(No Model.) 3 Sheets—Sheet 1.

C. SCHINZ.

PORTABLE INCANDESCENT LAMP.

No. 584,830. Patented June 22, 1897.

Fig. 1.

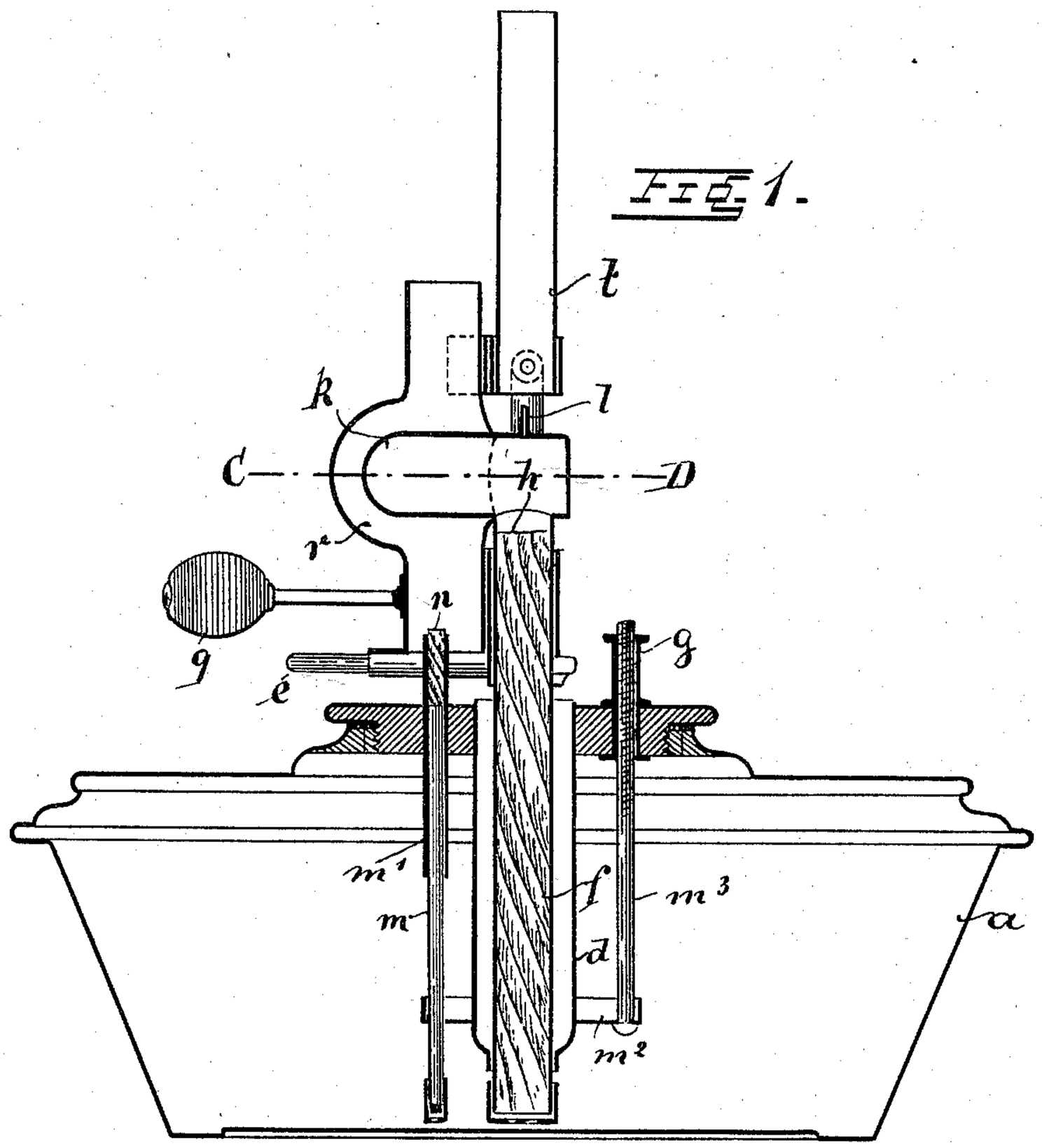

Fig. 3.

