such element is at work. The absence of many children in the country would partially account for the small number in July and August, but early in September they return to the city, and if material was the only requisite, the number of cases in September would be larger than it is. If the schools are free of contagion, should there not be a sanitary supervision over them? If the Board of Education should report to the Health Office any case of contagious disease occurring in their schools, and a similar report be required from all other schools, this department could have an opportunity of quarantining and disinfecting, and a certificate from the Health Office alone should re-admit to the schools a child convalescent from a contagious disease. It would doubtless occupy the entire time of one inspector, but it would be time and money well expended if these scourges of childhood could in any way be mitigated, and if one life could be saved from the hundreds yearly carried off by measles, scarlatina and diphtheria.

"Nearly allied to this condition of the public schools of Brooklyn is the Nursery, a department of the Almshouse for the care of pauper children. The crowded and filthy condition of that institution has very recently powerfully touched the public conscience. With an average number of inmates, the space for each child in the Nursery, without allowance for furniture, is 380 cubic feet. There are attached to it two school-rooms, and these measure, respectively, 117 and 153 cubic feet to each pupil, or five times as much as some of the rooms of the public schools, and are scarcely exceeded by any, either in space or appointments, in regard to light and warmth. The object of giving this example is not, by any means, to show that it has not deserved the complaint against it which it has received, but to illustrate the public apathy in regard to other institutions, the school-rooms for children who are not paupers being at the least equally worthy of public attention.

"In an examination of sixteen of the public school-rooms, and, with two or three exceptions, the same as here reported upon (but when they were less crowded than they are at the present time), and seven private schools in 1869, by the late R. Cresson Styles, M.D., the average proportion of carbonic acid present was 1.64 volume per 1,000, or 3.3 times its normal amount. Two only (and both of these were private schools) were perfectly ventilated; one of the public school-rooms had eight times the normal proportion of carbonic acid present, and more than half of them four times the normal proportion.

"It is very far from my purpose to show that the school-rooms of Brooklyn are more perilous than the school-rooms of other cities; indeed, they are not so. In the neighboring city of New York the plan of construction in some of the new buildings is believed to be an improvement over any of the Brooklyn buildings, but, taking them altogether, they are about equally perilous. While engaged in the preparation of this paper, I addressed a note to Dr. R. J. O'Sullivan —for some time sanitary superintendent of the public schools of New York—for special observations. He replied, in part, as follows:

"'NEW YORK, *Nov. 5th*, 1874.

"'I have practised in one of the most densely populated portions of the city for the past eighteen years, and have been a school officer for several years, and attending and consulting physician of the Eastern Dispensary for upwards of fourteen years, and in the experience I have had in the schools and in the midst of an immense tenement-house population, I have not at any period within the time stated known contagious diseases among school children so prevalent as at the present time. I can merely give you an instance to show how school contagion has contributed to this result: I was called to see a child, six years of age, a few days since, who contracted diphtheria while attending school, and died after a brief illness. Two other cases where defective drainage and ventilation were the predisposing causes also occurred in my practice. The children were aged respectively four and six. They were attacked with diphtheria and scarlet fever, with these results: one recovery and one death. Did time permit, I could go on enumerating cases of a similar character; suffice it to say that there is abundant evidence to show that the present unsanitary condition of our city's schools has contributed in no small degree to the increase of infantile mortality by the great majority of the children living in tenement-houses, in narrow rooms, in close contact with the sick, and carrying contagion through their persons and clothing to the schools. Attending and visiting physicians in dispensary practice will concur in the statement that school contagion has been carried to the homes of the children in various parts of the city. Thus diseases that could be prevented by proper sanitary direction, have, through the negligence of the school authorities, become the means of propagating disease to the entire community.

"'Truly yours, R. J. O'SULLIVAN, M.D.'

