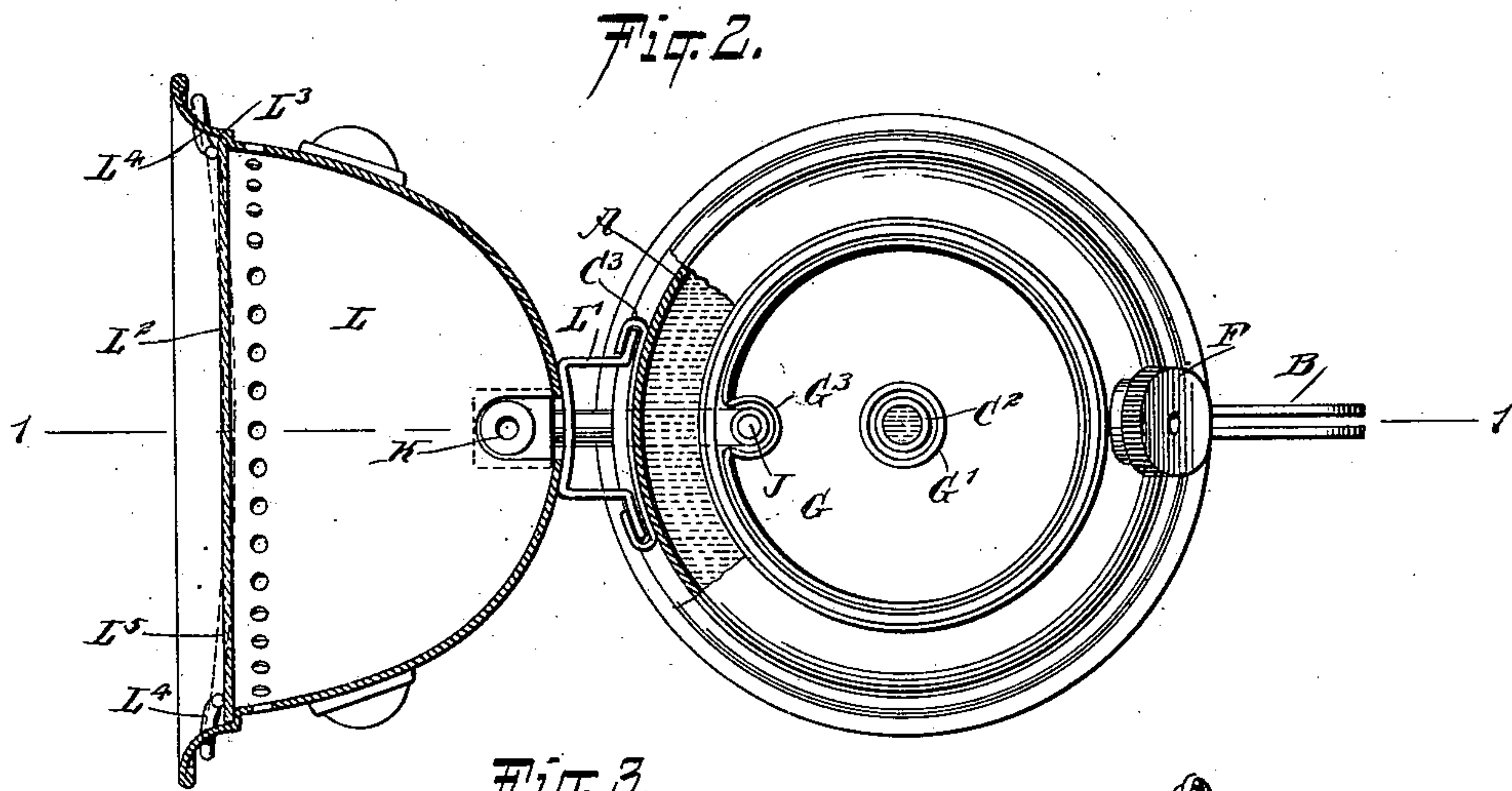
