SCHOOL DOCUMENT NO. 10-1889.

Lippleton St.

### REPORT

# BOARD OF SUPERVISORS

OF THE

## PHYSICAL TRAINING

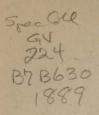
ON

IN THE

### PUBLIC SCHOOLS.



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#### IN SCHOOL COMMITTEE,

BOSTON, June 25, 1889.

Ordered, That the Board of Supervisors be authorized to report in print upon the subject of physical training in the schools.

Attest:

#### PHINEAS BATES,

Secretary.

#### IN SCHOOL COMMITTEE, BOSTON, Oct. 22, 1889.

Ordered, That fifteen hundred additional copies of the report of the Board of Supervisors on the subject of physical training (School Doc. 10, 1889) be printed.

Attest:

#### PHINEAS BATES,

Secretary.

#### REPORT OF THE BOARD OF SUPERVISORS

ON

# PHYSICAL TRAINING IN THE PUBLIC 272 SCHOOLS.

#### To the Committee on Hygiene: -

In accordance with your request the Board of Supervisors, in consultation with the Instructor in Hygiene, has carefully considered what system of physical training should be introduced into the public schools, and respectfully offers the following report :

Physical education is, in theory, placed side by side with intellectual and moral education. Although its importance has been recognized, yet it has not, in this country, been generally regarded a province of the public schools to provide the means and to regulate the methods of physical education. The desire for play, the natural activities of childhood and youth, and the demands of life have been deemed sufficient to furnish the occasions and the exercises for physical development; in a word, physical education has been left to shift for itself.

But public sentiment has, of late, so changed as to demand that some provision be made for physical education, inasmuch as it is an essential part of education. The colleges have begun the good work. Amherst College, led by Dr. Hitchcock, and Harvard College, led by Dr. Sargent, are already reaping the advantages of a rational system of

physical training. Benevolent individuals and institutions, private schools, and social clubs are providing means for physical development. The State and the city have done something for the good cause. The State requires that physiology be studied in every public school, and that proper systems of ventilation be introduced into school-houses. Our Rules and Regulations provide for a proper inspection of the sanitary condition of the schools, and for the prevention of the spread of diseases among the pupils. It is also provided that, in our Primary and Grammar Schools, five minutes each forenoon and afternoon be given to "physical exercises;" and that, in our High Schools, two hours a week be given either to calisthenic exercises or to military drill. Thus the way has been opened for something better.

It requires only a short acquaintance with our schools to learn that the physical exercises conducted in them produce meagre and unsatisfactory results. Leaving out of consideration the military drill in the High Schools and the Boys' Latin School, and the calisthenic exercises in the Girls' Latin School, in some of the High Schools, and in a few of the Grammar Schools, nothing could be more miscellaneous and heterogeneous than the physical exercises in our public schools. Their chief purpose is to rest the pupils, and, at the same time, to give an opportunity for ventilating the class-rooms. This purpose is usually accomplished. But it is evident that physical training is not their purpose. Indeed, it is only the elasticity of the youthful organism that prevents it from receiving injury from these Moreover, when they are executed with the exercises. greatest finish, in perfect time, without an order, and to the sound of music, they are exposed to the weighty objection that automatic rhythmical exercises tend, in general, to weaken the will, and thus to form in pupils the bad mental habit of working without purpose and without effort.

It is unnecessary to present all the reasons for the opinion

that the pupils of our schools need physical training, and that no generally satisfactory results in this direction will be produced till a system of physical education be adopted and carried out. It is enough to know that the undeveloped human organism, even when it is in perfect health, when it has normal strength, and when it is developing under favorable conditions, needs to be properly exercised in every part and to have its activities rightly directed. How much more, then, does the human organism that is unsound, weak, or deformed, or is daily exposed to unfavorable conditions, need to be so exercised as to become healthful, shapely, and strong, and to acquire such stamina as to be able to withstand unfavorable conditions! If one objects that the school cannot do all this for the pupils, it may be answered that the school may do - if not much - at least something for the pupils in this direction, and thus may lessen the amount of physical suffering and misery in the world, may give more leverage to the intellectual and moral powers, and, in the words of a political economist, "may give to three the efficiency of five."

