C. C. STANSELL.

Lamp.

No. 35,655. Patented June 17, 1862.

FIG. 1

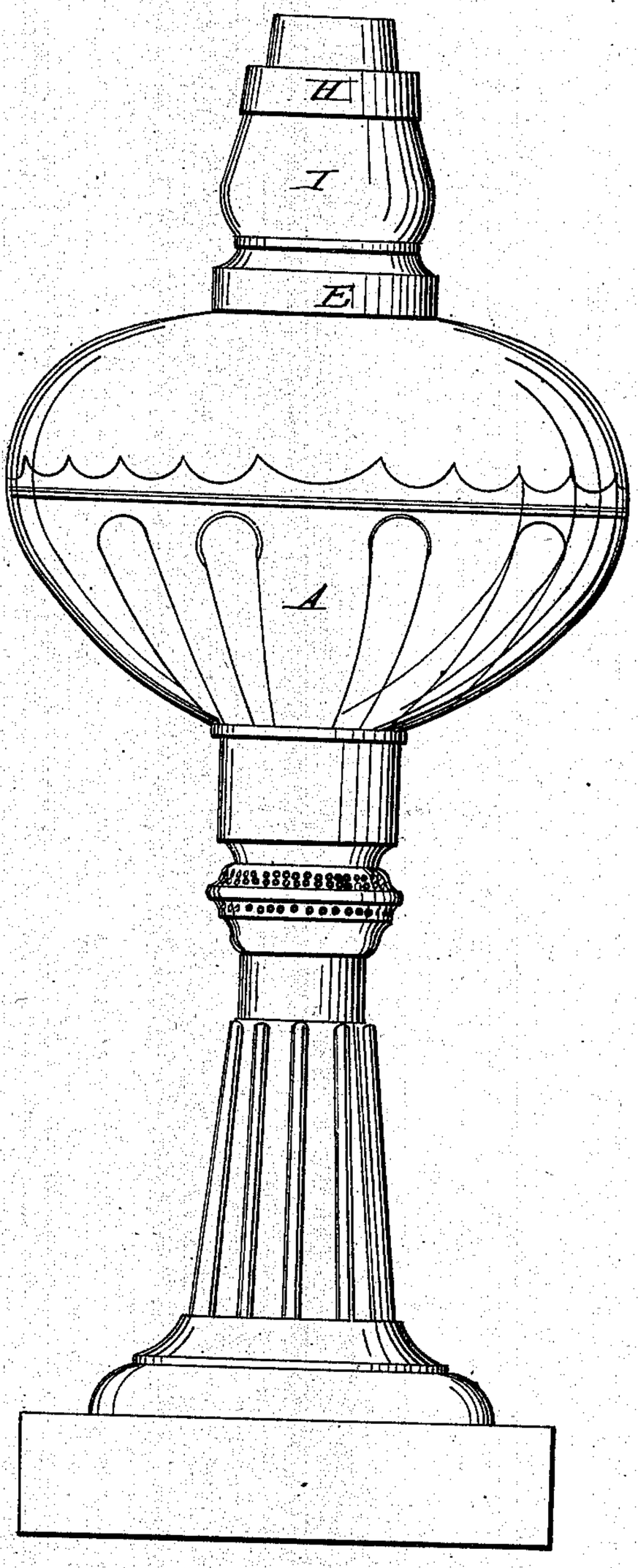
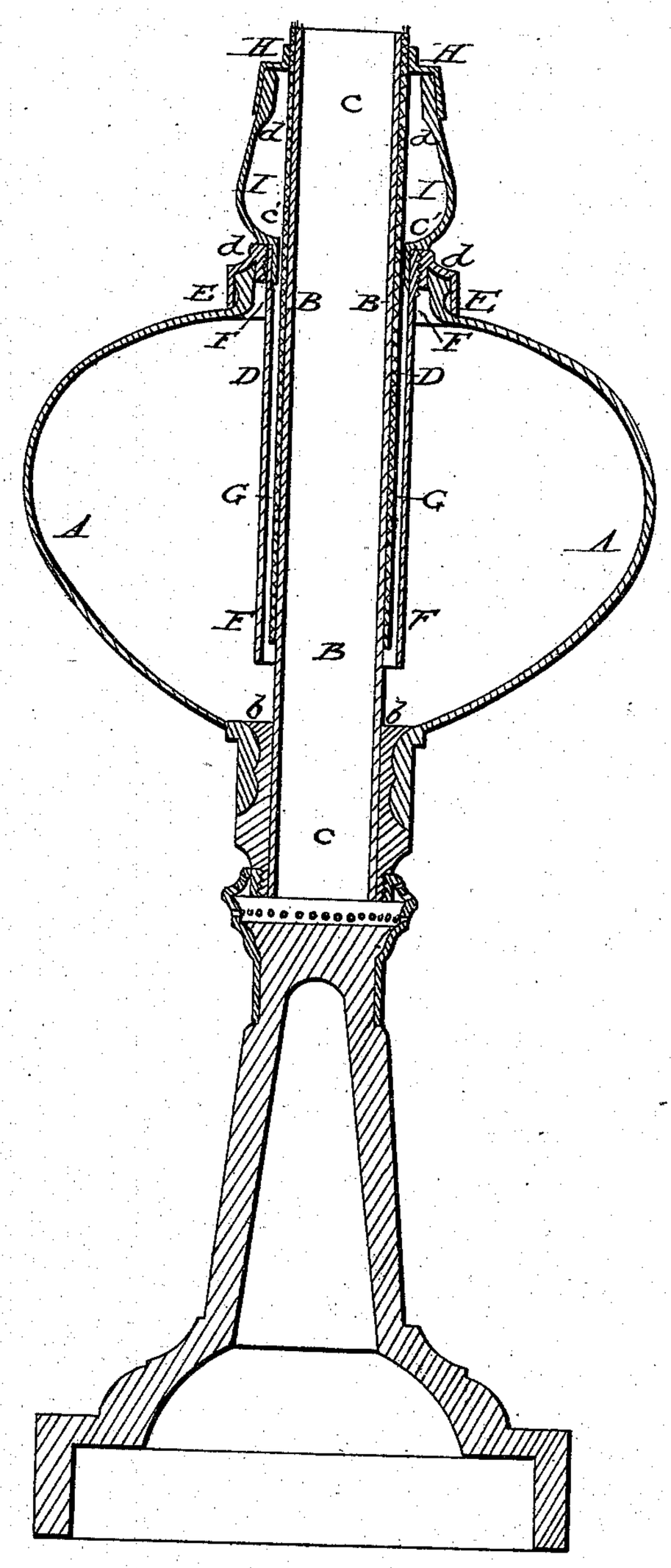


