

exhaled by the sleeper being respired. Again, it is a common error to suppose, that by simply opening a window a little at the top a room can be ventilated. People forget that for proper ventilation there must be an inlet and an outlet for the air. In bed-rooms there is often neither, and if there is a fire-place it is generally closed up. Again, it is a mistake to suppose that foul air goes to the top of a room. Certainly the heated air goes to the top, but the chief impurity, the carbonic acid, falls to the bottom. There is nothing so efficacious in removing the lower strata of air as the ordinary open fire-place, especially if there is a fire burning. The usual defect in ventilation is the want of a proper inlet for the air. If the window be open the cold air being heavier pours down into the room, causing draughts; if the door be open, or ajar, the same thing occurs. The perfection of ventilation may be obtained in any room with a fire-place by simply providing proper inlets for the air, and nothing answers so well for the purpose as the upright tubes invented by Mr. Tobin. By this means the heavier external atmosphere ascends veridically through the tubes like the jet of a fountain, displacing the warmer and lighter atmosphere of the room, which finds its exit up the chimney. The tubes should communicate with the outer air on a level with the floor, and should be carried veridically upward in the room about four or five feet. A constant supply of fresh air is thus ensured without the slightest liability to draught, as the current goes directly upward until it strikes the ceiling. It is then diffused downwards, mixing with the heated air of the ceiling. The same principle can be carried out in any room with a sash window, by cutting out two or three holes an inch wide and three inches long in the woodwork of the upper sash where it joins the lower one. The columns of air ascend directly upwards, just inside of the window, and mix with the heated air in the upper part of the room. If this system were universally carried out, we should hear less of rheumatism and chills caught by sitting in the draughts.

9. Persons should cultivate the faculty of detecting sewer gas in houses. Typhoid fever is often caused by the escape of this gas into the house through defect of the traps and drains. However bad the drains may be outside the house, there is little to fear, provided the gas can escape externally. The following two very simple precautions would naturally diminish the cases of typhoid fever: first, every main drain should have a ventilating pipe carried from it, directly outside the house to the top of the highest chimney; secondly, the soil pipe inside the house should be carried up through the roof, and be open at the top.

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THE CAUSE OF GOITRE.—Dr. Lombard, of Geneva, believes that the cause of goitre is a plethora of carbon, produced by the rarity of the oxygen in elevated regions. A sojourn on the shores of the sea corrects the affection by the greater abundance of oxygen, and by the iodine, which absorbs the carbon.