In order to decide what system of physical training should be introduced into our schools, it is necessary to apply certain tests:

1. Is it the purpose of the system to develop the whole body and its parts symmetrically and harmoniously; to preserve, increase, or produce bodily health, strength, and proportion; and to maintain and promote physical activity, dexterity, and efficiency?

2. Is the system founded upon the facts, laws, and needs of the human organism?

3. Are the principles of the system so simple, the classes and progression of exercises so plain, and the method of conducting them so easy, that the average teacher may be able, after proper study, drill, and direction, to understand the system and to carry it out safely and effectively? 4. Will the system of exercises interest the pupils? In other words, does the system present such a diversity of exercises in progression and in unity as to attract and, at the same time, to train the pupils?

5. Are the requirements of the system such as to allow the class-room to be used instead of a gymnasium, and to enable the teacher to accomplish the main objects of the system without much additional expense, and without making unreasonable demands upon the school-hours?

In considering some of the "systems" of physical training, it will not be necessary to apply all these tests. It will be sufficient to show that they fail in some essential particular.

1. Dr. Dio Lewis, an enthusiastic pioneer of physical training in this country, had the merit of calling public attention to the value of light gymnastics. Under his leadership, his series of exercises with light apparatus proved of great interest and value to many of his pupils, and gave an impulse towards physical training. But his plan lacked unity, and his exercises lacked orderly arrangement. His method, though energetic and inspiring, was crude and unscientific; and the results of his training were partial and unsymmetrical.

2. Dr. Winship, with his "health lift," proved how great a weight one could gradually acquire the power of lifting. He gave once, and we hope for all time, an illustration of the fact that "moving great weights through small spaces produces a slow, inelastic, inflexible man." As Mr. William Blakie, an expert in physical training, says, "He who does work of the grade suited to a truck-horse is far more likely to acquire the heavy and ponderous ways of that worthy animal than he who spreads his exercise over all, or nearly all, his muscles." The "Heavy-weight System" must, therefore, be condemned as one-sided and partial in its development.

3. The Monroe system of vocal and physical culture is

founded upon sound principles, and is excellent for its purpose, viz.: to develop the vocal organs and to train the voice; but as a system for general physical training its range is too narrow and its exercises too special.

4. The Delsarte system has for its object to train the body and the voice to express artistically "the vital, the mental, and the emotive;" and, although the accomplishment of this object implies and demands a training in mechanical movements, yet the æsthetic end to be reached limits the exercises, and, consequently, makes them specific rather than general.

5. The physical exercises in the Allen gymnasium in this city show great organizing ability and energy on the part of its director, and evidently develop muscle and restore and preserve the physical powers. They show the muscular capacity and ability of the girl and woman. Although these exercises demand agility, strength, and skill, and include the natural and the artificial, the beautiful and the ugly, the ordinary and the wonderful, yet they seem to be orderly, safely, and efficiently conducted. Moreover, the special needs of individuals are provided for and met. It requires, however, only a moment's consideration to be convinced that the means and methods here used could not, under the existing conditions of our schools, be used in the class-rooms, and that only an expert in physical training could safely conduct these exercises. It is plain, too, that what might be accomplished in a gymnasium, for individuals, with the most approved apparatus, and under the direction of an expert, could not be accomplished in the school-room, for classes, with apparatus not adapted to the special needs of individuals, and under the direction of the average teacher.

Whether or not such a selection from the exercises in the Allen gymnasium could be made as to meet the needs of the schools is not the question under consideration. If it were the question, it would be pertinent to ask whether this

eclectic system has been tried in graded schools, and with what purpose, method, and results? If the purpose were only "relief from nerve tension and mental weariness," the system should be rejected as insufficient. If the method of conducting the exercises were founded on the rule that the exercises should be given "from imitation," and not from "word of command," the method should be rejected as unsound. It is plain to the observer of pupils in schools that they find relief, not by changing voluntary attention into a passive, negative state, but by changing the direction, the object of voluntary attention, or by spontaneous, active play. Moreover, training by imitation is almost a misnomer. To give nerve, to train nerves, requires the exercise of the will. The purpose, and the determination and the effort to accomplish the purpose, are essential conditions of physical training. Nor must imitation of movements be for a moment regarded as synonymous with spontaneous or regulated play - the natural and vigorous method of developing physically the growing child. Therefore, while the doctrine that "gymnastic work should be pleasurable" is sound, the added statement, that " as far as possible it should be non-mental," assumes that nature was at fault for putting mind and body together, and for causing them to grow and develop together. On the contrary, the next generation will demand that the cunning hand shall be trained with the cunning head, that the strong body shall be united with the strong mind, and that the deficiencies of either shall, so far as training can do it, be supplied, in order that mind and body may be able to coöperate in doing the allotted work of life.

