We might class with these another scarcely less important, viz., durability. Hence the strength and stability of walls, the tightness of roof and outside covering, are matters of prime interest; and if neglected in the outset, no subsequent expenditure of skill or labour can provide a remedy.

To secure these results, attention should be specially paid to two things.

1. The *materials* used should be excellent in *quality*.

It is a false economy that consents, under any circumstances, to use inferior materials. There may be, in the beginning, a small saving of cost, but the result will be premature decay, and consequent expense for rebuilding. The greatest care should be taken to procure bricks properly burned, straight-grained timbers for frames, sound roof-boards and siding, floor-boards without knots, shingles of the first quality, and fresh-burned lime. These precautions can not be too strongly urged. A single stick of bad timber will sometimes ruin a whole building; and many a brick wall has fallen in consequence of using lime which has been too long exposed to the action of the air. The money annually expended in repairs occasioned by the use of poor materials, is more than triple that increase of the first cost, which would have entirely obviated the difficulty. *Every part of the materials should be carefully examined by competent judges, and all except the very best, rejected.*

2. The *work* should be *well* done.

Job-work, as it is usually termed (often another name for work miserably performed), can not be too earnestly deprecated. With the best of materials a careless or unskilful workman will construct a worthless building. Lumber of the best kind may be worse than wasted by a slovenly manner of framing and adjusting it. Shingles poorly laid will be followed by leaks, which must seriously damage the plaster and inside finish. Foundations insecurely built will rack and destroy every other part of the building. Window-frames imperfectly constructed, siding and floors loosely laid, and doors with yawning joints, all allow the entrance of the cold and storms, and thus become the source of unnecessary expenditure for fuel, as well as of serious injury to the entire structure. Lath and plaster badly put on, last but a short time, and constant patching presents an unsightly appearance, besides being the cause of annoyance and expense. Surely no further specification is needed to satisfy the most reluctant, that the truest economy demands such an expenditure for labour in the outset as shall secure the best possible construction. Faults in workmanship should be carefully provided against, and every part of the work should be subjected to the closest scrutiny. But workmen are not alone to blame for improper construction. It is quite as often the result of false economy or parsimony on the part of trustees. The estimates of mechanics are often cut down without an intelligent reason, upon the assumption that they are not made in good faith. In consequence, the workmen, who perhaps are forced by circumstances to undertake the job, are obliged to slight their work to save themselves from absolute loss. The injury resulting does not end with the work imperfectly done, but it has a direct tendency to impair that confidence in man which is the basis of all true humanity, and to lead to a regular system of deceptions on the part of both employer and workman. Let those having charge of the construction of buildings therefore beware of offering a premium for *poor* work by paying less than *good* work is worth. Let them remember that the "labourer is worthy of his hire," and that to extort labour for less than its value is only a safe and legal species of robbery.

In the erection of every School-house particular care should be taken to observe the rules of taste as regards form. In our country districts, where a small and plain building only is demanded, we need to consider proportion and symmetry alone; the other principles of architecture applying chiefly to larger and more pretending structures. If this is done, if our School-houses all conform to these two fundamental laws, they can not fail of becoming strong educational influences in the right direction. The advantages, in this regard, of obeying the principles of architecture in the construction of School-houses may be summed up in a few words.

1. If the building is an object of beauty, the very sight of it inspires emotions of pleasure.

2. It adorns and beautifies the landscape of which it forms a part.

3. It becomes an attractive place to children, and does not repel them, as now, by its deformity

4. It practically teaches ideas of proportion and symmetry, and new and exalted conceptions of beauty of form.

5. It throws over property the shield of beauty, and so checks, and finally eradicates the rudeness which is stimulated to destructiveness by deformity.

6. It forms one of those influences which have most power over the heart and affections, directly aiding the teacher in the most difficult and important part of his work.

