

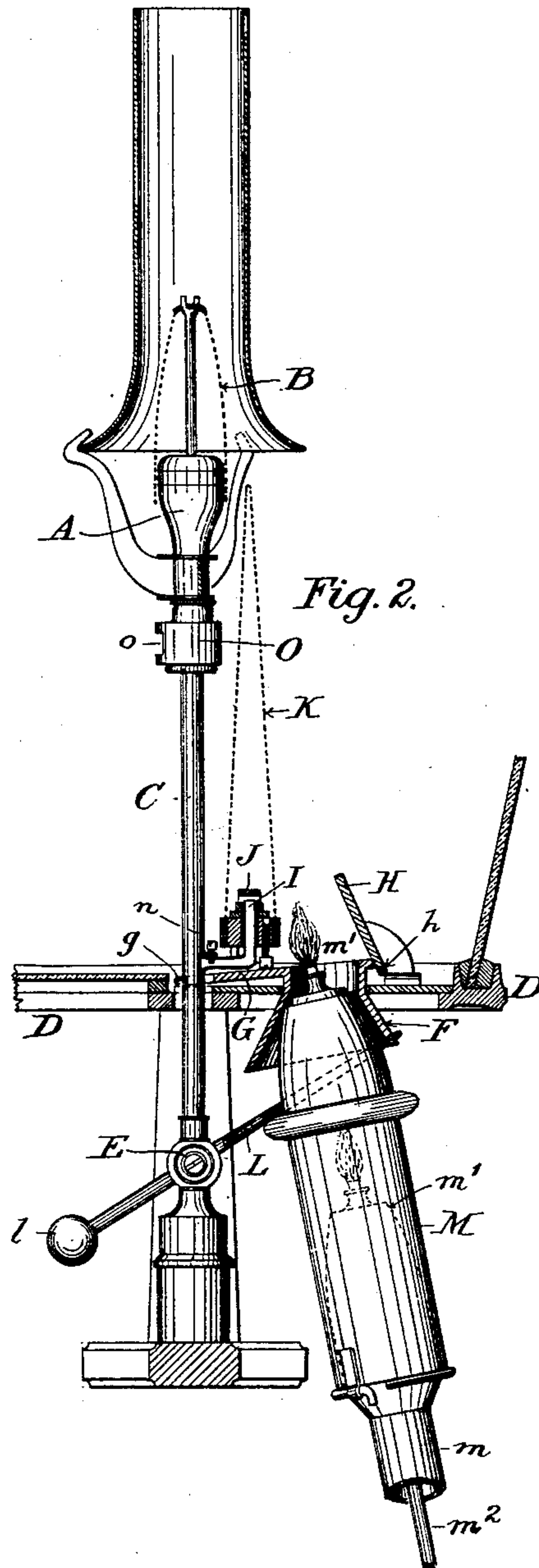
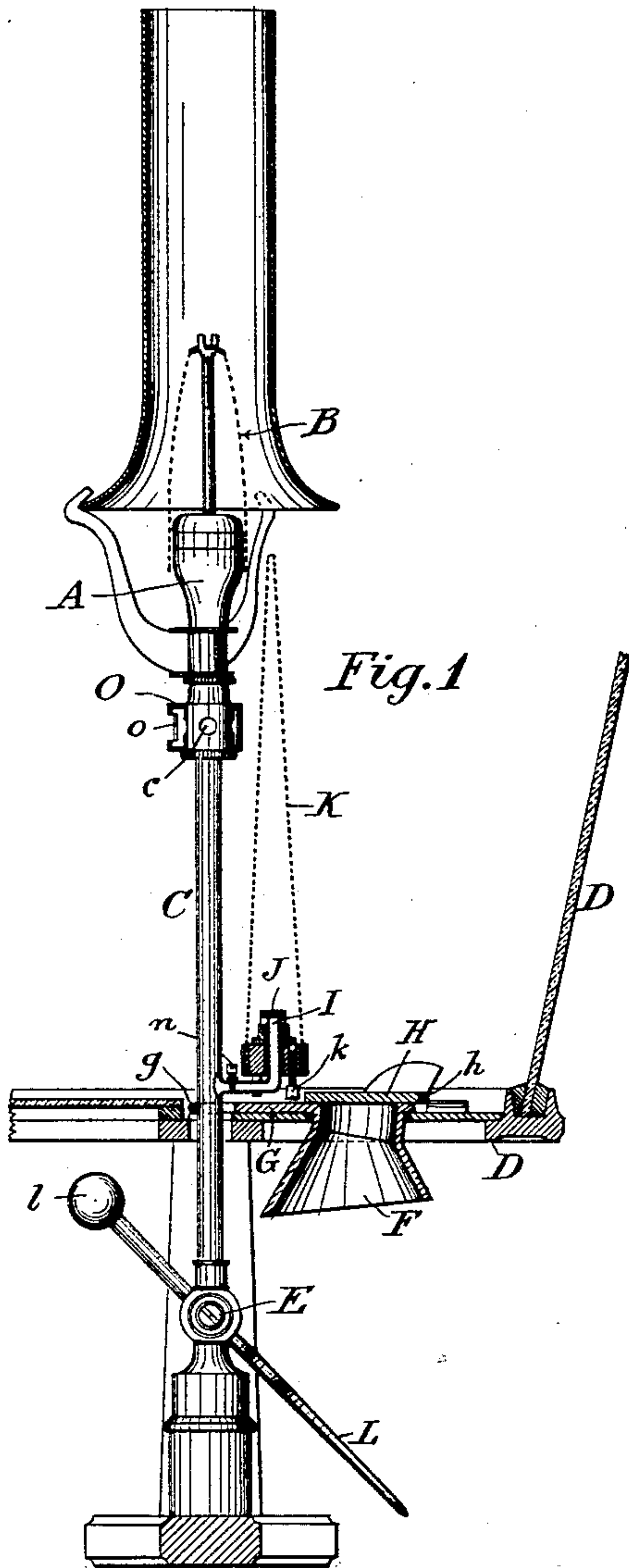
(No Model.)

