APPLICATION OF NATURAL VENTILATION

Factory or industrial buildings are usually ventilated by natural forces, and most commonly by means of windows arranged in side walls and monitors of some form. The vast amount of openings made available by operative windows gives opportunity for unbelievably large air flow, even with forces of slight intensity.

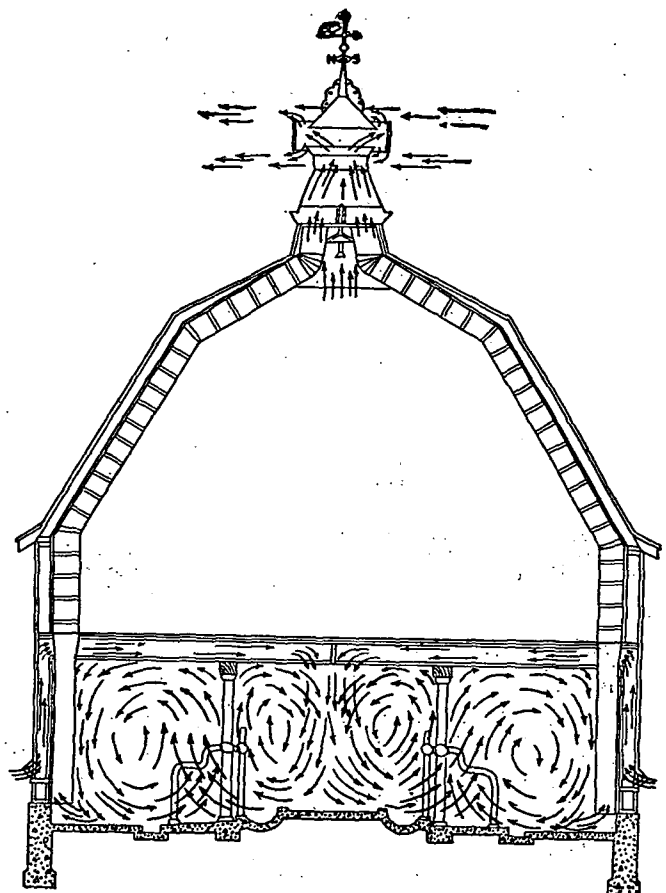

FIG. 12. ACTUAL AIR CIRCULATION AS DETERMINED BY VENTILATION INDICATOR

Roof ventilators are found on buildings of all kinds, particularly where fumes and gases are produced.

Dwelling houses are almost always ventilated by natural means, sometimes by roof ventilators, but more often by windows. In colder weather, practically the only ventilation in houses is by infiltration.

CHAPTER XXXIV

REPORTS, CODES AND STANDARDS OF THE A. S. H. & V. E.

(1) FLANGED FITTINGS

Standards for Flanged Fittings and Flanges, presented at annual meeting, January 1912. See A. S. H. & V. E. TRANSACTIONS, Vol. XVIII, p. 44.

(2) USE OF THE ANEMOMETER

Standards for Measuring Air Velocities at Air Supply Openings by means of the Anemometer, presented at annual meeting, January 1913. See A. S. H. & V. E. TRANSACTIONS, Vol. XIX, p. 202. (Not adopted). The following is a synopsis of this report:

Opening shall be divided into twelve equal squares or at least into equal squares not over 10 x 10 in. One-half minute readings shall be taken at the center of each square.

If the anemometer is held against the face of a register or the periphery of diffusers the volume of air shall be gotten by multiplying the average of the velocities by the net area through the grille or diffusers. If the anemometer is held 2 in. away from the face of the grille or diffusers no deduction shall be made for the area occupied by the material of the grille or diffuser.

(3) USE OF THE PITOT TUBE

Code for the use of the Pitot Tube, presented at annual meeting, January 1914. See A. S. H. & V. E. TRANSACTIONS, Vol. XX, p. 211. Adopted, January 1914. The following is a synopsis of this Code.

Pressure readings of 1 in. or less should be taken on an inclined tube type differential draft gage, graduated to at least hundreths of an inch, calibrated by a hook gage. Readings over 1 in. should be taken either with an Ellison type gage or with a U-tube graduated to at least tenths of an inch. Great care should be taken to have perfectly tight connections, especially on the static side.

The reading should be taken at a cross-section where the pipe is straight and the flow undisturbed. This should be preferably at least 10 diameters from the fan outlet, from an elbow, or from a change in cross-section in the duct.

The readings should be taken over a plane at right angles to, and the tube should be pointed in a direction parallel to, the direction of the air-flow.

In making a traverse of a rectangular duct the cross-sectional area may be divided into a number of smaller rectangles, and a reading taken in the center of each small rectangle.

A round pipe should be divided into at least three concentric zones of equal area per foot in diameter, and four readings taken on a circle drawn through the center of area of each zone or ring. That is, readings should be taken across the horizontal and vertical axis of the pipe.