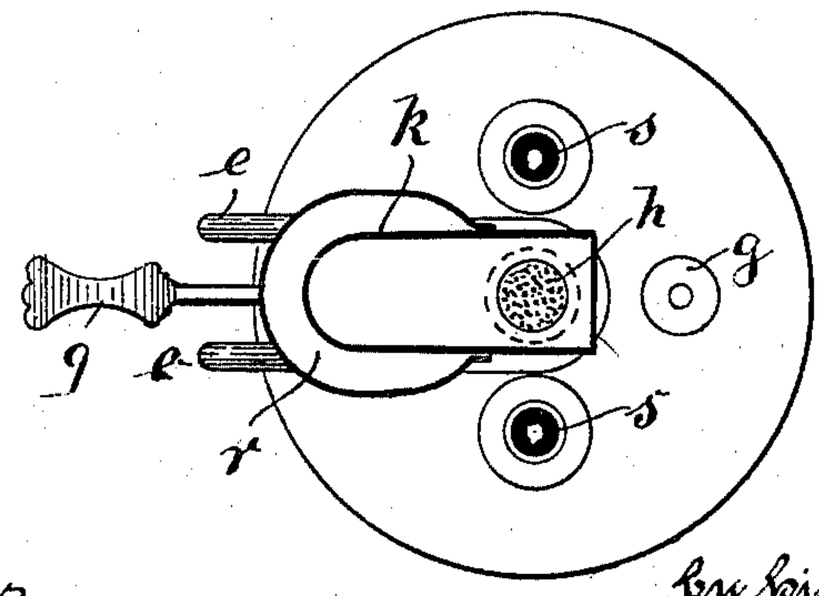

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Fig. 2.

