

(No Model.)

F. RHIND.
NO-CHIMNEY BURNER.

No. 559,947.

Patented May 12, 1896.

Fig. 1.

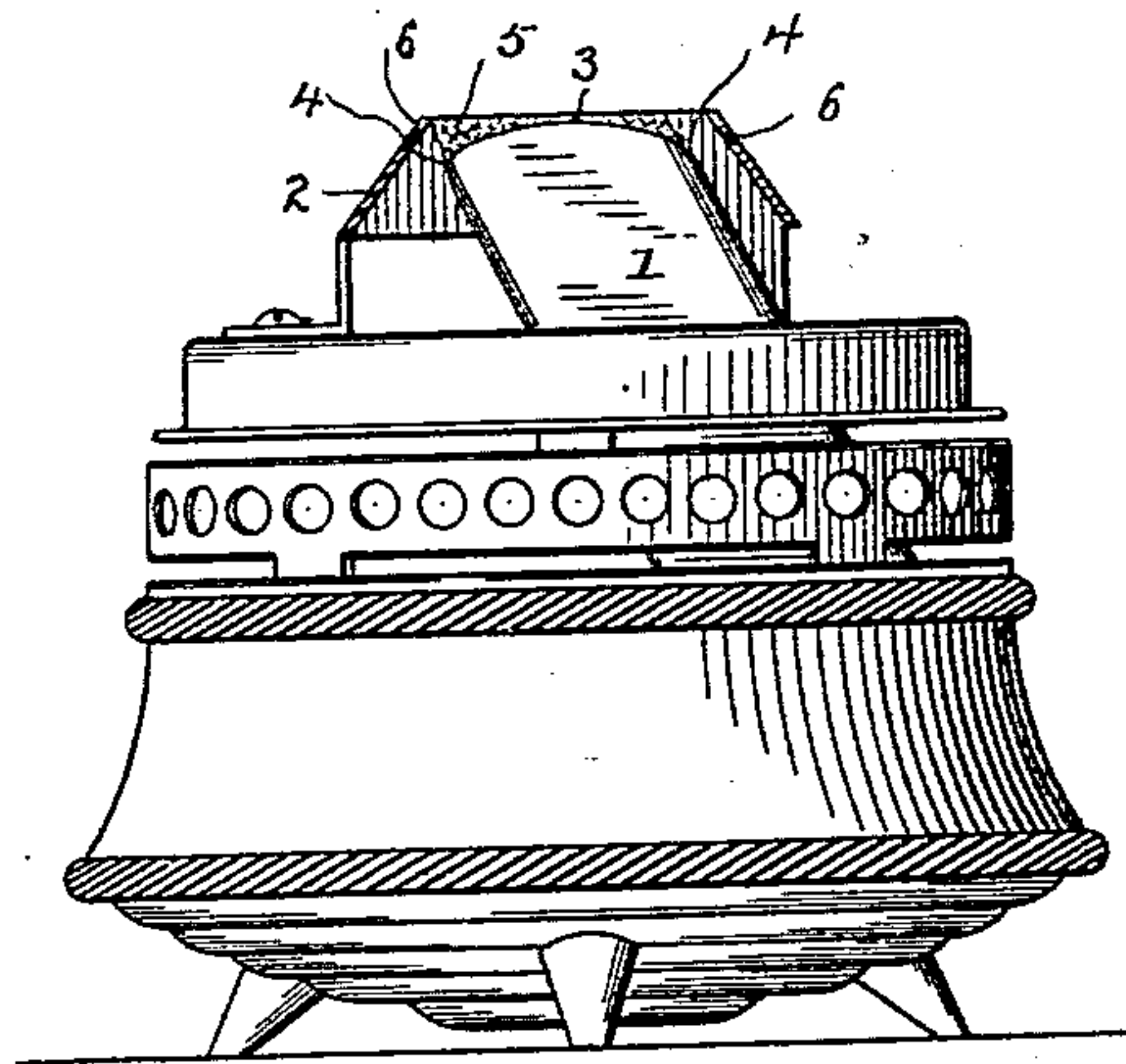


Fig. 2.

