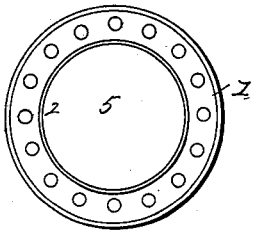
2 Sheets—Sheet 1.

W. H. STARR.

Compound Capillary Burner.

No. 4,561. Patented June 6, 1846.



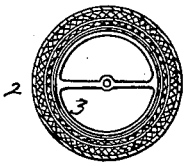


Fig. 1

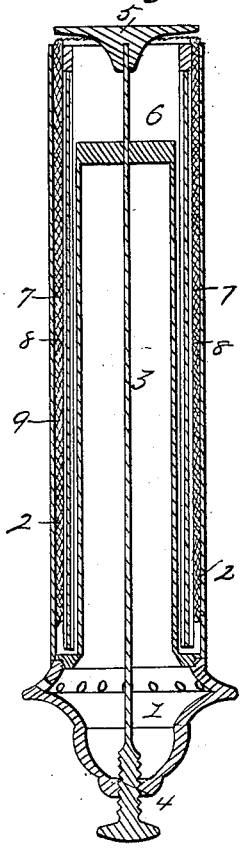
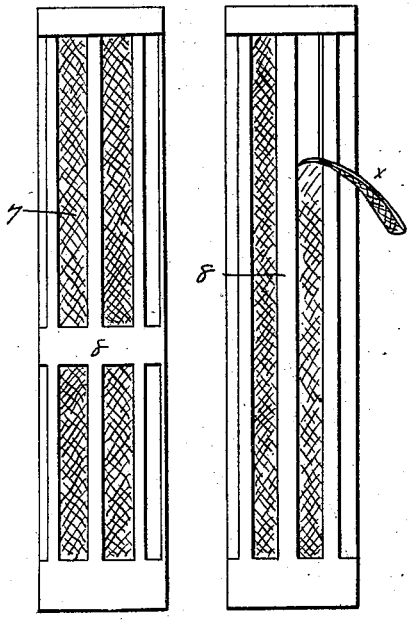


Fig. 2, Fig. 3,



Witnesses:
T. Mckeman.
W. Serrell

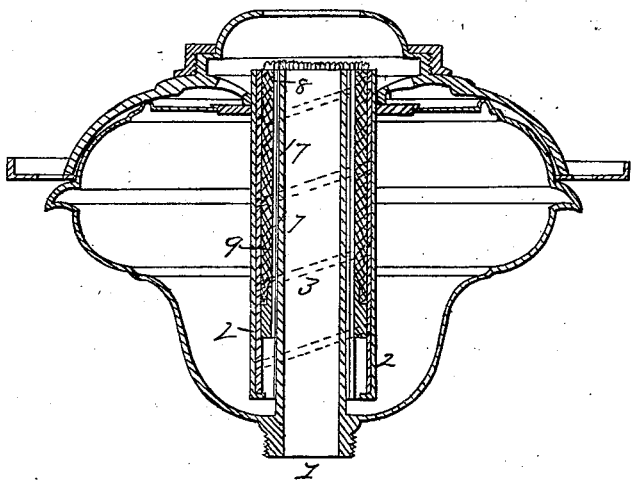
Inventor.
Wm. H. Starr

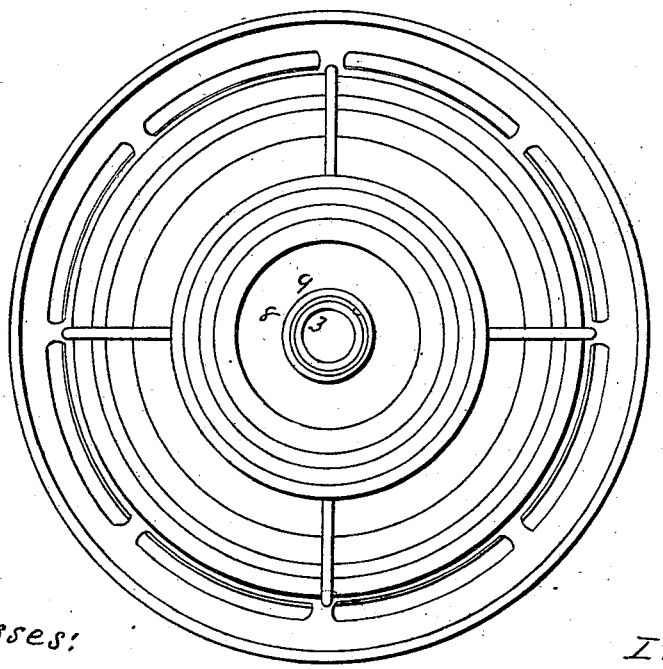
2 Sheets—Sheet 2.