FIG. 2



UNITED STATES PATENT OFFICE.

CHARLES C. STANSELL, OF MIDDLEBOROUGH, ASSIGNOR TO HIMSELF, AND AARON W. ROCKWOOD, OF NEWTON, MASSACHUSETTS.

IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **35,655,** dated June 17, 1862.

To all whom it may concern:

Be it known that I, CHARLES C. STANSELL, a citizen of the United States of America, and a resident of Middleborough, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Lamps; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front elevation, and Fig. 2 a vertical section, of a lamp as constructed in accordance with my invention.

The said lamp is intended to burn coal-oil or other liquid rich in carbon.

The nature of my improvement consists in combining and arranging with the wick, the wick-tube, and the flame-adjuster of a lamp, in manner substantially as hereinafter described, a vapor interceptor and conduit, whereby the vapor generated by the heat of that part of the wick-tube which may extend within the oil-reservoir may be intercepted and conducted to the flame to be burned thereby; also, in combining and arranging with the flame-adjuster and the vapor interceptor and conduit, a heat-insulator, by which the heat of the flame-adjuster may be insulated more or less from the vapor-interceptor.

The peculiar object of my invention is to prevent the escape of hydrocarbon vapor through the neck or wick-tube opening at the top of a lamp-body when such body may contain a liquid hydrocarbon in the process of being elevated by a wick and burned at the top thereof.

In the drawings, A denotes a lamp which is furnished with a stationary cylindrical wick-tube, B, so applied to the lamp-body as to extend upward from the bottom of its oil-reservoir *b* and have an air-passage, *c*, leading through the stand of the lamp in a manner to supply the tube B with air for the flame of the wick. The said wick (shown at D) is to be tubular, and to surround and fit closely on and project upward to or above the top of the tube B, which should extend some considerable distance above the lamp-cap E. A female screw, *d*, is cut in the mouth of the cap E, and receives the tubular vapor-interceptor F, which is screwed into it. The vapor-interceptor is a tube having a bore whose diameter is somewhat larger than that of the external surface of the wick, in order that there may be an annular passage, G, between the said interceptor and the wick. The interceptor is to be continued upward, and to be surmounted by the flame-adjuster H, which is a short tube or annulus surrounding and fitting closely at its upper end to the outside cylindrical surface of the upper part of the wick.

The vapor-interceptor and the flame-adjuster may be made in one piece of metal or material; but I prefer to interpose between the lamp-body or the vapor-interceptor and the flame of the wick a material or substance which, while performing the functions of surrounding the wick and supporting the flame-adjuster, shall be a non-conductor of heat. Such portion of my invention I term a "heat insulator or interceptor," it being shown at I. It consists of a hollow vessel, made of glass, with a bulging or conical form, and provided with two open necks, *c' d'*, in order that it may be fitted or fixed to the tubes F and H. The said part I serves, also, as a vapor-reservoir. By laying hold of either of the said parts F H I, and twining it horizontally, so as to turn the part F, we may either elevate or depress the flame-adjuster H with reference to the top of the wick, and by so doing we may regulate the height of the flame.

As the wick-tube is in direct contact with the flame more or less heat from the latter will be conducted down such tube, and will be absorbed by the wick. This will cause much of the liquid which may be taken up by the wick to be vaporized, in which case the tube F, by surrounding the wick and extending into the fluid within the oil-reservoir, will intercept the vapor and conduct it up into the part I, from whence it will pass through the part H to the flame of the wick, where it will be consumed, and thus be made to aid in giving light. Were it not for the tube F and passage G, the said vapor by its tension would escape out of the mouth of the screw-cap, and by passing into the atmosphere surrounding the lamp would not only vitiate it, but impart to it a disagreeable odor.

The passage G enables the combustible vapor to pass freely upward within the tube F and gain uninterrupted access to the flame of the wick. By passing into the chamber of the

part I the vapor will have a chance to cool and condense more or less, and to flow back in a liquid state into the lamp.

It will thus be seen that the purpose of my improvement is to prevent the escape of vapor from the lamp, and thus avoid a difficulty incident more or less to most, if not all, the hydrocarbon burners or lamps heretofore in use.

The vapor-interceptor F and the part I may be made in one piece of glass, in which case they will operate better to so insulate the vapor-interceptor F and the lamp-body A from the flame of the wick as to prevent the latter from heating them so as to vaporize the liquid contents of the lamp-body.

I do not herein claim the flame-adjuster, nor a supporting-tube therefor, to encompass and fit closely to the wick and screw into the lamp-cap and extend down in the oil-reservoir; but

What I do claim as my present invention is as follows:

1. Combining and arranging with the wick the wick-tube B and the flame-adjuster H of a lamp, in the manner substantially as described, a vapor-interceptor, F, and conduit or passage G, the same being substantially as and for the purpose above explained.

2. Combining and arranging with the flame-adjuster and the vapor interceptor and conduit, as described, a heat-insulator or insulating vapor-reservoir, I, made of a material and so as to operate in manner and for the purpose substantially as specified.

C. C. STANSELL.

Witnesses:
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F. P. HALE, Jr.