

greater. The observer was struck with the number of class rooms which always had one or more windows up. It would appear that this is necessary in order to secure fair ventilation, although the Plenum System in use is supposed to require closed windows. The existence of dead air pockets was evident even from a casual inspection. None of the rooms seen had more than one intake and one outlet. Such a system may demonstrate that sufficient air is sent in each hour to allow for the required changes of air, but it cannot guarantee actual changes of all the air in the room. There should be several places for the air to come in and several places for it to go out. Again, the outlets are usually about the same size as the inlets, and, therefore, incapable under most conditions of carrying off the air as fast as it comes in. Either the overplus must find its way out through various interstices, or the resulting back pressure will reduce the supply of air coming into the rooms. An exhaust fan would certainly go far to remedy this condition.

The school has a humidifying plant. It is doubtful, however, whether its work is continuous or satisfactory. No scientific test was made of the humidity of the air, but if the testimony of the nasal and throat passages can be believed, on several days the air had not been sufficiently humidified. During one visit the visitor was told that the humidifier was not in operation. On the same day the fresh air intake of the whole ventilation system was closed, so that the school rooms were being supplied with the same air over and over again. This is not so serious, according to modern theories of ventilation, as was once thought—if the air is otherwise good—but is in distinct contravention of the principles upon which the ventilation of the Park School is based.

A large sum of money was spent on the heating and ventilating system of the Park School. Part of the possible return from this expenditure was irretrievably lost through ill-advised attempts to be economical where economy should not be considered. The proper balance between the radiating surfaces in the north and south rooms can, however, be established. The deficiency in boiler power can be largely offset by the use of fuel economizers. The thing most necessary to reap the benefit of the expenditure already made is an exhaust fan, or a number of small suction fans at convenient points, which will reduce the back pressure, permit a greater inflow of new air and consequently improve the circulation and diffusion within the class rooms. This is particularly necessary, as the foul air exits are relatively too small in comparison with the fresh air inlets. If the windows are not to be used at all the plenum and exhaust fans will have to be run practically continuously. The humidifying plant will have to be kept at the highest possible point of efficiency, and on account of the undesirable location of the fresh air inlet, all air will have to be thoroughly washed, if it is expected to keep the building clean and to protect the linings of the children's lungs. In spite of the best that can be done there may remain some dead air pockets in the class rooms. These can be stirred up by small electric fans in the class room. Unless the mechanical system of heating and ventilation now in use in the school can be made efficient it is extremely doubtful whether the results in conserving the health and vigor of children and teachers will be any better than could be secured by window ventilation supplemented by small fans, and if possible localized humidifying attachments.