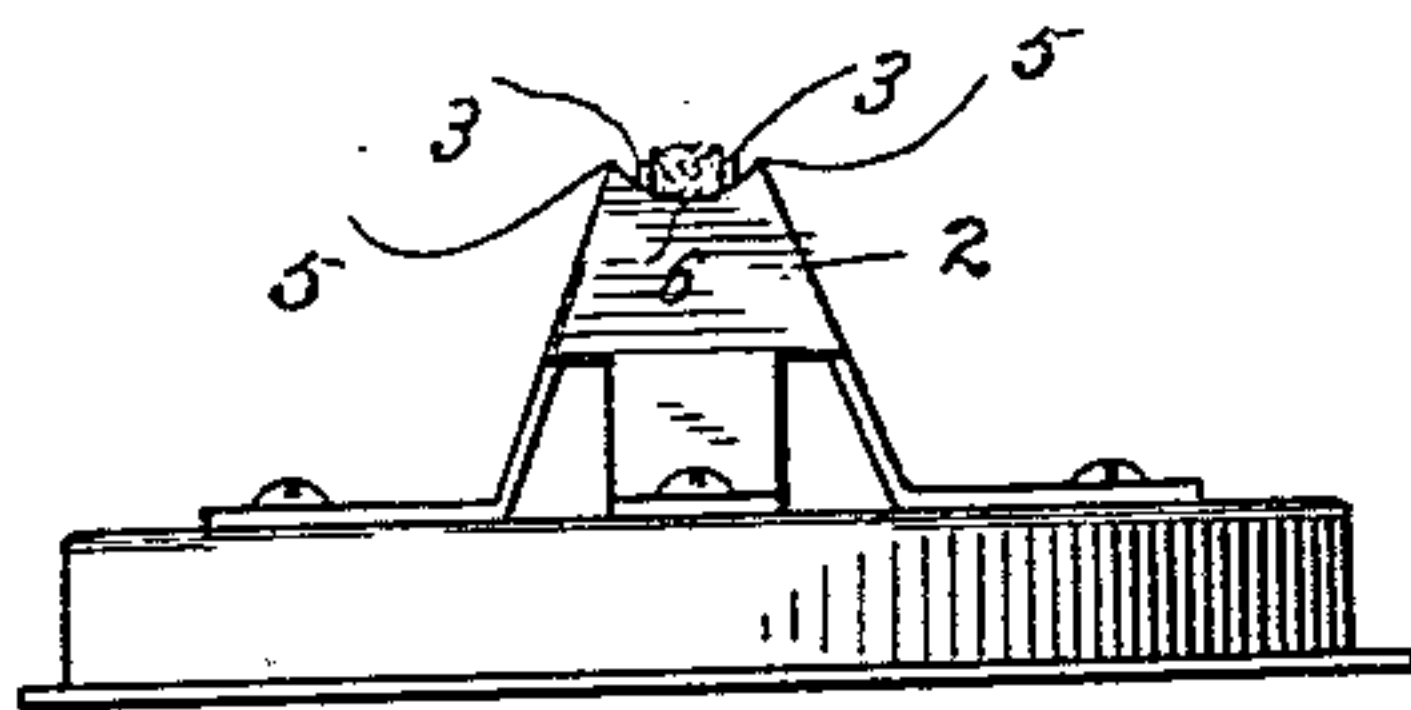
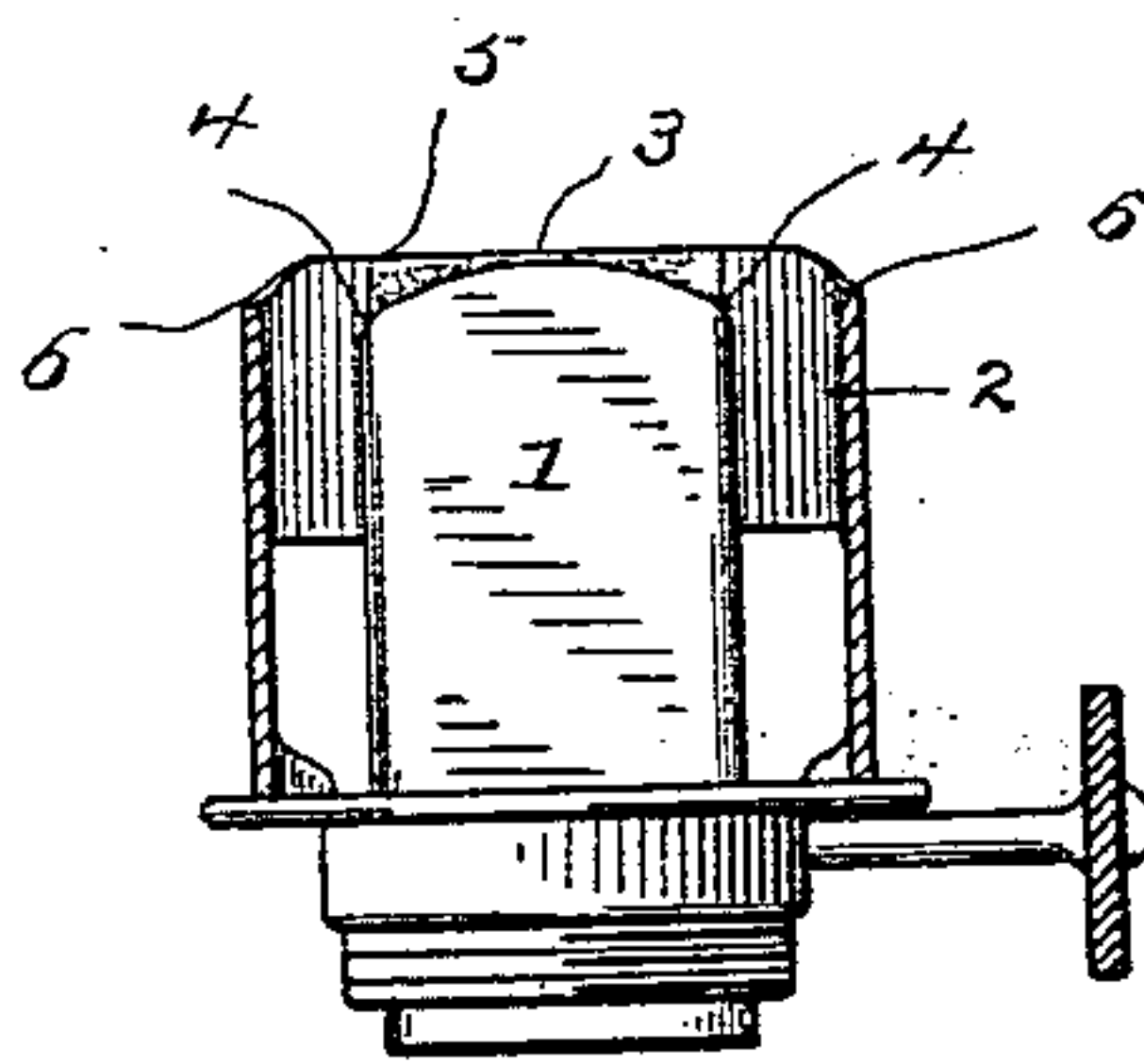


