

## The Hygiene of the Home.

By A. J. BACON.

(Continued from p. 166.)

### III. (PART 2).—ITS NEED OF VENTILATION—THE REMEDY.

Although what has been said has only had reference directly to our typical sitting-room of the last article, it must not be lost sight of that every room in the house is really only an *air tank* and also requires treatment upon the same lines. In the bedrooms we need not be much concerned about the luminant, and outlet and inlet can therefore be much smaller in area, but it must not be forgotten that here the temperature of the escaping air is far lower, because there is no fire; that in most cases the shaft is lower, and that hence the velocity in the flue will also be less. An opening of 3 in. by 9 in. will, however, suffice. To make a dwelling perfectly salubrious as far as its air supply is concerned, every one of its rooms should have its inlet and outlet opening. The lavatory needs very special provision in this respect, for here far worse things than mere carbonic acid gas may be generated. Ordinarily there is none whatever, and the British housewife thinks she is mending matters by opening the small window a little at the top. If it is cold outside, and fires are going in the house, the consequent effect is, that the cold heavy air simply falls into the house through the partially opened window as its easiest road to those fires and carries with it whatever of impurity the sanitary fitting gives off! Every lavatory should have its upcast ventilating shaft, running (on an upward slope, however slight) into a warm chimney and by preference into that of the kitchen, for it is more often in use, hence also more likely to have a constant current. An inlet from outside is unnecessary; it is much better that this room in the house should suck its fresh air out of the rest of the building. We thereby ensure that none of the air we breathe emanates from it.

All the foregoing is intended to apply only to existing structures, and are but suggestions to help the reader to mend matters at small expense. To aid him further in this respect, it may be mentioned that Arnott ventilators are to be obtained of the Falkirk Iron Company, 67, Upper Thames Street, London, E.C., who stock two sizes, and sell them at the following prices:—

9 in. by 6½ in. opening, plain iron, 7s. 3d. each.

14 in. by 8 in. opening, plain iron, 11s. 9d. each.

If a new house is to be built, more effective methods of keeping its air supply in condition are possible. The extract openings can then be made in the centre of the ceiling and connected by channels, sloping upwards all the way, with the chimney. This arrangement will allow the deleterious vapours from the gas to escape at once without an opportunity of contaminating the rest of the

air. The inlet upcasts can be built into the thickness of the outer walls, and hence be not so unsightly.

Should this paper meet the eye of a wealthy man, let him not think, because we have specially considered the little villa of the average clerk or artisan, that the subject is no concern of his. His rooms are larger, loftier, perhaps, and since he has more of them at his disposal, not so frequently used, but ventilation is not unnecessary on these accounts. He, for instance, is not content with a single burner, and has probably three or even four going at once; we have seen how quickly they use up the available air, and the ventilating arrangements in his case are probably no more ample than in the little suburban home we have been studying.

A few further hints and we can leave this portion of our subject. In matters of ventilation, it is as necessary to beware of quacks as it is in those of health, or money can easily be thrown away. The writer was once consulted by a *cafétier* on the Continent; he was shown a highly-decorated ceiling and cornice, both consisting for the most part of open trellis work, elaborately finished in bronze and gold. All the openings were intended for ventilation, and must have presented a total area of many square yards. The proprietor, however, complained that they were totally ineffective, and the heavy cloud of tobacco smoke, which almost obscured the ceiling was ocular evidence of his truth.

"Hm! Of course all these openings are connected with some big shaft?" was the question put.

"Oh, yes!" came the quick reply, "Come with me and you can see it."

We passed through the back of the *café* into a little yard about 6 ft. square, and surrounded on all sides by tall buildings, a perfect well in fact; and there he proudly pointed to a 6-in. zinc pipe running up the wall to above the roof! In addition to the fact that this tube bore no proportion to the area of the openings it was intended to serve, the outer cold was busy destroying whatever current in it the heat of the *café* could possibly generate, because of the material of which it was made. That poor man had spent pounds and pounds to have things right, and had been simply fooled! A form of inlet ventilator, which is often seen is a many-bladed fan of tinplate or brass sheet, 6 in. to 8 in. in diameter, placed in a circular opening of equal size in the outer wall. The little fan whirrs round merrily, and often even makes a worrying noise. Its proud possessor thinks it is doing no end of work, and his pleasure increases in direct proportion to its squeaky buzz. He is quite ignorant of the fact that his fan depends upon the inrushing air for its movement, and that, if it does anything at all, it impedes its entry!

Who does not know the pretentious glass panel ventilator so common in offices? It consists of a circular disk of glass 8 in. to 10 in. in diameter, and

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