

that six parts of carbonic acid in 10,000 of air is all that can be breathed with a proper regard for health: *i.e.*, two parts in 10,000 in excess of the amount naturally contained in the atmosphere. A very simple calculation, then, tells us that to keep the air at a healthy standard, 3,000 cubic feet of air must be supplied. It has further been proved that with ordinary appliances for ventilation, and taking into consideration our climate, three times in an hour is about as often as the air in a room can safely be changed. This, then, would require that a room should be so capacious as to give to each individual adult 1,000 cubic feet of absolute space, necessitating in a room twelve feet high a floor space a little over nine feet square. But, it may be said, children do not require so much, because they are smaller, and there is not so much blood to be oxidized. True, there is not so much blood, but remember that there is more growth and waste in proportion; their blood circulates more rapidly, and their respirations are more frequent; besides, their organizations are more delicate and susceptible to unhealthy influences. Hence, we cannot safely deduct much from the amount of fresh air, and consequently from the air space, required by children. I am aware that the army regulations only allow to the soldiers 600 feet; well, if we are to give our children less than is requisite for the fullest requirements of health, according to the above calculation, let us give them, at any rate, as much as the Government allows to the hardy soldier, and make the very smallest limit not less than 600 cubic feet, or in a room twelve feet high, not less than seven feet square of floor space. I now ask you to tell me in the discussion which will follow, in what proportion of our schools we will find air spaces of 1,000, or even of 600 cubic feet per individual; and to tell me also what is about the

average space that is to be found. I hope that we shall get answers to these questions, as the presence here of so many who are able to answer is an opportunity of which I feel sure the Board with which I am connected would desire to avail itself in its labours in regard to this subject.

Having settled the average amount of air space, the next question to be put is, Are there appliances for changing the air in it the requisite number of times to give a product of 3,000 feet, or something near that amount?

If not, what is the result? It has been found as the result of actual analysis and experiment, that air containing eight or nine parts in 1,000 of carbonic acid produces nausea, loss of appetite, headache, irritability, and allied symptoms. Are your little scholars ever peevish and fretful? I must not ask whether children of an older growth ever become so; no wonder if they do. It is hard to get exact statistics of mortality in connection with various degrees of vitiation of air by respiration, as other unhealthy conditions are often associated; but the above results were found to be solely attributable to the vitiation of air by respiration to the extent named. Of course, mortality statistics associated with an indefinite amount of air vitiation are to be had.

If some of the poor little fellows above alluded to as breathing bad air could be aroused to the necessary vigour, I would like to furnish them with the following "pome," to be recited during visits of the powers that—(don't)—provide school accommodation. I take it from a paper read by the Rev. Mr. Fairfield, of Michigan, who has altered it as he says, "to meet the case" in point. I believe that in its original form it was addressed by a congregation to their sexton, but it is here dedicated to the caretaker of a school:—