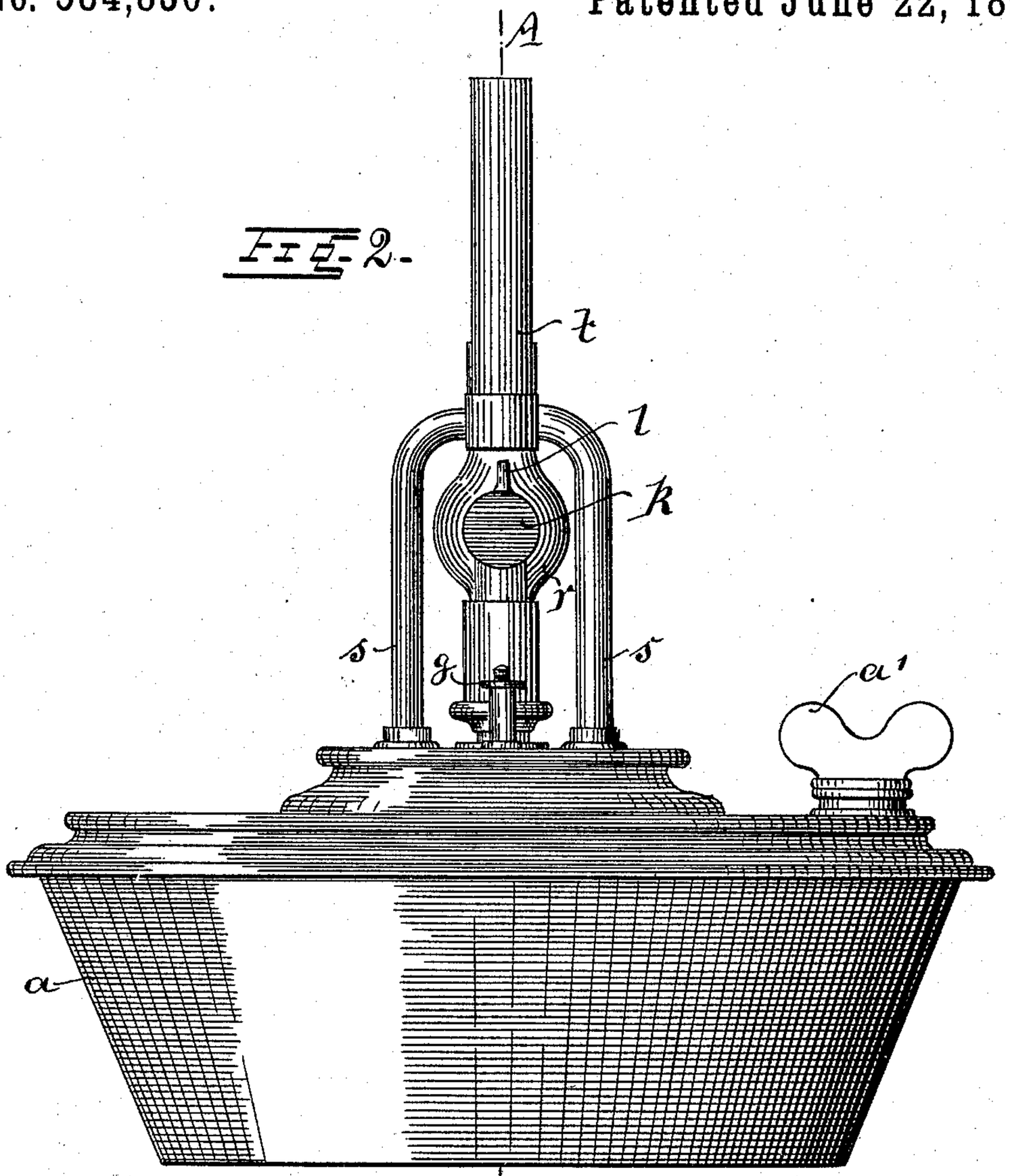
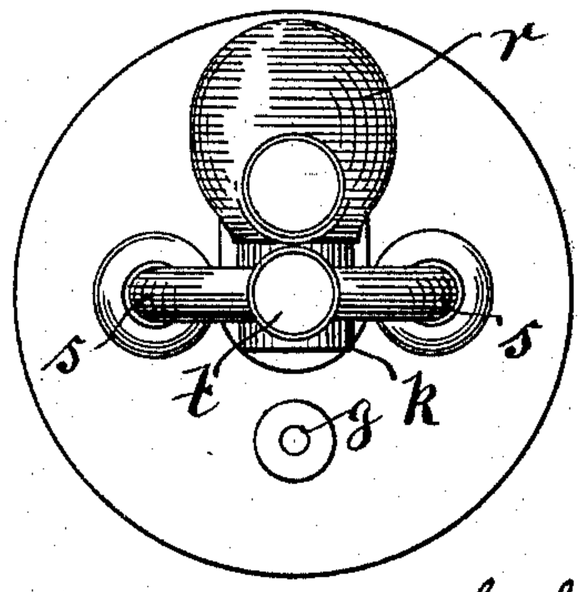


Fig. 4.



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(No Model.) 3 Sheets—Sheet 3.

