

and strong. The general ignorance of mothers in all classes of society, of nurses, of nursery governesses, regarding the first physical education of a baby and infant, is the cause of the infant mortality, to which no doubt *neglect* contributes very much.

14. The importance of swimming for all school children of both sexes is not yet sufficiently appreciated. All School Boards of large towns should take the matter of swimming baths in hand as a part of physical education. The ratepayers would soon find out that every penny well employed by a School Board saves twopence in poor and police rates, and in the expense for medical attendance and chemists' bills.

15. My last suggestion is the appointment of Medical Inspectors of Schools, to prevent the large class of school diseases, which are partly imported and spread by infection, partly caused by unsuitable school arrangements.

The practical exercises of pedagogic gymnastics do not develop special manual and bodily ease and skill required, later in life, for a special trade or profession, but deal with those faculties and powers which are necessary to every one, and which are required by everybody in the various circumstances of life; thus, besides the general development of the body, walking, running, high and long jumping, climbing, hanging, and swimming are objects of special attention. Although the natural power enables a man to do the exercises just named, without any special school instruction, pedagogic gymnastics teaches how they are done with the greatest ease, safety, energy, and with a quick resolution at the right time; and, further, how they are to be done for the ultimate aim of gymnastics.

It is obvious that no single one of these exercises should be practised at the expense of the others; the aim is not to try to obtain the maximum to which exercise can be carried, but that the exercises in general should be reasonably limited; unæsthetic, unnatural, artificial, and acrobatic exercises, are neither wanted nor permitted. The aim is not to do all possible exercises, but only those which can be done rationally. For educational purposes, simple gymnastics are the best. The pedagogical, practical, and æsthetic aim is to be considered in each exercise; too many exercises, as well as too great a variety, are not required. One part of Ling's rational pedagogic gymnastics consist of exercises which are done without any external, mechanical, or gymnastic apparatus; they are, therefore, called free exercises. They appear more simple than they really are. Each gymnastic exercise is based on the special structure of the joint on which it acts; has commencing, many intermediate, and final positions; it is done in a definite period of time, and in a definite direction. Just as there are various standards of writing, reading, and arithmetic, so there are various standards of exercises to be chosen on pedagogic principles, and adapted to the various ages and stages of strength of the pupils.

The so-called simple free exercises can be combined in a manner similar to the letters of the alphabet; and two, three or more simple free exercises can be chosen. One individual or many persons can perform the free exercise at the same time, which is done by words of command. If the physical faculties are developed to a certain extent, and if it is desired to make further progress, two or three persons form a group for the purpose of mutually assisting or resisting one another. The models and drawings I have here represent a few positions and movements of the free exercises. Having taken much interest in the improvement of the physique of the blind, I had an artist for several months living with me to model from life about thirty-six positions; a copy of the original models I have given to the Kensington Museum, where they form part of a collection which I have named before. These models are

bad imitations of the original bas-relief of which you have the drawings in your hand; they serve for the instruction of the blind, deaf or dumb, and also for children in general. The Society for the Improvement of the Blind have been so kind as to lend me these models for the present occasion.

As there are probably some persons present who have never heard of free exercises, I intend showing you some models and drawings representing the elementary free exercises, which can be arranged under the heads of bending, stretching, turning, and circular movements. The movements of the head are analogous to those of the trunk, while those of the arms and hands are similar to those of the legs and feet. According to the commencing position of the body, which can be standing, sitting, kneeling, lying, the effects of the various exercises change; for school purposes the standing position is usually chosen. This standing position varies according to the position in which the feet are placed. There are two fundamental positions of the feet, called "feet open" and "feet close," which can be varied according to the distance in which one foot is placed, either sideways, forward, or backwards. The length of the pupil's foot represents the distance, which can be single, double, or threefold, sometimes even fourfold. If the base on which the pupil stands is diminished, more attention and effort are required, because the exercise to be done is more difficult. If the same exercise is to be done on one leg only, it is necessarily still more difficult. If exercises of various parts of the body are combined and simultaneously executed, the difficulties increase according to the various combinations. I have mentioned these few instances only for the purpose of showing that the teacher has in the free exercises all the means for gradually developing the physical faculties of his pupils. My advocacy of the free exercises is based on the many advantages which they offer in physical, mental, and moral respects. I shall only say a few words on the advantages of free exercises, but must refer you to my little pamphlet on the neglect of Physical Education and Hygiene by Parliament and the Education Department, where both the advantages as well as the consequences of neglect of physical education are more fully named. Many teachers know the improvement in discipline, obedience, and order, caused even by the unscientific ordinary drill.

In a paper on Physical and Mental Training (which Mr. Chadwick was kind enough to send me), he mentions "a committee of a large school considered physical training unnecessary, and the drill-master was dismissed." The immediate result was bodily irritability, and hence uncontrollable mental irritability on the part of the boys. There was tumult and bolstering in the dormitories, and all sorts of riot and disorder ensued. In less than a fortnight damage was done to the amount of £200, more than three years' salary of the drill-master. The chaplain exhorted and prayed, the master flogged, and flogged, and flogged, but without effect, as flogging did not touch the seat of depravity—irritation from the want of physical exercise. At last the chaplain and manager besought the restoration of the teacher and the physical exercise he directed. This was done. The demands of hygiene were satisfied; there was quiet sleep in the dormitories, and so it has gone on. Now, wheresoever we hear of any disorder and rebellion in schools, wheresoever there has been extensive truancy, we may be sure that it is the system or the managers that are in the wrong.

The importance of these exercises for military training is well known to the Imperial German Government, the Emperor being the Commander-in-Chief of all German armies, and there is what they call "ein allerhöchster Befehl," or Cabinet order—which means that the Emperor himself has signed the order that all German recruits must pass through an obligatory course in these ex-