2 Sheets—Sheet 1.

A. C. NIERMEYER.  
INCANDESCENT GAS LAMP FOR STREET USE.

No. 590,586.

Patented Sept. 28, 1897.



Witnesses:  
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(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

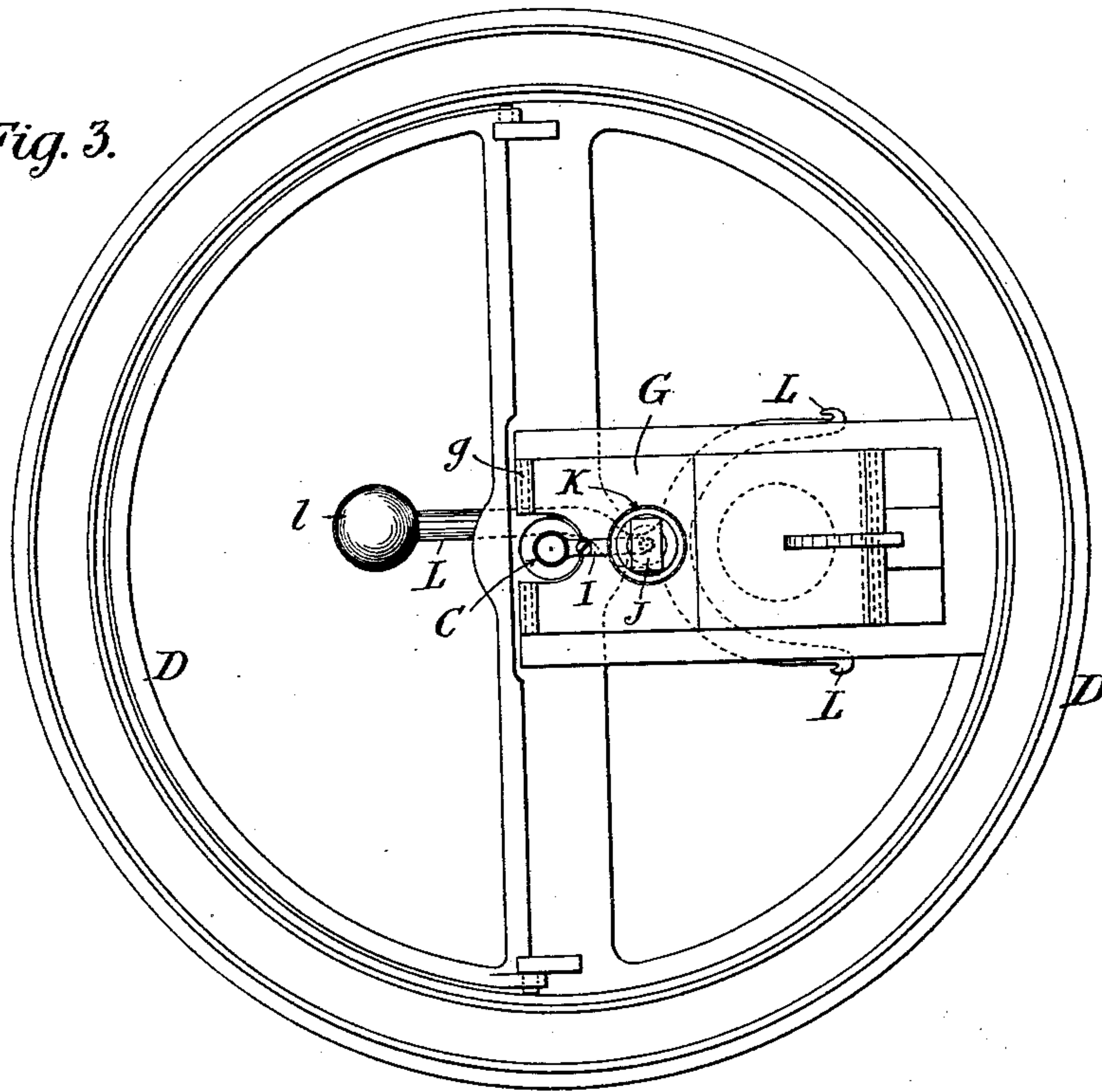


Fig. 6.