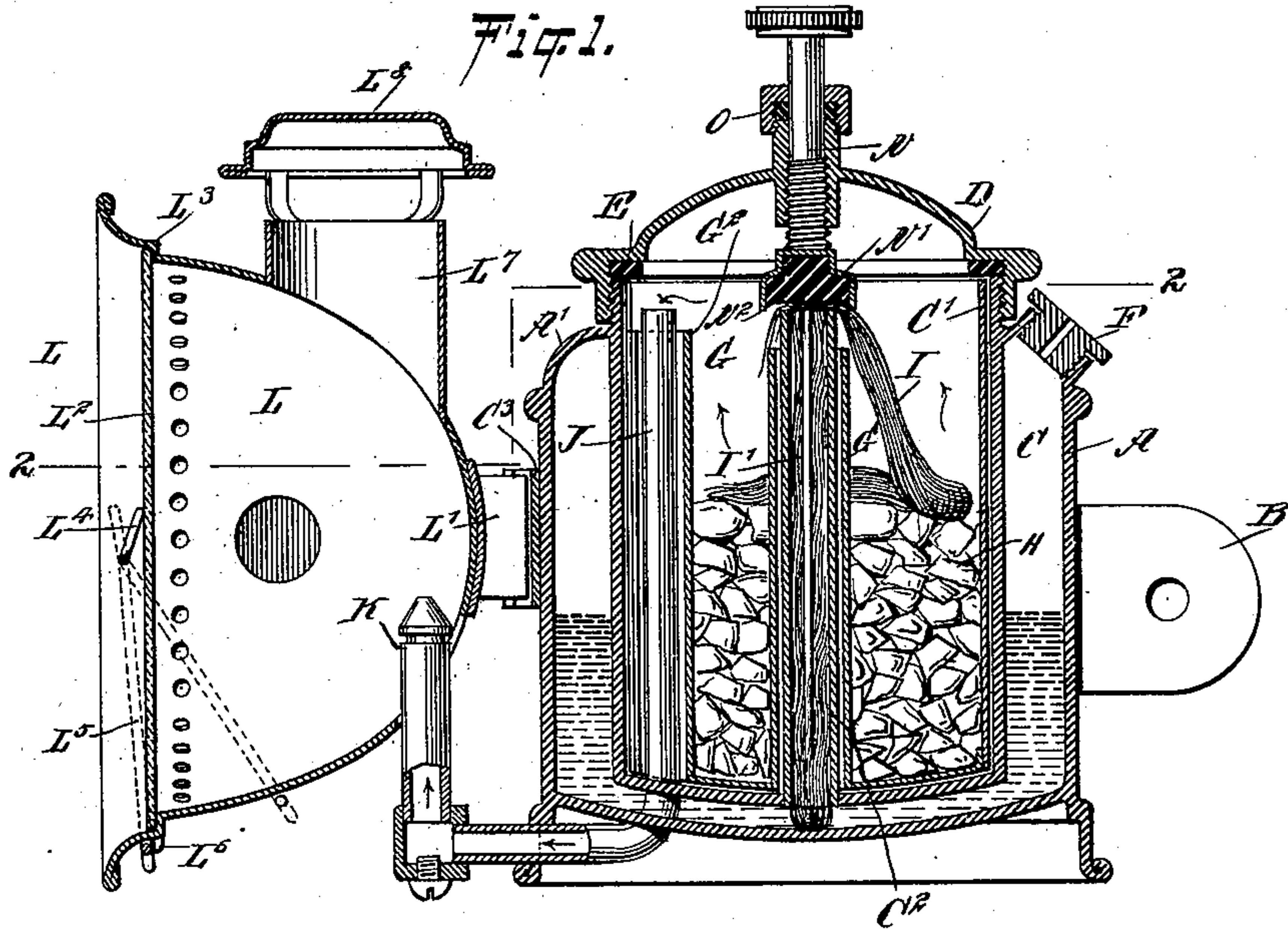
No. 631,643.

