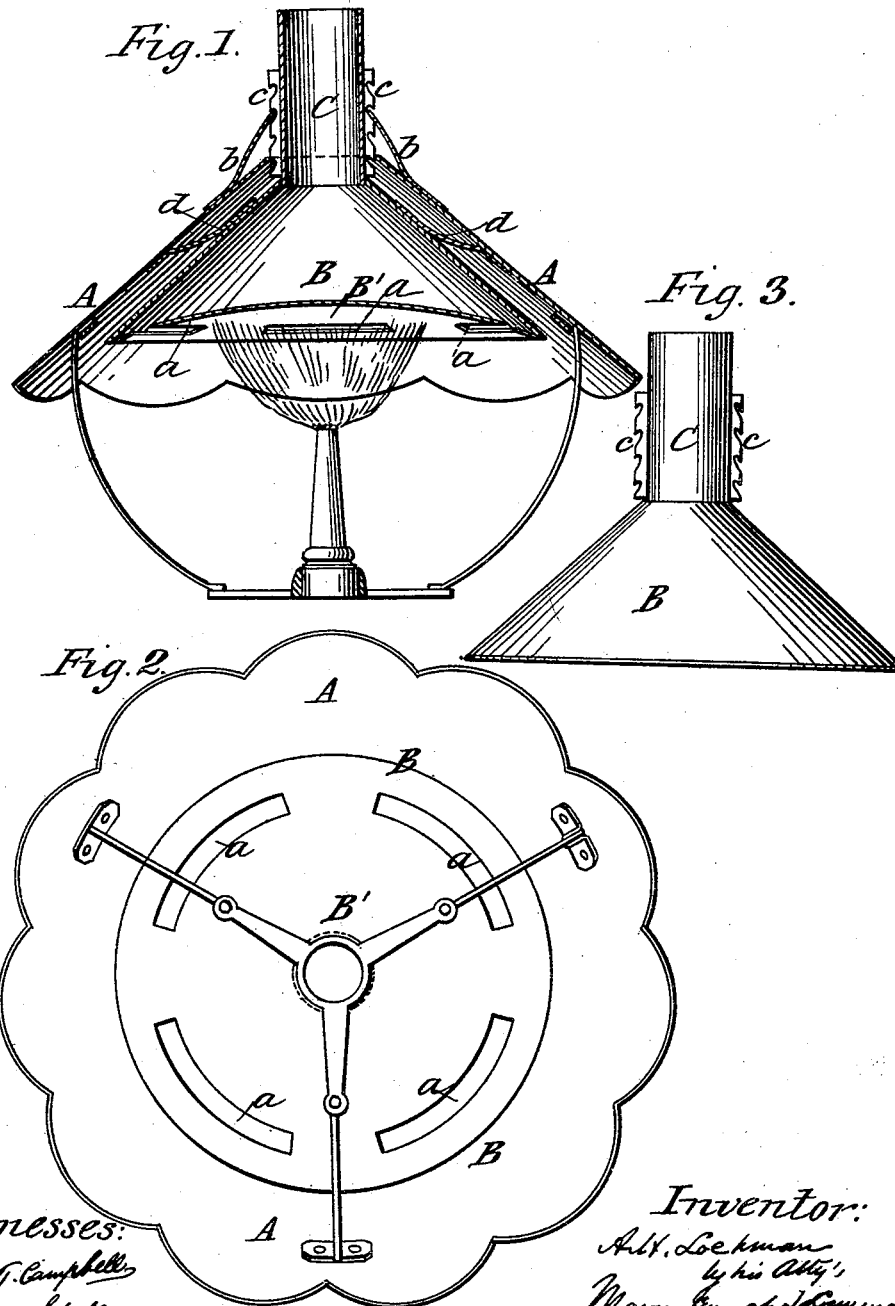


A. H. LOCHMAN.

Heating Shades for Gas Burners and Lamps.

No. 53,456.

Patented March 27, 1866.



Witnesses:

A. T. Campbell,  
Edmund Schaffer

Inventor:

A. H. Lochman  
by his Atty,  
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# UNITED STATES PATENT OFFICE.

AUGUSTUS H. LOCHMAN, OF YORK, PENNSYLVANIA.

## HEATING-SHADE FOR GAS-BURNERS AND LAMPS.

Specification forming part of Letters Patent No. 53,456, dated March 27, 1866.