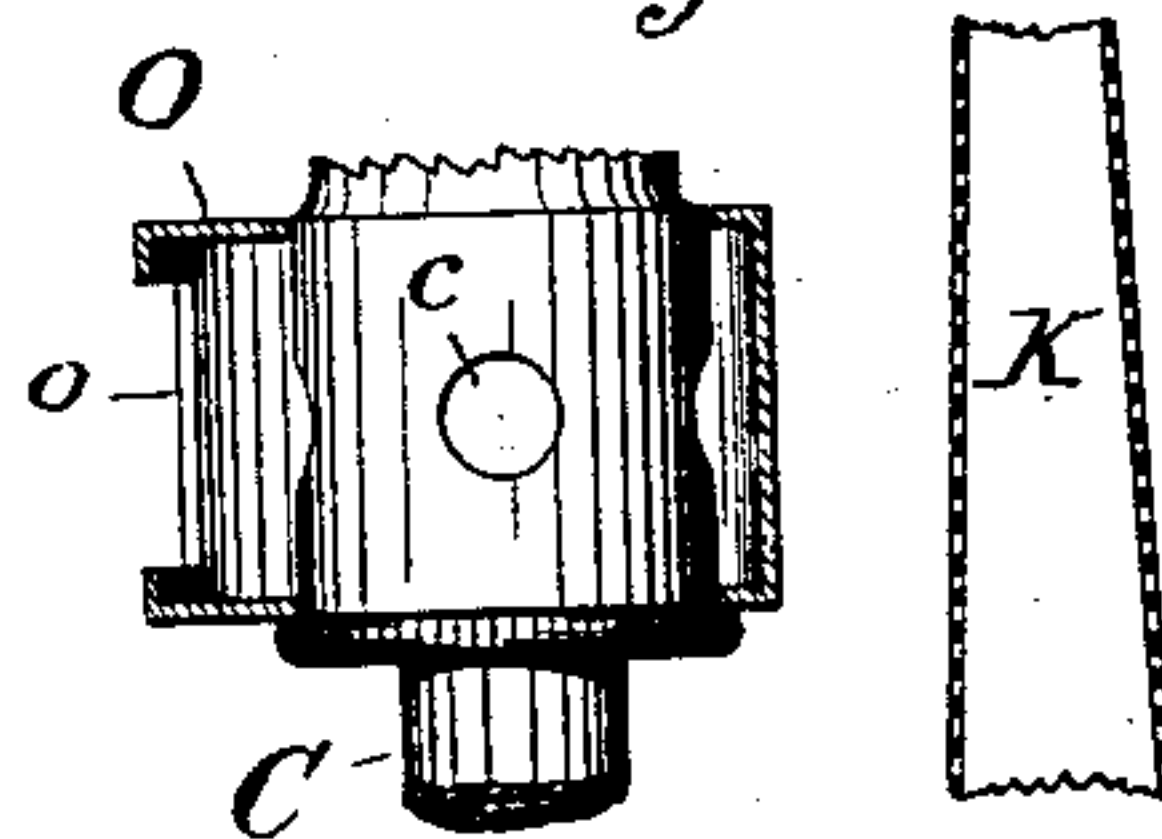


Fig. 4.