But it is unnecessary to consider whether this imaginary "eclectic system" of exercises would probably be satisfactory. It is enough to know that a series of physical exercises for a system of graded schools, even when selected by an expert, must be looked upon with some suspicion, and must be regarded at least as experimental. Have not sufficient experiments of this kind been tried, and is it not high time to introduce into our schools a *system* of physical training that has been tried, and that has been found in its essentials sound, safe, practicable, and efficient?

Such a system exists in Germany, in France, in Belgium, in Sweden, and in some other European countries. It may seem strange that Boston, having experts so near as Cambridge and Amherst, should go abroad to find a system of physical training suitable for its public schools. But the public demand for such training has not existed so long, and has not been so great, as to cause these experts to formulate a plan of physical training for elementary schools. It was only fifteen years ago, when Victor de Laprade, a member of the French Academy, writing upon physical education, declared that the system of gymnastics that had, a few years before, been introduced into the French schools, " seemed more suitable for making mountebanks and clowns than fine and vigorous young men." And yet this system of physical training, developed and perfected, is now demanded by a detailed programme, and controls a part of the regular daily instruction in the schools of France. Germany, always ready to do what it believes will strengthen itself, requires gymnastic training in its schools. Even Matthew Arnold, recalling the manly and vigorous contests of the Rugby boys, gave a qualified approval of the German gymnastics in the following words : --

The Germans now cultivate gymnastics in their schools with great care. Since 1842, gymnastics have been made a regular part of the publicschool course; there is a *Central-Turnanstalt* at Berlin, with 18 civilian pupils who are being trained expressly to supply model teachers of gymnastics for the public schools. The teachers profess to have adapted their exercises with precision to every age, and to all the stages of a boy's growth and muscular development. The French are much impressed by what seems to them the success of the Germans in this kind of instruction, and certainly in their own *lycées* they have not at present done nearly so much for it. Nothing, however, will make an ex-school boy of one of the great English schools regard the gymnastics of a foreign school without a slight feeling of wonder and compassion, so much more animating and interesting do the games of his remembrance seem to him. This much, however, I will say: if boys have long work-hours, or if they work hard, gymnastics probably do more for their physical health in the comparatively short time allotted to recreation than anything else could. In England the majority of public schoolboys work far less than the foreign schoolboy, and for this majority the English games are delightful; but for the few hard students with us there is in general nothing but the *constitutional*, and this is not so good as the foreign gymnastics. For little boys, again, I am inclined to think that the carefully taught gymnastics of a foreign school are better than the lounging shiveringly about, which in my time used often at our great schools to be the portion of those who had not yet come to full age for games.

Had Matthew Arnold considered the physical condition of hosts of children in London, Manchester, and other English cities, he would probably have modified his opinion still more. Had he written upon the subject with the knowledge of what has been recently accomplished under the leadership of Maclaren, late professor of physical education in Oxford University, he would probably have expressed the opinion that all pupils should receive at least the physical training which a rational system of gymnastics can give, and, in addition, as much physical development by means of outdoor games and exercises as the circumstances of pupils allow. Professor Maclaren, after closely observing through many years the effects of games and of gymnastics upon many of the best British youth, wrote as follows : —

The man who invented cricket as surely, to my mind, deserves a statue to his memory as he who won Waterloo. The influence of our national games upon the national character is valuable beyond computation: nothing could take their place, nothing could atone for their loss. But valuable as these exercises are — invaluable as they are — it will be at once seen that not one of them has for *object* the development of the body, or even the giving to it, or to any part of it, health or strength; although all of them, in a greater or less degree, undoubtedly have this effect, it is indirectly and incidentally only — the skill, the art, is the

first consideration. And in this, as purely recreative exercise, lies their chief value, the forgetfulness of self, the game being all-in-all.