Patented Aug. 22, 1899.

C. KELLY.
ACETYLENE GAS GENERATING LAMP.

(Application filed Apr. 13, 1899.)

(No Model.)



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CHARLES KELLY, OF PASSAIC, NEW JERSEY.

ACETYLENE-GAS-GENERATING LAMP.

SPECIFICATION forming part of Letters Patent No. 631,643, dated August 22, 1899.

Application filed April 13, 1899. Serial No. 712,880. (No model.)

To all whom it may concern:

Be it known that I, CHARLES KELLY, of Passaic, in the county of Passaic and State of New Jersey, have invented a new and Improved Acetylene-Gas Bicycle-Lamp, of which the following is a full, clear, and exact description,

The object of the invention is to provide a new and improved acetylene-gas bicycle-lamp, which is simple and durable in construction, very effective and economic in operation, arranged to permit of regulating the generation of gas, and to allow of conveniently filling and cleaning the holder to insure a perfect burning of the gas at all times.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement on the line 1 1 in Fig. 2. Fig. 2 is a sectional plan view of the same on the line 2 2 in Fig. 1 and with the screw-cap removed and parts broken out. Fig. 3 is a perspective view of the carbide-holder with part broken out, and Fig. 4 is a similar view of the wick.

The improved bicycle-lamp is provided with a water-reservoir A, preferably made cylindrical in shape and formed at the rear with lugs B for attaching the lamp to the bicycle on which it is to be used. Into the water-reservoir A extends a generator-casing C, rigidly connected near its upper end with the annular top A' of the reservoir A, so that the latter is closed and the generator-casing C is suspended within the water-reservoir, a space being provided between the sides and bottom of said generator-casing and water-reservoir to allow the water contained in the water-reservoir to surround the generator-casing, and thereby keep the same cool. The extreme upper end C' of the generator-casing C is screw-threaded and extends to the top A' to be engaged by the screw-threaded cap D for closing the generator-casing C. A gasket

E is held in the cap D to engage the top edge of the end C' to prevent leakage of gas from the casing. The top A' is provided at the rear end with a water-filling and air-vent plug F for filling the reservoir A with the desired amount of water, and also for allowing air to pass to the reservoir.

Into the generator-casing C is adapted to be set a closely-fitting carbide-holder G, made cup-shaped and adapted to contain carbide H, engaged at its top by the loose strands of a wick I, held on a rod I', adapted to be passed with a portion of the wick through a pipe C², attached to the bottom of the generator-casing C, preferably at the middle thereof and extending upward to within a short distance of the top of the generator-casing, as is plainly indicated in Fig. 1. The lower end of the wick I thus inserted into the pipe C² extends into the water contained in the reservoir A, so that this water can pass by capillary attraction to and upon the carbide H, contained in the holder G, to generate acetylene gas. The gas thus generated is taken from the upper end of the generator-casing C by a pipe J to a burner K, arranged within the rear end of a parabolic reflector L, provided at its apex with vertically-disposed flanges L', fitting into a socket C³, attached to the front of the water-reservoir A. The pipe J extends through the bottoms of the casing C and the water-reservoir A, and then through the forward portion of the base of the reservoir, to then extend upward through an opening in the reflector L to bring the burner K into the proper position within the parabolic reflector to insure a forward reflection of the light when the gas is burning at said burner K.

The carbide-holder G is provided with a central tube or pipe G', fitting upon the pipe C², and at the side of said holder is arranged a tubular guideway G², fitting loosely around the upper portion of the gas-pipe J, so that said holder G is held against rotation, and at the same time the carbide contained in the holder is not liable to pass in any manner into the casing C or into the water-reservoir A.

In the cap D is mounted to screw a screw-rod N, arranged in alinement with the pipe C², the lower end of said screw-rod being formed with a cup N', containing a flexible

head N^2 , preferably made of rubber, and adapted to engage that portion of the wick extending over the upper edge of the pipe C^2 , so that when the screw-rod N is screwed downward said head engages the wick and presses the same firmly in contact with the edge of the pipe C^2 to stop the water flowing from that portion of the wick contained in the pipe C^2 to the loose portion extending in the holder G and in contact with the carbide H . By using the screw-rod N and the head N^2 the user of the lamp is enabled to control the supply of water from the reservoir A to the carbide, thus controlling and regulating the generation of gas and the burning of the gas at the burner K . A stuffing-box O is held on the cap D at the screw-rod N to prevent leakage of gas at this point.