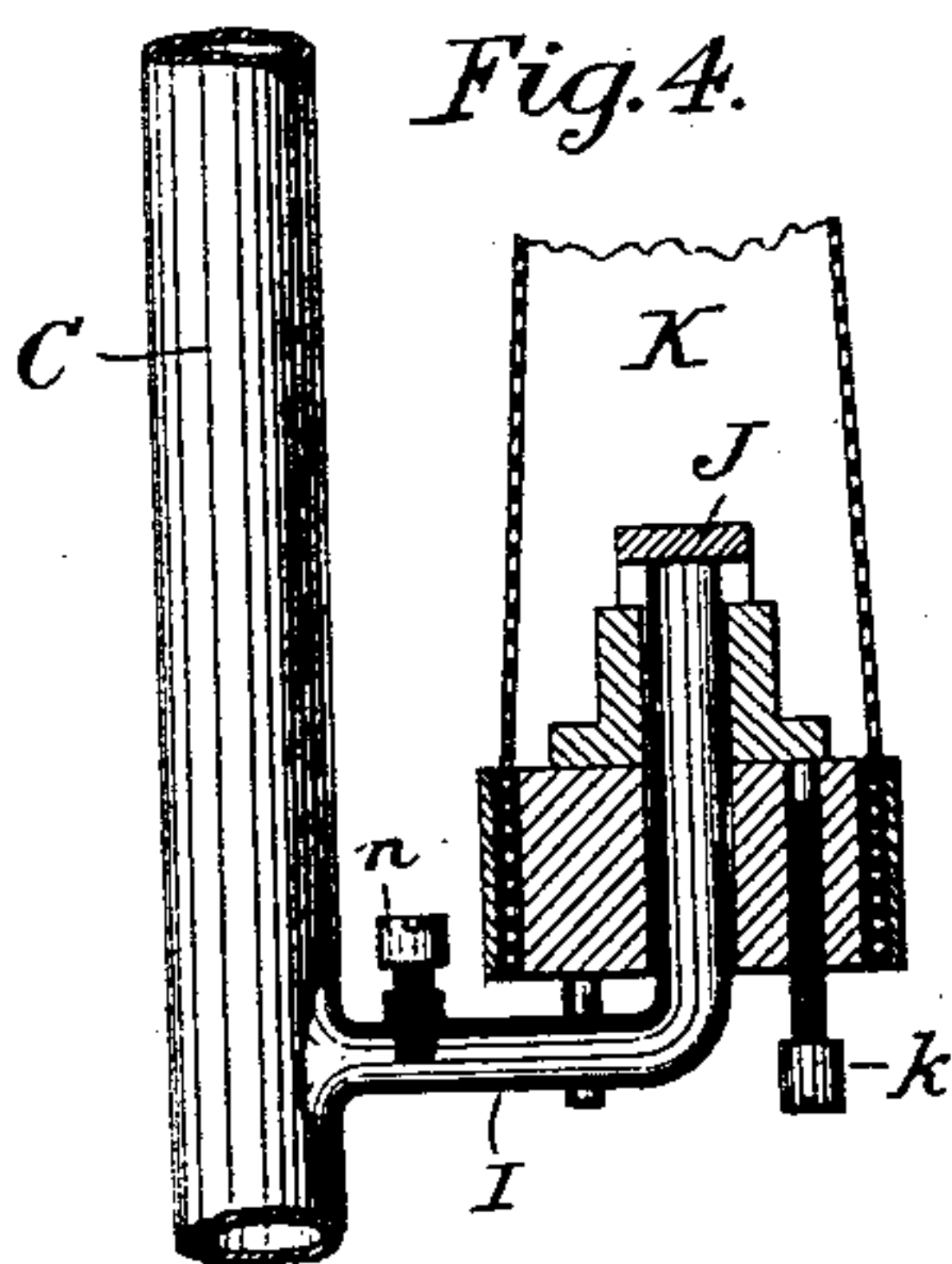


Fig. 5.