Recreative exercises, then, from their very nature, are inadequate to produce the uniform and harmonious development of the entire frame, because the employment which they give is essentially partial. Where the activity is, there will be the development; and if this principle be overlooked, a portion of the body only will be cultivated, and the neglected portion will fall far behind the others in strength, in activity, in dexterity, and in endurance, for the simple reason that it will be less abundantly nourished.

Recreative exercise in sufficient amount is usually in itself sufficient to maintain health and strength after growth and development are completed, but it does not meet the many wants of the rapidly changing and plastic frames of youths spending a large portion of their time in the constrained positions of study. Hence the necessity for a system of educational exercises.

Belgium, too, thoroughly convinced that the best training of the body is necessary to the best training of the mind and to the highest efficiency of the citizen, has introduced into its schools a system of gymnastics. "Every elementary school has its gymnasium, with a special teacher and special time of practice, as a part of the regular curriculum. So much importance is attached to gymnastics in Belgium, that there is a monthly publication devoted to the interests of gymnastic teachers."

In the procession of States that have done most for physical education, Sweden is at the fore-front. Ling, its famous citizen, prepared a system that has formed the basis of European systems of physical culture. France, fond of perfection in details, has built up a complete and somewhat complicated system. Germany, with characteristic economy, has simplified the system of Ling, and has made it useful, not only for training the body of the growing child, but also for training the youth for military service. Between these two extremes stands the Swedish system, the same in its essential features as that which Ling founded. At Stockholm is a State academy, the Royal Gymnastic Central Institute, which prepares teachers of the Ling gymnastics, by whom the principles, methods, and art of physical education are carried to the schools in Sweden and Norway. Men of thorough scientific training and culture, and not mere specialists, direct and conduct the instruction of this Central Institute. Presumably, then, the system of physical education which for threequarters of a century has been taught there, is, to say the least, founded in the main upon sound principles, is safe, is suitable for schools, and has borne the tests that a sensible, intelligent, and thrifty people have applied. But this presumption is not sufficient; other evidence is demanded.

The following extract from the writings of Mr. Edwin Chadwick, an Englishman, who has carefully investigated many questions of economical and social welfare, will serve as an illustration of the evidence which might be presented :

The War Department, on the invitation of the King of Sweden, sent a commission to examine the system of physical training in use there. The reporter, Captain H. Armit, of the Central London Rangers, reported highly and favorably of it, for the gain of civil as well as military forces. The gymnastic college there, he stated, had branches in all the different towns of the country. " By this means the civil and the military schools are connected. A bond of union exists in the instructors, who are also sent from the military establishments gratis to all State schools throughout the country. The result is that the whole Swedish population has by degrees been trained and disciplined by means of the Ling system of extension drill, and has thus been accustomed to work, when assembled in large or in small numbers, with an exactitude and a precision of motion hardly credible." He spoke of the many and great benefits which it conferred upon a people, by strengthening the system of the weak and of the robust alike, by infusing health and vigor into the mind, and by teaching to all the value of and the necessity for the existence of discipline amongst all classes of the community. In truth, the Ling system has made of Sweden a disciplined nation. The introduction of the system would, Captain Armit says, cost the taxpayer nothing beyond the salaries paid to the instructors, as no appliances of any sort are required. On the other hand, recruits for the army would present themselves, not

as untrained men, but as men proficient in every essential point necessary to form a soldier, except the rifle exercise, which latter it would not take long to teach.

The strongest evidence in favor of the Swedish system of gymnastics is its internal evidence — that which its purpose, its principles, its methods, and its art reveal. It is difficult to describe the system briefly. All that can be here done is to note some of its salient points :

1. Beginning with the recognition of "the oneness of the human organism" and of nature's intention to keep "harmony between mind and body and between their parts," it aims at health; at such a development of the body as that each part will have its proper strength, and will be able to perform its function with vigor and satisfaction; and at such harmony and symmetry as that all the parts together will form a well-proportioned and beautiful whole under the perfect control of the will. Although, in this high aim, muscular development is not overlooked or slighted, yet it is regarded as only one part of the purpose of physical training. The health and strength not only of the muscular, but also of the respiratory, circulatory, and nervous systems are included in the aim of the Swedish system of gymnastics.