In adorning and decorating School-houses, however, care should be taken lest the cost exceed the means or inclination of those for whom it is built. Neither should any mere ornament interfere with health or comfort.

PRINCIPLES TO BE OBSERVED.

HEALTH.—The preservation of health should be considered a matter of prime importance in the erection of every School-house. Everything else, including cost, comfort, and convenience, should be subordinated to this. Unless our children can be educated in a way compatible with the preservation of their health, it were better at once to tear down our School-houses, and abolish our School system. Minds refined, however highly, in broken-down and sickly bodies, are of very little practical value in *this* world.

To accomplish the end so much to be desired in this regard, great care should be taken in the following particulars:

1. THE SITUATION.—This should be at a distance from all sources of malaria. The foul breath of decaying vegetation, or of stagnant water, becomes a fruitful source of disease and death. Unseen and unnoticed, it insidiously does its work, and spreads the atmosphere of the charnel-house as far as its influence extends. The diseases seeming to be epidemic, which sometimes break out in Schools, may often be traced to some neighbouring swamp or marsh, or heap of rotting vegetables. Some manufactures also generate disagreeable gasses, which, if breathed for any considerable time, are deleterious in the extreme. The School-house should be placed at a distance from all these sources of disease.

Again; it should be situated away from the noise and dust of the street. There is scarcely anything more annoying or unwholesome than the clouds of dust which, upon a dry summer's day, are driven along the highway, covering and clogging everything in their path. Let the location, if possible, be upon a hill-side, where it may be free from these annoyances, and where the purest air is poured out in unstinted measure.

2. THE SIZE OF THE SCHOOL-ROOM.—This is a consideration of great importance. Every pupil should have sufficient room to sit and move without being confined or jostled by any one else; and there should be sufficient space in the room for a large reservoir of air. Packing children close together, so that the breath and atmosphere of each is shared with all his neighbours, is an unmitigated evil. The rule laid down on this subject in the official regulations are as follows:—The vitality of the air is exhausted by breathing, and a constant supply of fresh air is necessary to preserve life and health. Air, absolutely pure, is essential to the highest degree of health. Rendered partially impure by breathing, it will sustain life, but then all the machinery of the body becomes clogged, and the brain is so enfeebled as to be unable to perform its functions. Every person contaminates, and renders unfit for use, at least five cubic feet of air per minute. A School-room, twenty by thirty feet in size, and ten feet high, would contain six thousand cubic feet of air. Forty scholars would consume this, and render it unfit for sustaining the bodily functions, in just thirty minutes. Yet a larger number are often confined in a smaller room, and during a much longer time, without any possibility of a change of air. The effect of this is to excite disease and impair the more delicate organs of the body. The most virulent poison could scarcely be more fatal. The only remedy is to provide means for the rapid and frequent change of the air in the room, throwing out that which is contaminated and impure, and replacing it with that which is fresh from without.

In every School-house without proper means of ventilation, there is a slow and subtle poison which enters the blood and brains of the pupils, and saps the very foundation of life. There can be no escape from its deleterious influences, for exposure to it is a violation of one of the laws of GOD.

3. THE CONSTRUCTION OF SEATS AND BENCHES.—For the health of the pupil, as well as for his comfort, the height of the seats ought to be so graduated as to enable him to set his feet squarely on the floor. A contrary custom often produces much suffering and a distortion of the lower limbs. Seats without backs are also to be deprecated. To relieve the overstrained muscles, unnatural postures are assumed, and a crooked spine is a very probable consequence.

4. PROPER ATTENTION TO CLEANLINESS.—As health can not be preserved without habits of personal neatness, so it is useless to inculcate these upon pupils while the dirty condition of the room they are obliged to occupy forbids the acquisition or preservation of those habits.

EXTERNAL ARRANGEMENTS.

1. THE LOT.—A large and commodious School lot is a matter of prime necessity. Without it, some of the most essential ends of education are impossible to be attained. A little attention, on the