The parabolic reflector L is provided at its front end with a glass L^2 , fitted against an annular shoulder L^3 on the body of the reflector, and this glass is held in place by lugs L^4 engaging the sides of the glass and held on a bail L^5 , mounted to swing on the reflector-body, the bail being adapted to be sprung in place behind a lug L^6 at the bottom of the reflector and at the outside thereof, as plainly indicated in Fig. 1. By swinging the bail L^5 rearward over the lug L^6 , as indicated in dotted lines in Fig. 1, the lugs L^4 swing out of contact with the glass, and the latter can then be conveniently removed for cleaning the reflector and lighting the gas at the burner K . The reflector is also provided with an outlet L^7 at the top over the burner and with a hood L^8 , supported from the outlet. By the arrangement described wind is not liable to blow out the flame at the burner K , and at the same time ventilation is established to insure proper burning of the acetylene gas at the burner K .

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

1. An acetylene-gas lamp, provided with a water-reservoir, a gas-generator casing in said reservoir and rigidly connected therewith by the top of the water-reservoir extending inward to integrally connect with the side of the generator-casing, a screw-cap for closing the upper end of the generator-casing, a reflector supported from the front of the water-reservoir, a gas-pipe carrying a burner inside of the reflector, said pipe extending into said generator-casing to conduct the gas from the casing to the burner, a water-pipe extending from the bottom of the generator-casing and opening at its lower end into the water-reservoir, a wick in said pipe and extending into the water at one end, its other end being upon the carbide held in such generator-casing, and a screw-rod screwing in said cap and in alignment with said pipe, the inner end of the screw-rod having a flexible head for engaging the wick at the upper end of said pipe, to regulate the flow of water

from the reservoir to the carbide, substantially as shown and described.

2. An acetylene-gas lamp provided with a water-reservoir, a generator-casing suspended within said reservoir from the closed top thereof to allow the water to surround the sides and bottom of said generator-casing, a water-pipe extending upward from the bottom of the generator-casing and opening at its lower end into the water-reservoir, a removable carbide-holder held in said casing and adapted to contain the carbide, the said holder being formed with a central pipe fitting upon said water-pipe, a wick in said water-pipe and extending at one end into the water in the reservoir the other end of the wick being arranged to extend into the carbide-holder, and a pressure device for engaging the wick at the upper end of the water-pipe, substantially as shown and described.

3. An acetylene-gas lamp, provided with a water-reservoir, a gas-generator casing in said water-reservoir and with its sides and bottom free from the sides and bottom of said water-reservoir, to allow the water in the reservoir to surround the gas-generator casing and keep the same cool, the upper end of the generator-casing being screw-threaded, and the upper ends of the said generator-casing and said water-reservoir being annularly and rigidly connected with each other by the top of the water-reservoir, a screw-cap screwing on said threaded end of said generator-casing, a gas-outlet pipe leading from said generating-casing, a water-pipe extending from the bottom of the generator-casing into the latter, to connect the water-reservoir with the interior of the generator-casing, a wick in said water-pipe and extending into the water in the casing and loosely into the generator-casing, and a carbide-holder removably held in said generator-casing and provided with a central pipe fitting upon said water-pipe, and a tubular guideway at the side of said holder fitting upon said gas-pipe, substantially as shown and described.

4. An acetylene-gas lamp, provided with a water-reservoir, a gas-generator casing in said water-reservoir, and with its sides and bottom free from the sides and bottom of said water-reservoir, to allow the water in the reservoir to surround the gas-generator casing and keep the same cool, the upper end of the generator-casing being screw-threaded and the upper end of the said generator-casing and said water-reservoir being annularly and rigidly connected with each other by the top of the water-reservoir, a screw-cap screwing on said threaded end of said generator-casing, a gas-outlet pipe leading from said generator-casing, a water-pipe extended from the bottom of the generator-casing into the latter, to connect the water-reservoir with the interior of the generator-casing, a wick in said water-pipe and extending into the water in the casing and loosely into the generator-cas-

ing, a carbid-holder removably held in said generator-casing and provided with a central pipe fitting upon said water-pipe, a tubular guideway at the side of said holder and fitting loosely upon said gas-pipe, and a parabolic reflector supported from said water-reservoir in front thereof, the outer end of said gas-pipe extending into the said reflector at or near the rear end thereof, substantially as shown and described.

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Witnesses:

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