### *To all whom it may concern:*

Be it known that I, A. H. LOCHMAN, of York, in the county of York and State of Pennsylvania, have invented a new and useful Improved Combined Gas or Lamp Shade and Heater; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section through my improved shade applied to a gas-burner. Fig. 2 is a bottom view of the shade. Fig. 3 is an external view of the heater removed from the shade.

Similar letters of reference indicate corresponding parts in the three figures.

The nature of my invention consists in a hollow chamber with a reflecting-bottom and with circulating-passages for hot air through it applied within a lamp, gas, or other similar shade or hood in such manner that the flame of a gas-burner or a lamp or other apparatus is concentrated, and, while the light is reflected upon objects in close proximity to and immediately upon them, the heat of the flame, which is usually diffused throughout the room, is also retained within the shade or hood and made to heat air for promoting combustion and for warming purposes at or near where the apparatus is located.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawings, A represents a conical shade, which may be made of metal or other suitable material and ornamented in any desirable manner. Within this shade A is placed a conical box, B, terminating at its upper end or apex in a chimney, C, and having a concave plate, B', for its bottom, which plate is perforated at *a a*, as shown in Figs. 1 and 2. This conical box is secured within the shade A by means of spring-catches *b b*, which are attached outside of the shade in such position that their upper ends catch into the teeth of two vertical racks, *c c*, that are formed on or applied to the chimney C, as shown in the drawings.

A number of teeth are made upon the chimney C diametrically opposite each other, so that the conical box B can be adjusted up or down and set at any desired point, or by re-

leasing the chimney from said spring-catches the conical box can be detached from the shade, to admit of the parts being easily cleaned.

Spring-fingers *d d* may be secured to the inside of the shade A, as shown in Fig. 1, for the purpose of centering the cone therein and keeping it steady.

It is obvious that a variety of devices may be employed for connecting the shade and cone together, so that the latter can be elevated or depressed, and therefore I do not confine my invention to the contrivances which I have described for this purpose; nor do I confine my invention to the particular shape of the inside cone, B, nor to the shade A, as the form of these parts may be varied without departing from the principle of my invention.

The shade A may be attached to a gas or lamp burner by the usual form of support shown in the drawings, or in any other suitable manner.

The inside cone, B, is intended to serve as a heater, and also as a reflector. Its concave bottom will radiate heat and light if the surface is kept bright, and the air which passes upward through the shade will become highly heated by contact with the heated surfaces of the shade and inside cone. Air will also pass up, through the perforations *a a*, through the cone bottom and become heated, and then escape through the chimney C. In this way considerable heat is radiated from the shade, and, while it serves as a shade and reflector, it also serves as a heater.

The operation is as follows: The reflector and radiator, becoming heated, throws light and heat downward. The air about the flame, being heated and ascending through the passages *a a*, causes a rush of fresh oxygen about the base of the flame of the burners, and thus a freer and more perfect combustion is secured. The passage of the heated air through the chamber B causes it to be highly heated, and a large proportion of the heat imparted to the metal of chamber B will be radiated to the shade or hood A, and it will in turn become heated. There is also a column of warm air continually rushing through the channel formed between the devices A and B, and this partially-heated air, which has been circulating about the flame and finally has found

this channel, is heated still more by contact with the heated surfaces of the devices A and B. The air which escapes from the channel and from the chamber B, being very hot, passes into the room and heats the same at the point where the apparatus is located much more effectively than any other part of the room is heated.

The advantages are—

First, in addition to the increased light, an increase of heat in the room when the furnace or stove is insufficient.

Second, it will answer for heating comfortably warm a small chamber.

Third, in time of sickness a ready and convenient means for heating a certain portion of the room is afforded by it.

Fourth, in rooms where it is not convenient to have a fire, sufficient heat for dressing or

undressing comfortably by will be immediately at hand by lighting the lamp or gas.

Fifth, and finally, it will render clerks located at desks some distance from the main stove or fire quite comfortable in very cold weather.

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

1. The combination of a fixed or adjustable heater, B, with a gas or lamp shade, A, substantially as described.

2. The construction of the hollow heater B B' a C, substantially as and for the purpose set forth.

AUGUSTUS H. LOCHMAN.

Witnesses:

GEORGE M. SHETLER,  
JACOB H. SHETLER.