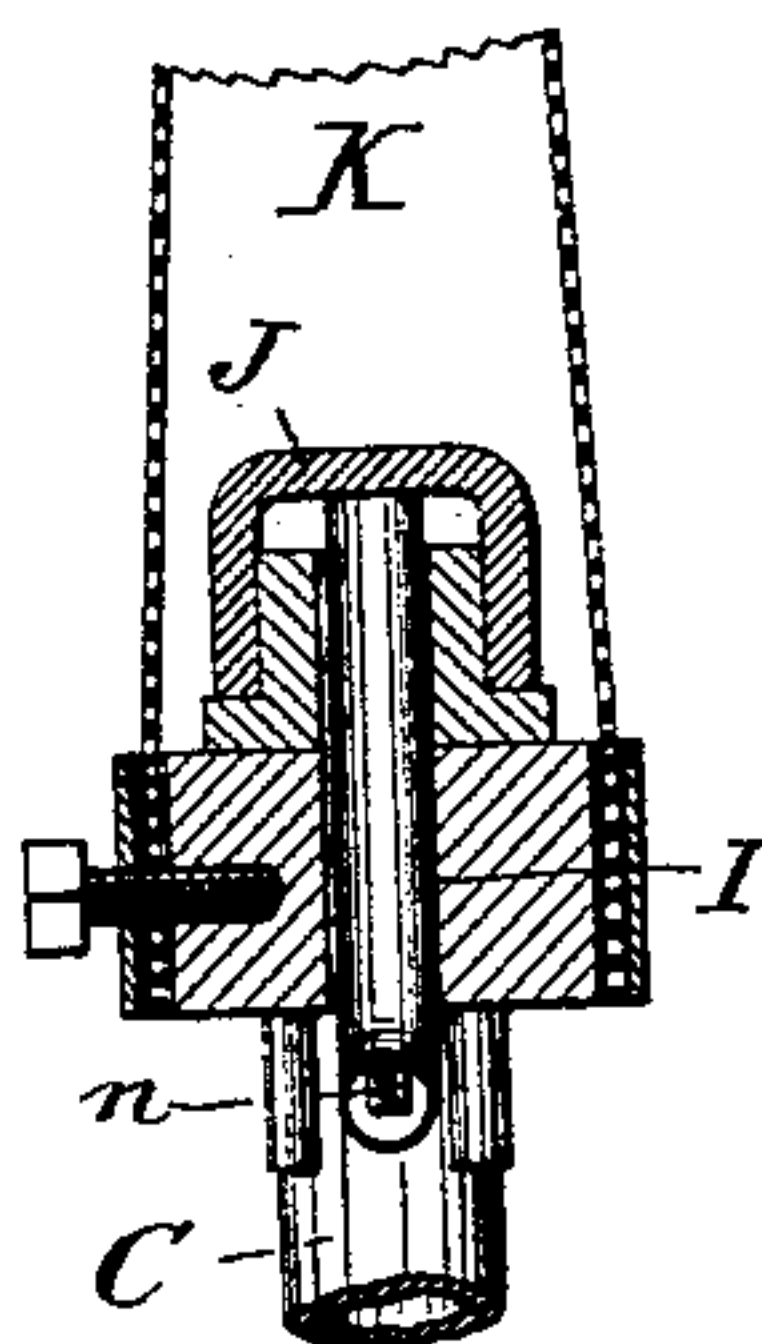
