

of amount of air to be introduced is rather greater than that recommended in the text of the King system, which means that for flues of the size recommended, a cold, still weather will favor the King system, and a hot, windy weather will favor the other systems. The amount of air to be introduced will vary with the temperature, the humidity, and other conditions, but the following figures are suggested.

Area of Outtake Flue, per Animal

If the outside temperature is 10° or below zero

	Square Feet		
	10° or below zero	10° to 20° below zero	20° or above zero
Horse	12	10	10
Cow	12	10	18
Pig	12	10	10
Sheep	8	6	10

These figures provide ample area for still weather conditions and where the temperature is 15 or 20 degrees F. above zero. Under these conditions we have a slower movement of air than when it is colder and more windy. This means that the flue area must be greatly reduced in windy and extremely cold weather.

Frosting of
in-take
openings.

A slight objection to the King system of intakes is, that the air rising through the flues makes the inside walls very cold, and in the coldest weather the moisture in the stable forms a thick layer of frost, or even ice sometimes, on the wall at these points, and then runs down the wall at the next rise in temperature if not kept scraped off. This trouble will occur, to some extent, around any intake openings in the coldest weather. In the case of the King inlets it can be largely overcome by making a dead air space between the intake studding as shown at 1, fig. 1.

FURTHER SUGGESTIONS

Flue
Regulation.

With any system of ventilation, all the intake openings should be practically closed in cold weather rather than to entirely shut off some of them, except when the wind is blowing strongly against one side of the barn, in which case the intakes should be almost closed or entirely closed. A test of intake flues in windy weather will show nearly all, if not all, of the fresh air coming in on the windward side of the barn and none coming in on the opposite. But if the intake flue openings on the windward side are cut down, fresh air will be drawn in on