

All methods of removing foul air, though they may differ in detail, are identical in principle with the foregoing. In large city buildings and in schools of the more modern type, the flue is heated by means of a steam-pipe situated at its base, or, instead of the coil, a small coal-heater, called the auxiliary. The important thing to emphasize here is the principle by the operation of which a draft from a room is continually kept up. Knowing the principle, anyone interested can work out his own details; for each house, especially one that is already built, is a separate and distinct problem, the requirements of which could not be anticipated by even the fullest details.

One method whereby, in the absence of the chimney flue, the latter may be successfully imitated, is given in the accompanying illustration, Fig. 15. In this case, it is supposed that the house is a two-story one, and that the chimney comes down only a short distance below the ceiling of the second story. The opening in the chimney is enlarged so as to admit a jacket for the stove pipe, much larger than the enclosed pipe. The jacket may be extended, as in the illustration, to the ceiling of the room below, and may thus be used to ventilate both rooms.

SUMMARY.

All plans of ventilation, to be effective and satisfactory, should possess in a greater or less degree, the following properties:

1. A motive force, by means of which the air is introduced and withdrawn.
2. A means of tempering the air before it enters the room.
3. A means of distributing the air uniformly over the space where it is required, and avoiding drafts and strong currents.
4. Sufficient provision for drawing off the foul air.
5. Automatic action.

The combination of all these properties, in the right degree, makes perfect ventilation, and no ventilation is perfect without this combination. Yet without all of these, very satisfactory ventilation may be had. If the external force is dispensed with, such a force as is represented in Figs. 9 and 11, there is still the heat from the bodies and the warm air from the lungs keeping up a constant upward motion of the air. If it is impossible to distribute the air as uniformly as seems desirable, then let the distribution be as good as possible, and it will be a long way ahead of no ventilation at all. If the plan cannot be made automatic, then it simply means more or less constant attention, and the time thus spent will be well spent.

With the preceding plans of ventilation, and the accompanying comments and instructions, the stockmen or householder may choose for himself, whether he wants the best and is prepared to pay for it, whether he will be satisfied with a fairly good system that yet has some disadvantage, or whether he will be content with an apology for ventilation, or with none at all.