W. H. STARR.

Compound Capillary Burner.

No. 4,561. Patented June 6, 1846.





Witnesses:
T. Wakeman
W. Sewell

Inventor
Wm. H. Starr

UNITED STATES PATENT OFFICE.

WM. H. STARR, OF NEW YORK, N. Y.

LAMP.

Specification of Letters Patent No. 4,561, dated June 6, 1846.

To all whom it may concern:

Be it known that I, WILLIAM H. STARR, of the city, county, and State of New York, lamp manufacturer, have invented and made and applied to use certain new and useful improvements in the construction and arrangement of that portion of lamp-burners connected with the supply of liquid or oleaginous combustible matter to the wick by the application of an intermediary fixed wick behind the combustible matter and the movable, or burning wick, so that the intermediary wick may operate as a compound of fixed capillaries to convey the liquid or oleaginous combustible matter to the burning wick when the surface of the liquid has descended below the lower end of the burning wick by the progressive consumption of either the liquid or the wick, or both combined, which improvements I designate collectively as "Starr's Compound Capillary Burner," and for which I seek Letters Patent of the United States, and that the said improvements and the mode of constructing and arranging the same and the results attained thereby are fully and substantially set forth and shown in the following description and in the drawings annexed to and making part of this specification, wherein—

Figure 1, Sheet 1, is a vertical section of a medium sized complete burner, fitted with my improvements, surmounted by a plan thereof; Fig. 2 is a vertical elevation of the parts added by me, having above a plan, taken through the operating parts at any portion of the light. The separate figures in Sheet 2 exhibit a plan and vertical section of a solar lamp with my improvements in place, as in use, and the same marks of reference, used herein, apply to the like parts, in all these figures.

1, is the air cup piece, 2, the exterior cylinder, screwed on, having the interior air cylinder 3, regulating screw 4, and button 5, all made, thus far, nearly in the usual way, but instead of placing the burner wick on the air cylinder or adopting any other usual mode, a slide cylinder 6, is placed around the air cylinder 3, and outside this slide cylinder 6, a fixed wick 7, is made to fit, moderately tight, and is inclosed within a perforated cylinder 8, shown in Fig 2, as made with longitudinal ribs, forming vertical openings, or perforations, by which parts of the exterior and burning wick 9, come in contact with the interior and fixed wick 7. When thus made and in place for use, the operations and effects of these parts are that while any portion of the liquid or oleaginous and combustible matter is in contact with the lower portion of the fixed wick 7, that serves as a compound of fixed capillaries, by which the combustible matter will ascend, and wherever the burning wick 9, is in contact with the capillary wick 7, by the perforations in the cylinder 8, the ascending matter will transfer itself from the one to the other and thus maintain a supply to the burning wick that will support a full and continuous light, even though the matter of combustion shall become many inches below the burning wick by the progressive consumption of either, or both, the wick and matter, as the burning wick may be progressively slidden up to the last by any usual means, and will continue to burn while any part of that and the supply of combustible matter remains within the contact of the capillary wick 7. A variation from the above mode will obtain nearly the same effect by making the capillary wicks in strips +, introduced between the air cylinder and a set of longitudinal ribs, as shown in the auxiliary Fig. 3, where one wick is drawn partly out of place, to show the intended variations. Another mode, tried by me, has been to introduce the burner wick in the air cylinder, but within an exterior capillary wick, on, or inside, or both inside and outside, of an exterior perforated capillary wick cylinder, but I do not approve, or recommend, this latter mode of fitting a lamp burner of my hind.

I do not claim to have invented a new lamp, nor do I claim to have invented any of the parts herein described, nor any exclusive use thereof, irrespective of the manner in which I have constructively combined them for these purposes; but

I do claim as new, and of my own invention, and desire to secure by Letters Patent,

The constructing lamp burners, as shown in Figs. 1, and 2, with the slide cylinders 6, and perforated cylinder 8, to carry the fixed intermediary capillary wick 7, between them, so that these three parts act in combi-

nation to maintain a continuous supply of combustible matter to the burning wick 9, including the variation shown in Fig. 3, and otherwise, substantially as herein described and shown.

In witness whereof I have hereunto set my hand in the city of New York, this twenty-ninth day of April, One thousand eight hundred and forty-four.

WM. H. STARR [L.S.]

Witnesses:
W. SERRELL,
SAMUEL W. SERRELL.