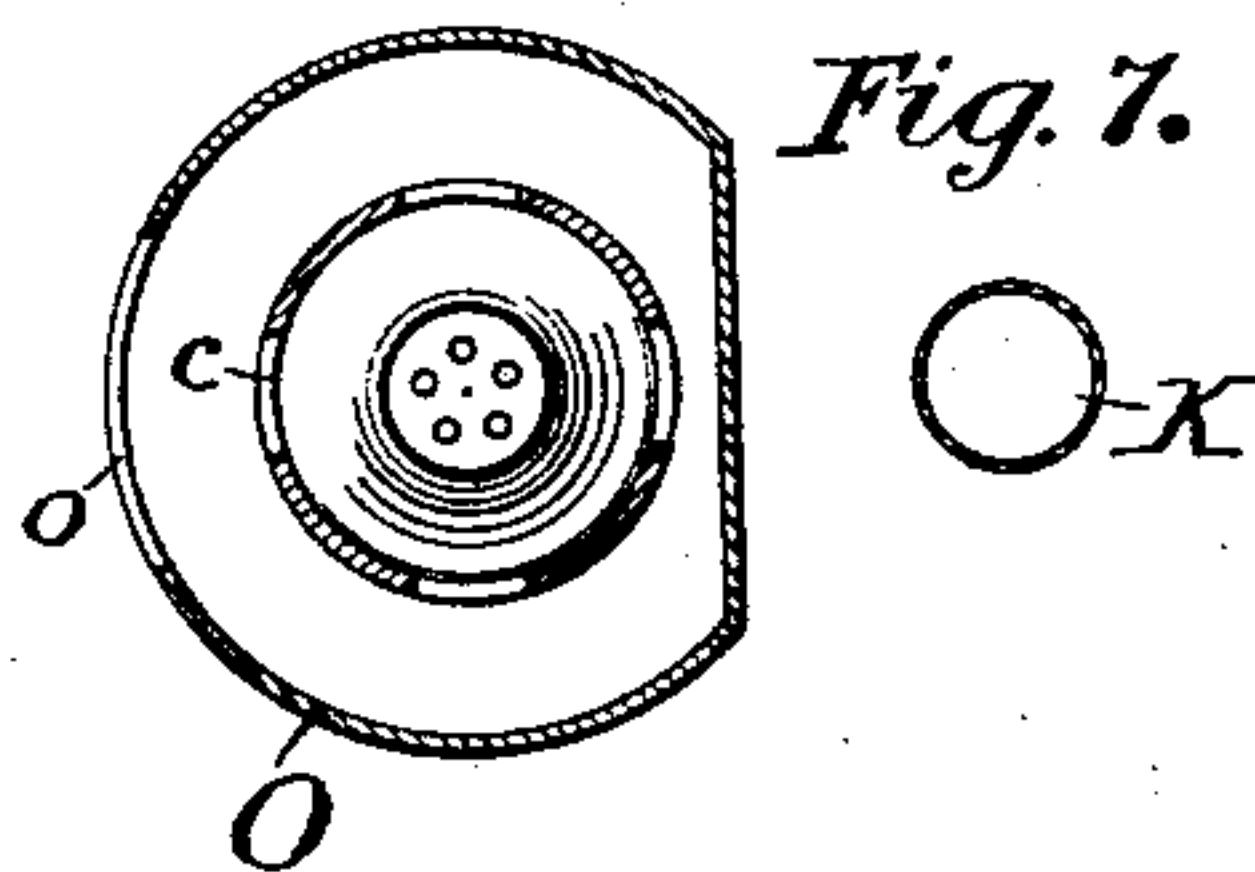


Fig. 7.



