

The Adams & Westlake Company

CHICAGO

General Office and Works
ELKHART, INDIANA

NEW YORK



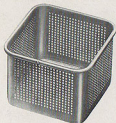
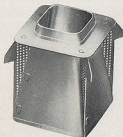
ADLAKE
SQUARE TOP VENTILATION

Adlake Square Top Ventilation and Wind-Proof Door

The Adlake Square Top Ventilation embodies all of the advantages hitherto found in the Adlake Non-Sweating Balanced Draught Ventilation, and is simply a refinement of a correct basic principle. In describing the new equipment, the old terms "cone" and "perforated cylinder" will be retained, although these parts are now square instead of circular.

It will be seen in the illustration that fresh air to be burned enters the lamp at the top, and is drawn down following the outer wall of the cone, passing through the perforated cylinder into the body of the lamp. This air passes out against the inner surface of the lenses while still at nearly the same temperature as the air outside the lamp, then over the burner, and passes out as heated air up through the cone, being mixed when it leaves the lamp with cold air drawn through the small openings in the top of the lamp.

The square construction of the cone and perforated cylinder and the diagonal baffle plates attached to the cone in each of the four corners prevent any whirling action of air entering the lamp, and as no perforations are provided in the corners of the perforated cylinder, it is impossible for any excess air pressure to enter, except as it is deflected by the cone to the proper direction. This method of balanced draught insures a steady flow of fresh air into the lamp, and the ready escape of the heated or used air prevents sweating and gives perfect combustion. Maximum candle power of the burner flame is insured, and dimming of signals through fogging or frosting of lenses is prevented.



Adlake Wind-Proof Door

In order to be **wind-proof**, whenever the door is closed it must be **closed**.

(Note) In these four cross sections, the door is white and the lamp body shaded.

Top Construction

As will be seen from the cross section of the top construction of the wind-proof door, to enter the lamp body at this point, air would have to pass under the lip on the inside of the door, up between the door and the lamp body, and down between the door and the lamp body, making four changes of direction. All of these joints are tight enough to prevent even seepage of air.

Side Construction

A spring brass angle bears against the side of the door, making it necessary for air entering the lamp to pass the knife edge of the brass strip, turn around the edge of the door, back past the flange of the lamp body, and then into the lamp, making three changes of direction.

Bottom Construction

Two constructions are necessary for the bottom, one for semaphore lamps, where, in order to enter the lamp air would have to pass between the strip on the door and the lamp body, down between the door and the lamp body, and up between the door and the lamp body, making four changes of direction; the other for classification lamp construction, where there is a lens in the door, air, to enter the lamp body at this point, would have to pass up between the door and the lamp body, and down between the door and lamp body, making three changes of direction.

These constructions are all so designed that they will maintain their wind-proof qualities throughout the life of the lamp.



Top Construction



Side Construction

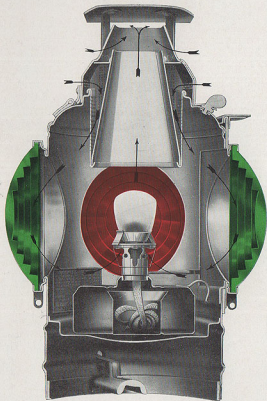


Bottom Construction
—Semaphore



Bottom Construction
—Marker or Switch

Adlake Square Top Ventilation can be furnished on signal lamps for all classes of service.



This balancing of air currents would be impossible should the lamp body leak at any point, and to prevent such interruptions of the air currents, a wind-proof door has been devised. Reference to the small illustrations on page four will make perfectly clear how this is accomplished.