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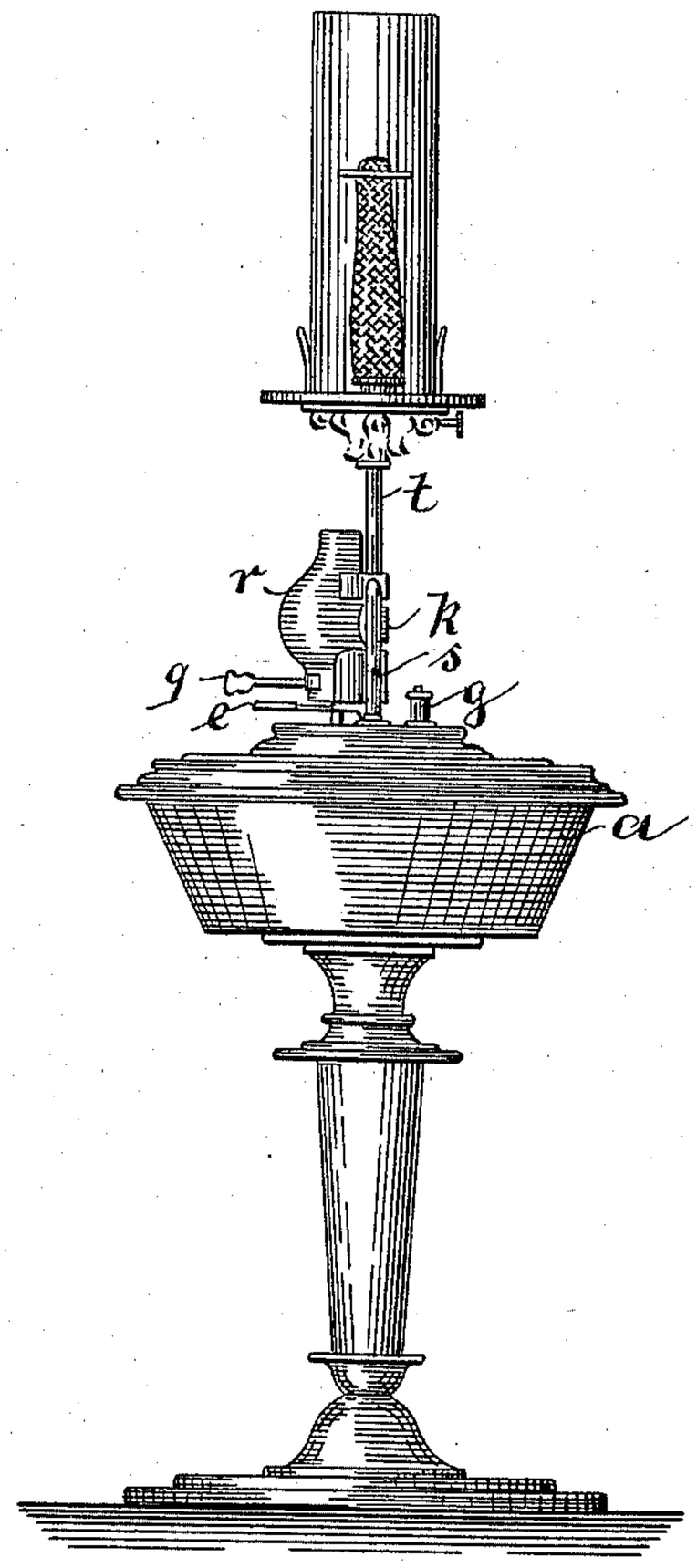
PORTABLE INCANDESCENT LAMP.

No. 584,830. Patented June 22, 1897.

Fig. 5.



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UNITED STATES PATENT OFFICE.

CONRAD SCHINZ, OF ST. PETERSBURG, RUSSIA.

PORTABLE INCANDESCENT LAMP.

SPECIFICATION forming part of Letters Patent No. 584,830, dated June 22, 1897.

Application filed October 31, 1894. Serial No. 527,548. (No model.)

To all whom it may concern:

Be it known that I, CONRAD SCHINZ, engineer, a citizen of the Republic of Switzerland, residing at St. Petersburg, in the Russian Empire, have invented a certain new and useful Portable Incandescent Lamp, of which the following is a full, clear, and exact description.

The present invention consists of a portable incandescent gas-lamp having a gas-generator and adapted to consume the lighter kinds of hydrocarbons, the said hydrocarbons being first gasified, the gas formed then emitted in a fine jet into a tube open at both ends, into which it draws air after the manner of an injector, and, mixing therein with the said air, is ignited at the upper end of the tube, where it burns as an intense blue flame, sufficiently intense to bring the "Auer" filament to a white glow; and in order to make this specification more easily intelligible reference is had to the accompanying drawings, in which similar letters denote similar parts throughout the several views.