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# UNITED STATES PATENT OFFICE.

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## INCANDESCENT GAS-LAMP FOR STREET USE.

SPECIFICATION forming part of Letters Patent No. 590,586, dated September 28, 1897.

Application filed June 29, 1897. Serial No. 642,783. (No model.)

*To all whom it may concern:*

Be it known that I, ANTONIE CORNELIS NIERMEYER, a subject of the Queen of the Netherlands, residing at Deventer, in the Kingdom of the Netherlands, have invented new and useful Improvements in Incandescent Gas Lamps or Lanterns Principally Intended for Street Use, of which the following is a specification.

10 This invention relates to an improved construction of incandescent lamps or lanterns principally intended for street use, whereby same may be ignited and extinguished without having to open the frame or lantern of the lamp; and it consists, essentially, in the employment of an ordinary igniter for street-lamps, mounted upon a suitable handle and provided with a sliding lamp, the action of inserting the igniter into the under side of the lamp serving to open the gas tap or cock to the burner and also to open a valve communicating with an auxiliary burner terminating near the main burner, so that when the lamp-igniter is raised such auxiliary burner will become ignited and so ignite the main burner, while when the igniter is withdrawn the auxiliary burner will be extinguished and the parts will return to their original position, leaving the main burner ignited. By this means, as the case or lantern of the lamp is not opened, all chance of a sudden rush of air onto the mantle of the incandescent burner and the consequent destruction or deterioration of same is avoided, while the necessity for employing a permanently-burning by-pass flame (which might accidentally become extinguished) is avoided and a consequent economy in the consumption of gas effected.

40 The accompanying drawings illustrate a suitable method of carrying my invention into effect, Figure 1 being a side elevation, partly in section, and showing a portion of the surrounding frame or lantern of the gas-burner, the parts being shown in the position when such burner is extinguished. Fig. 2 is a similar view showing the parts in the positions they occupy when the igniter has been inserted into the lantern for the purpose of lighting the burner. Fig. 3 is a plan view, on an enlarged scale, of Figs. 1 and 2. Fig.

4 is a side elevation, partly in section, of the valve and pipe for supplying gas to the auxiliary burner; and Fig. 5 is a sectional end view of Fig. 4. Fig. 6 is a vertical section of the pipe to the main burner and of the upper end of the auxiliary burner, showing the sleeve employed for preventing the back lighting of the former; and Fig. 7 is a horizontal section of Fig. 6.

Referring to the drawings, A is the main burner, upon which the mantle B is mounted in the ordinary manner, and the supply-pipe C to which proceeds downward to the outside of the lantern or casing D of the lamp, where it is provided with the usual cock or tap E. The bottom of the lamp or casing D is provided with an opening, through which projects a funnel F, secured to or forming part of a plate G, hinged within such lantern or casing at *g*. The upper part of the opening of funnel F is normally closed by a plate H, hinged to the casing D at *h*.

Within the casing or lantern D of the lamp a branch pipe I projects from the main gas-pipe C, and the upper end of same normally forms the seat for a valve J, secured to or forming part of a tube K, constituting the auxiliary burner, and the upper end of which terminates near the burner A. The tube K is capable of sliding vertically upon the upwardly-extending arm of the branch gas-pipe I and has a stud or pin *k*, (preferably adjustable,) terminating near the upper surface of the hinged plate G.

The plug of the gas-tap E is connected to a lever L, which is counterbalanced, as shown at *l*, so that when lever L is actuated the plug remains in the position to which it has been shifted.

