Primaries Nos. 21, 22, 25, 27, 28, 29, 30, 32 are in rented buildings.

No. 25 is in a building that is supported by props, and altogether unfit to be occupied by human beings.

It will cost thirty to thirty-five thousand dollars to place these buildings in healthy and comfortable condition.

VENTILATION AND HEATING.

Ventilation.—In regard to ventilation it is probable that no artificial system has yet been invented that may be introduced into buildings as closely connected with other buildings as must be the case in cities, that can be adapted to all the departments needing the improvement. The outer and inner draughting of cold air, in any artificial manner, is so interfered with by ever-changing currents that play upon the atmosphere is to render any and all of the systems that I have examined imperfect in their adaptation to all the contingencies of inconvenience and awkwardness that appear in the school structures of this or of any former period. The cold air conduits that work in one department, fail in other departments of the same building. There is too much ventilation in the winter and too little in the summer for the comfort of the school room. The cold air of the winter may be managed much easier than the still atmosphere of the summer. To set the sultry air in motion and cool it by artificial means is a much more difficult operation than the heating of the cold air of the winter. It is much easier to manage draughts of heated than of cold air, and yet there is difficulty, in many instances, in this management. When the plan of the perfect heater shall have been invented, we may hope to approximate that by which the draughting of cold air can be regulated. What is difficult in the matter of heating is the production of a pleasant and healthy atmosphere in the school room. This can never be done by the use of stoves as they are now constructed and used. An improvement may be made in the proper use of the stoves. But if there is not sufficient teaching time during the day, there is certainly no portion of time that can be allotted to the care of stoves. The draughts of our buildings are of every variety, and require a varied attention, which the teacher cannot appropriate to the purpose. The greatest difficulty that I have encountered in the system of heating by the furnace, is in the imperfect construction of the furnace itself, and its improper location.

In the course of my service I have been obliged to have altered or removed nearly every furnace that has not been constructed under my own supervision. In a number of instances, it has been after severe study and laborious effort that the furnaces have been made to answer their intended purpose. I mention these facts to indicate the imperfect condition of the heating and ventilating machinery of the times, and to direct the attention of the commissioners and teachers to the necessity of exercising great care in its introduction as well as in its use. I have known good furnaces to be removed and bad ones substituted in consequence of the mismanagement of the janitress. At one time the use of the furnaces of the building occupied as the Commissioners' office and by the Central High School was discontinued, and fourteen stoves introduced into the departments occupied by the school. I afterwards had the furnaces properly repaired and in a degree reconstructed, and the result was the removal of twelve of the stoves. In most instances of difficulty the furnace builder knows as little about the location and structure of a furnace as the commissioner or teacher, and there are always many erroneous views to be overruled in the search after the one that is correct. In the present imperfect condition of the art of stove and furnace making, we must be satisfied with the nearest approximation we can make to perfection, and not be unreasonable in expecting more than we can realize in the premises.

CONCLUSION.

In the preceding pages I have endeavored in the limited time that I could devote to the purpose, to afford the best