Fig. 3.



WITNESSES

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FRANK RHIND, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRIDGEPORT BRASS COMPANY, OF SAME PLACE.

NO-CHIMNEY BURNER.

SPECIFICATION forming part of Letters Patent No. 559,947, dated May 12, 1896.

Application filed May 31, 1895. Serial No. 551,044. (No model.)

To all whom it may concern:

Be it known that I, FRANK RHIND, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in No-Chimney Burners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to no-chimney burners, and has for its object to provide a construction of wick-tube which will prevent the flame from running to a point at the center, and a construction of deflector to act in connection therewith, and which will also serve as a guide in trimming. It is of course well understood that in burners having a chimney the shape of the flame is to a great extent determined by the shape of the deflector, or, as it is frequently called, the "dome." In a no-chimney burner, however, entirely different conditions exist. Combustion is partially supported by outside air, the tendency of which, moving as it does from all directions, is to point the flame—that is, make it run to a point at the center—and of course causing the flame to smoke. The deflector in a no-chimney burner counteracts this effect to a limited extent. It also acts to a limited extent to prevent the flame from spreading when exposed to drafts. The deflector, however, in a no-chimney burner by no means accomplishes the result that is accomplished in the other class of burners by a deflector in connection with a chimney. The only way in which it has been possible heretofore to modify the shape of the flame in no-chimney burners has been by giving to the top of the wick a concave form—that is, trimming it so that it is lowest at the center, leaving the ends highest. My present improvement enables me to provide a no-chimney burner which will wholly prevent the flame from running to a point at the center by exposing more of the wick at the ends than at the center, which will require no trimming of the

wick but a straight cut, and which will provide a guide for making the cut.

With these ends in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to designate the several parts.

Figure 1 is a side elevation, partly in section, illustrating the application of my invention to a bicycle-lantern having an inclined wick-tube; Fig. 2, a side elevation corresponding therewith; and Fig. 3 is a view corresponding with Fig. 1, illustrating the application of my novel invention to an ordinary no-chimney burner.

1 denotes the wick-tube, and 2 an air-deflector. The novel feature of the wick-tube is that it is made highest at the sides, as at 3, and lowest at the ends, as at 4, thus protecting the wick at the sides and leaving it exposed at the ends, so that when the wick is trimmed straight across the flame will tend to run up at the ends and will frequently be depressed slightly at the center, the tendency to run up at the center being wholly overcome.

In practice the sides of the wick-tube are preferably curved from end to end, as shown in Figs. 1 and 3. In connection with this form of wick-tube I make the top of the deflector straight across, as at 5. By that I mean that the line of the top of the deflector is parallel to the plane of the burner, so as to form a perfect guide in trimming the wick, it being simply necessary to cut the wick straight across the top of the deflector. I also preferably make the ends of the deflector lower than the sides, as at 6, so as to permit air to pass inward freely to support combustion at the ends of the wick.

Having thus described my invention, I claim—

1. In a no-chimney burner the combination with a wick-tube whose sides at the top are curved so as to expose more wick at the ends than at the center, of an air-deflector acting as and for the purpose set forth whose sides at the top are straight so as to form a guide in trimming whereby a flame higher at the

ends than at the center is produced from a wick cut straight across.

2. In a no-chimney burner the combination with a wick-tube whose sides at the top are
5 curved so as to expose more wick at the ends than at the center, of an air-deflector acting as and for the purpose set forth whose sides at the top are straight so as to form a guide in trimming and whose ends are lower than

the sides for the purpose set forth, whereby is a flame higher at the ends than at the center is produced from a wick cut straight across.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK RHIND.

Witnesses:

A. M. WOOSTER,

S. V. RICHARDSON.