As above stated, Fig. 1 shows the position occupied by the parts when the burner A is extinguished. In order to light such burner, the operator or lamplighter inserts the upper end of the igniter M into the fork of the lever L, connected to the plug of the tap or valve E in the gas-supply pipe C, and forces same upward, the ignition-lamp *m'* being then in the position shown in dotted lines in Fig. 2. The result of this action is to open the gas-valve E and thus supply gas to the burner A. The continued upward movement



of the igniter M brings the upper end of same within the funnel F and causes same to rise, the plate G, to which same is attached or forms part of, turning upon its hinge *g*. This upward movement of plate G also causes the flap or plate H to turn upon its hinge *h* in the opposite direction, thus unclosing the opening from the funnel into the interior of the lantern or casing D. The upward movement of the plate G will also have brought its upper surface into contact with the lower end of the stud or projection *k*, secured to the base of the auxiliary burner K, thus raising the valve J from off its seat against the upper end of the branch gas-pipe I. As the valve E in pipe C is open, the gas will consequently issue from the upper end of the branch pipe I and into the lower end of the auxiliary burner K. The branch pipe I is preferably provided with an adjusting-screw *n* for the purpose of regulating the amount of gas which can pass through such branch pipe I to the auxiliary burner K.

The auxiliary burner K is preferably formed of some perforated material, such as metallic gauze, and, as above stated, its upper end terminates in close proximity to the burner A. The metallic gauze of the auxiliary burner acts on the same principle as that of what is known as the "Davey" lamp. The gauze prevents back lighting by the igniting-flame, which (by the draft of air) burns with a blue flame and ignites the gas issuing from the burner A without any deposit of smoke on the mantle B. All perforated material will not be suitable for the construction of the auxiliary burner, but metallic gauze is best suited for the purpose, and care must be taken not to employ gauze of too coarse a mesh, as otherwise the protection against back lighting in consequence of the rise of temperature will not be efficiently insured.

When the parts have been moved to the position above described, the ignition-lamp *m'* is by means of its handle *m*<sup>2</sup> raised to the position shown in full lines in Fig. 2, and the gas issuing through the perforations of the auxiliary burner K will be ignited and the flame extend upward to the upper end of such burner, when the gas from the main burner A will in its turn be ignited.

Upon removing the igniter M the funnel F, with its plate G, will descend and consequently permit the auxiliary burner K to do the same, thus closing the valve J against the upper end of the branch pipe I and thus extinguishing the flame of the auxiliary burner. The descent of the plate G will also permit the flap or plate H to turn downward on its hinge and close the upper end of the orifice of funnel F.

The lever L will, however, remain in the position to which it has been raised, and the burner A will consequently remain ignited, and can only be extinguished by turning the lever L in the reverse direction.

The openings *c* near the upper end of the gas-supply pipe C, leading to the burner A, are covered by a sleeve O, with an opening *o*, directed away from the auxiliary burner K, so that all chance of back lighting resulting from the flame from the latter will be avoided.

It will be readily understood that the various details above described may be considerably modified, according to circumstances or as desired, the essential feature being that the parts should be so arranged that the insertion of an igniter should open the supply of gas both to the main burner and to a branch pipe leading to an auxiliary burner, while the lamp of such igniter should ignite the flame of the latter, whereas the withdrawal of the igniter should cut off the supply to the auxiliary burner and close the opening through which the igniter is inserted, while leaving the supply open to the main burner.

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

1. The combination and arrangement of parts for incandescent gas lamps and burners consisting in a lever or part secured to the plug of the valve to the main burner, and which is actuated by inserting an igniter within the lantern or casing of such lamp, the act of inserting such igniter also opening a gas-passage to an auxiliary burner which is ignited by the lamp within such igniter, while the withdrawal of the igniter causes the closing of the supply of gas to the auxiliary burner while leaving the supply to the main burner open, all substantially as and for the purpose specified.

2. The improved arrangement of parts for igniting incandescent gas lamps and burners consisting in a lever connected to the plug of the valve in the gas-supply pipe of same, and which lever is actuated by the action of inserting an igniter within the lantern or casing of the lamp, and of a hinged plate serving to lift a valve from its seat on a supply-pipe delivering gas to an auxiliary burner the upper end of which terminates near the incandescent burner, and also of a second hinged plate serving to close the opening through which the igniter is inserted, when such igniter is withdrawn.

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