

and climbing, with the addition of engaging several in the same exercise at the same time. It also has the advantage, which few of the exercises which have been enumerated possess, of being equally adapted to females.

Though girls neither require the same robust exercise nor rough sports, to develop their frames and fit them for the duties of life, as boys, yet the system of education which omits or slightly provides for their physical training, is most radically defective. In addition to such of the apparatus already enumerated, and others proper for both sexes, those more peculiarly adapted to their wants should be provided. In this point of view, light dumb bells are best calculated, if properly used, to strengthen the arms and expand the chest.



DUMB-BELL.

The long back-board is also well calculated to expand the chest and give liveness and grace to all the movements of the arms and bust.



TRIANGLE.

The variety of attitude into which its use can be made to throw the person, cannot but be beneficial. The triangle is a short bar of wood, attached by a light rope at each end, to one secured at some point of considerable height. This is so arranged, by means of a pulley, as to be adaptable to the size of the person using it, and is a simple contrivance which may be used in a shed or room, in bad weather, and made to answer most of the uses of the rotary swing.



BACKBOARD.

In suggesting these or similar arrangements and apparatus for the amusement and physical training of youth of both sexes, of course it is not designed to assert that all or even any of them are indispensable to every School. It is admitted that children, in good health, will have exercise of some kind, and, if not restrained, will generally manage to secure a sufficiency to promote growth and vigor of body; but it is also known that, if left to themselves, they will generally neglect the studies proper for their intellectual culture. Hence the latter, with that of their moral nature, becomes the object of primary importance and obligation. But then, it is also believed that the means of physical exercise may also be vastly improved in nature and result, and at the same time be made a strong attracting influence in favor of the School and of learning. In this view of it, physical training rises in importance to a point only secondary to that of the culture of the heart and the intellect; and it may, therefore, not be overlooked without detriment to the best interests of the child and of society.

If it do not suit the convenience or the means of the District, to expend money to provide for the physical training of its youth, by means of proper gymnastic arrangements, much may be effected by the teacher and the pupils. Timber is cheap, and there will be found in every School of the ordinary size, several scholars of sufficient age, mechanical turn, and, if properly influenced, of willingness to labour for the common good. A Saturday or two devoted to this purpose, will readily produce one or more of the simpler kind of gymnastic apparatus, and the agreeable and beneficial effects of these will soon introduce others. In this way a full set may in time be obtained.

As to where the exercises shall take place in rainy weather, has been a question. Some have proposed to fit up and use the basement for the purpose; some have thought that the School-house should be constructed with two stories, the upper one of which might be used for play; and others have proposed separate covered buildings or sheds. Should such a use be made of the second story of the school building, the walls of the first story must be made thick and firmly bound together. They need not extend, however, higher than the first story, as the second should be open, but surrounded by a balustrade and pillars to support the roof. The floor ought to be laid with thick plank and deafened. More costly arrangements might be described, but these have both simplicity and cheapness to recommend them.

Should the price of ground in particular localities render it advisable to occupy a room in the school building, for gymnastic or calisthenic exercises, or to erect a building purposely, in which case alone such expedients should be resorted to as the sole means of exercise, the utmost care must be taken to ensure a full supply of pure air. No consideration ought to be permitted to interfere with this indispensable requisite.

KEEPING THE GROUNDS IN ORDER.—The Trustees in whom, in this Province, is vested the exclusive control of the school property of

the District, should first project and erect school-buildings and arrange school-grounds; but after they are in order, they should be intrusted to the Teacher's care, and he should be made responsible for their abuse. It is considered his duty to keep a clean and tidy school-room, and he should be held equally responsible for the condition of the yard and its enclosure. It is true that the destructive propensities of children uncontrolled, often lead them to do mischief—to throw down the fences—to cut and bark the trees—to cover doors and furniture with uncouth and obscene figures; but it is emphatically the teacher's duty to prevent these acts, and no better proof need be desired of a Teacher's want of qualifications than his inability to do so. This propensity on the part of the young, to cut, scratch, deface and destroy school property, should be corrected. They do not thus misuse the property of their parents, and it is but mismanagement at school, that induces them to act differently there. Teachers may create such a spirit among their pupils, as not only to prevent them from doing harm to the school property, but to render them willing and ready to assist in protecting it from the trespasses of others. They can be taught to love neatness and order, to guard affectionately the trees and flowers about the school-grounds, and to take pride in their protection and preservation.

It would be a great convenience to have a spring of water in the yard, or a pump, from which cool, fresh water could be brought at all times; and this should be of such easy access that all might undergo those frequent ablutions so necessary to cleanliness, and upon which depend, to so great an extent, the good looks of school boys and school girls.

IMPROVING EXISTING SCHOOL-GROUNDS: These grounds can be levelled and smoothed, and good enclosures be provided. They can be enlarged by the purchase of adjoining grounds; and in view of the probable increased future requirement of the Schools in this respect and the increasing value of land, good economy would dictate that there should be as little delay as possible in so doing. Shade trees can be planted in all school-grounds, in which they do not at present exist. It will take them years to grow, and in the far future the little folks who shall then enjoy the comfort of their shade, will look back and thank those to whom they may be so much indebted.

GYMNASTICS AS A BRANCH OF EDUCATION.

A LECTURE DELIVERED BEFORE THE UNITED ASSOCIATION OF SCHOOL-MASTERS ON THE 25TH OCTOBER, BY MR. G. REINICKE.

Man is a twofold being, consisting of a wonderful union of a physical and mental nature into an harmonious whole. From the time when it was acknowledged that our mental development was the true aim of our earthly existence, the physical development has too often been treated with too little importance. This neglect attained its highest pitch in the supposition, that the body was but a clog to the soul, and that in proportion as the body was neglected, the mind became improved. Locke was the first who opposed this view; he was followed by Rousseau. Though the view of the latter had too much of materialism in it, still he saw that the body is the habitation of the soul, and that bodily exercises must be an important part of education. And how bitter is the result of such neglect of the body, the Temple of God? What a fine example the old Greeks give us, who in noble cultivation outshone the whole world, so beautifully uniting the mental with the physical development. It is very right to free the soul from the bonds of the body, but not through carelessness and degeneracy, but through strengthening the same. And the human body is calculated for vigorous activity: only by much use and continued practice can the body attain and preserve the right standard of power.

All bodily exercises are not Gymnastics, according to the view which we take. We do not understand by that term irregular exercises of children and uncivilised tribes, national games, or public exhibitions of bodily strength and agility. Gymnastics, as a science, consists of an harmonious and methodical development of the body by exercises, considered both in relation to the bodily and intellectual faculties.

We will first consider the influence of such gymnastics upon the body.

The first and most striking result is the development of muscular power. We all know that the muscles, without exercise, not only become powerless, but change both in form and substance, which is shown by reduction in size, and by softness and laxity. Continued inactivity converts them into a fatty substance; whereas, through much exercise the muscle grows larger and stronger, and even in a state of inaction attains a certain degree of firmness, which the unexercised muscle scarcely has during its contraction. The quality of the muscles is influenced by the reproduction and appropriation of new organic substances in the place of those, which through the process of existence are constantly consumed. They are the ground work of existence. Consequently the greater the vital power of the body, the greater will be the reproduction and circulation of the animal fluids. The comparatively great amount of nerves and blood-vessels in the muscles is a proof of their qualification for a quick reproductive power, as well as of a high degree of vital activity. Hence the rapid growth of their substance by continued vigorous activity. A journey on foot of a few days even increases the size of the muscles of the lower ex-