"Philadelphia, I am sorry to believe, is no better. With an enviable amount of house room for all other purposes, and the banner city of America, for the health of her people, her school-houses, notwithstanding, are a disgraceful exception. The general plan of her school buildings is faulty in the extreme.

"Availing myself of the kindness of one of the officers of the Philadelphia school board, I visited one of these buildings a few nights ago, during the school session. And it may here be remarked, as generally applicable, that however necessary night schools may be to meet the convenience of working children and others who cannot attend the day schools, the night schools as a rule are more perilous than the day. The rooms already filled with the mephitic exhalations of the day's service, and with no sufficient time for purification– add gas light—an additional means of impurity. The night pupils are, for the most part, clad in their working clothes, and many of them from factory life and other occupations which render their persons and clothing unclean.

"Of this condition the school I visited on Tuesday night, a few blocks from this hall, is an example. Crowded to the extent of less than 100 cubic feet of air space to each person, in several of the rooms, warmed by radiation from hot-air pipes, without any provision for moisture, and no means for the escape of foul air, an offensive odor pervaded the whole school; and the entire aspect was one of perspective disease and early death. On descending to the cellar, the sickening odor of carbonic acid and oxide was so unbearable as to suggest the propriety of a speedy retreat. The cellar had evidently never been cleansed, or even aerated, since the floors were laid above. And to this hot-bed of disease and death—well stocked with coal, and most likely at the time of storage rendered more certain to evolve its deleterious gases by wetting—every teacher and pupil of this school was exposed. Nor is this, bad as it is, an exceptional case. Indeed the evil is so general, in all of our cities, as to fully justify the conclusion that the examples given are examples of American school-houses generally, and of no particular city. They are a disgrace to our civilization and a shame to our humanity."

VENTILATION ESSENTIAL IN SCHOOLS.

A writer in the Pennsylvania *School Journal* has sent out a circular of queries on various school subjects, the tenth question was as follows.—

10. How can our schools be modified to improve their hygienic influence? (*a.*) As to tasks and discipline. (*b.*) As to physical conditions.

The reforms called for in the answers to this question (*a*), are:

Lightening tasks	38	More cheerfulness	24
More discriminating teachers	37	Abolishing "marking"	16
Less routine in methods	32	Pursuing fewer studies	14
Lightening discipline	25	More variety of exercises	15

The answer to (*b*) may be analyzed as follows:

Bettter ventilation	77	Better seats and desks	17
More equable heating	27	Shorter sessions	17
Regularity in daily physical exercises	21	Better lighting	14
More frequent change and freedom of position	21	More frequent recesses	13
		Fewer pupils to each teacher	10

If *unnatural incentives to study* did not exist probably there would have been little call for *lightening tasks*. The other reforms called for are worthy of the most careful consideration.

Defective ventilation is complained of in very emphatic terms. Common sense seems to fail entirely in matters of ventilation. Trustees and directors too often do not *know* the value of fresh air, and yet are too wise to be told.

This makes the case most lamentable. A building on the warming and ventilation of which "much thought and care have been bestowed" by the directors, was inspected, and this is the report: "I visited several several of the rooms and found the air offensive in all to the smell, the odor being such as one would imagine old boots, dirty clothes and perspiration would make if boiled down together;" and yet those who erected this house called it a *model*. We have have abundance of such "models." Fresh air within doors costs money. "There's the rub." Ventilation by the windows is almost criminal. Dr. Angus Smith says: "Though foul air is a slow poison, we must not forget that a blast of cold air may slay like a sword. To ventilate properly a building to accommodate two hundred students will require but little less than $500, and yet it will probably save scores of precious lives. The air should be *fresh;* it should be warmed before entering the room; it should leave the room as soon as it has been breathed once. Pure air should be insisted upon. *It is cheap at any price.* A paper on the "Ventilation of School-houses," published in the report of the Massachusetts State Board of Health for 1871, ought to be read by every person who has anything to do with building school-houses, or it would pay him to visit the school