Figure 1 is a vertical section through a lamp constructed according to my invention, taken along the line A B in Fig. 2, which is a side elevation of the lamp seen from a position taken at right angles to that of Fig. 1. Fig. 3 is a horizontal section on the line C D in Fig. 1. Fig. 4 is a plan of the gas-retort and burner, and Fig. 5 an elevation of the complete lamp on reduced scale.

The reservoir *a* is provided with an inlet for the hydrocarbon, closed by means of a thumb-screw *a'*, and centrally mounted therein is a tube *f*, inclosing a somewhat large wick *h*, said tube, together with the wick, extending down nearly to the bottom of the reservoir and advantageously being closed at the bottom by a perforated cap, as shown at Fig. 1. A second tube *d* incloses this tube *f*, leaving an air-space around the said tube, as shown in Fig. 1, said outer tube closing tightly into the reservoir at its upper end and tightly around the inner tube at its lower end, so that the air is free to play around the inner tube along its whole length. The upper end of the said tube is enlarged at *k* to form a retort, in which the hydrocarbon fed thereto by the suction-wick *h* is gasified and may escape in a fine jet at *l* at the upper part of the said retort. The said retort extends laterally, Fig. 1, so that the body of the same lies over and above a second wick *n*, smaller than the first and carried in a tube *m*, extending to the bottom of the reservoir and also advantageously having a perforated cap at its lower end. The tube *m*, which carries the wick *n*, is arranged to slide in a sleeve *m'*, fixed in the cover of the reservoir, and may be adjusted—*i. e.*, raised or lowered—by means of the rod m^3, having screw-thread and operated by the micrometer-screw *g*, the tube *m* of the wick being rigidly connected to the rod m^3 by a band or strip of metal m^2. A flue or chimney *r* incloses the retort and the wick *n*, said chimney being mounted on two rods *e e*, on which it may be slid back by means of the handle or button *q* to enable the ignition of the wick *n*.

t is the tube into which the gas escaping at the nozzle *l* flows, said tube being supported on the tubular standards *s s*, the interior of which communicates with the interior of the reservoir at their lower ends and with the interior of the tube at the upper ends, thus forming the air inlet and outlet to the said reservoir.

The lamp is manipulated in the following manner: The chimney *r* is drawn back to leave the wick *n* free, and the latter is ignited and the chimney replaced. In about a minute or less the flame playing on the retort *k* will cause the vapors and hydrocarbon drawn up by the wick *h* to gasify, and gas at a pressure will escape at the nozzle *l*, entering the tube *t* and drawing air in with it after the manner of an injector. With this air it mixes intimately in the said tube, and on ignition at the upper end of the tube *t* will burn in an intense blue flame capable of bringing the Auer filament arranged above it to a white glow. The gasification can be regulated by regulating the position of the wick *n* by means of the screw *g*, and when the lamp is to be extinguished it is only necessary to turn down the wick *n* until the flame goes out. The rest of the gas present in the retort will then be burned and the upper flame will also go out. It is advisable that the flame of the wick *n* be not allowed to play directly onto the walls of the retort *k*, but just under the retort. The air-jacket around the tube *f* will prevent the heat of the same from being communicated

to the hydrocarbon in the reservoir, so that all danger of explosion is effectually precluded.

I claim as my invention—

The combination of a reservoir *a*, a suction-wick mounted therein, a tube *f* to support said suction-wick, an outer tube *d* around said tube *f* and inclosing the same at the bottom within the reservoir, said outer tube being fitted air-tight to the reservoir at its upper end, a laterally-extending retort *k* at the upper end of tube *f*, a nozzle at the top of said retort, a chimney *r* to inclose said retort, said chimney being mounted on bars *e* and laterally movable on the same, a smaller wick *n* having tube *m* and guide-sleeve *m'*, extending into the said chimney, a vertically-adjustable rod *g* rigidly affixed to said smaller wick-tube, an open tube *t* arranged above the said nozzle and supported on tubular standards communicating at their upper ends with the said tube and at their lower ends with the reservoir substantially as described and shown.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CONRAD SCHINZ.

Witnesses:
H. SCHLOSS,
G. SCHEUBER.