2. The Swedish system of gymnastics is founded upon the facts, laws, and needs of the human organism and upon the laws of motion, especially the movements of the human body. Physiology and, in less degree, physics, chemistry, and æsthetics, contribute their respective shares of materials upon which rest the principles and methods of the Ling system. Its greatest merit is that it is a *system*, simple, thorough, direct, and safe. A well-defined and well-executed Swedish movement differs as much from the ordinary sledge-hammer performances in an old-fashioned gymnasium as a Damascus blade differed from a Saxon bludgeon. The following are a few of the essential facts or laws that give character and utility to the Ling system :

(a) "Muscular development of any part of the body occurs in direct relation with the active movements to which the part has been subjected."

(b) "Man has, in his own organs of movement, an efficient means for the preservation or restoration of health."

(c) Every valuable gymnastic movement has a welldefined physiological or psychical object, and a definite beginning and end; requires a certain degree of effort or exertion through will and muscle; is performed in a determined time and rhythm, and describes a definite "figure" in reaching its end.

(d) "The gymnastic value of a movement depends upon how it combines the greatest effect on the body with simplicity and beauty of performance."

(e) Movements may follow each other in such an order, or may be so combined or coördinated as to increase not only the general bodily energy, but also the strength and functional power of the weaker parts of an organism.

(f) "It is not the greater or lesser power of any part that determines the strength or weakness of an individual, so much as the proportion and harmony of the several parts."

(g) "In bodily development, beginning with the simplest, you may gradually advance to the most complicated and powerful movements; and this without danger, inasmuch as the pupil has acquired the instinctive knowledge of what he is or is not capable."

3. The Swedish movements are classified with reference to their effects on nervous action, respiration, circulation, digestion, and secretions. The following is Ling's classification:

(1) Order movements: To gain attention and good position.

(2) Movements for the back and chest: To strengthen the

extensors of the back and to straighten the back; also, to expand the anterior and lower part of the chest.

(3) *Heave movements* (various forms of lifting the body by means of the arms): To expand the upper part of the chest, and, incidentally, to strengthen the arms.

(4) Balance movements: To give a correct carriage and general equilibrium.

(5) Shoulder-blade movements: To flatten the upper part of the back, and to pull the shoulders backward.

(6) Movements for the abdomen: To strengthen the outside muscles of the abdomen, and to affect digestion.

(7) Alternate trunk-movements: To strengthen the lateral parts of the trunk.

(8) Slow leg-movements: To increase the circulation in the lower limbs, to quiet the action of the heart, and to counteract palpitation.

(9) Jumping and vaulting: To cultivate speed of motion, and — as these exercises require the activity of the whole body at one time — to effect the coördination of movements.

(10) Respiratory movements: To increase the capacity of the lungs, to restore breathing to its normal rhythm, and to help counteract the evil effects of precipitate movements.

Each of these classes of movements contains a variety of exercises suited to the age, physical condition, progress, and skill of the pupils. Usually, one exercise at a lesson is taken from each of the ten classes and in the order of these classes. Sweden has proved that the average teacher, after suitable study, drill, and direction, can conduct these exercises with safety to the pupils and with good physical and mental results. Moreover, the variety of exercises, the gradual increase of effort and skill required for their exact performance, the general refreshment that they give, and their ability to remove weariness and the ill-effects of too great or too long exertion — all these go to show that the Swedish gymnastics not only train but also interest the pupils.

The Swedish system of gymnastics is eminently eco-4. nomical. Unlike the ordinary "systems," it husbands, while it directs and develops, strength. It should be kept in mind that many pupils in our public schools are underfed, and cannot afford to waste their supply of physical energy by misdirected or excessive physical effort. It is also true that many of the Swedish movements can be executed in the class-room, and without apparatus. Although "the hall" might be profitably used by some of the classes, and some comparatively inexpensive apparatus might be provided for it, and used with good results; yet the important ends may be reached without the use of either hall or apparatus. The Swedish system is not only comparatively inexpensive, but also moderate in its demands upon the school-hours. Somewhat more time than is now allowed for "physical exercises" should, however, be given to physical training - else the results, though good, will be imperfect. If the long recitation or study periods were oftener interrupted by suitable physical exercises, the resulting refreshment and energy would enable the pupils to give better attention to their studies and to accomplish more in a given time.

Therefore, the Ling system of gymnastics has borne the tests that have thus far been applied to it. Some objections have, however, been made to the Swedish gymnastics. It has been affirmed that the movements, not being metrical, cannot be accompanied by music, and that, consequently, the pupils will not be interested in them. The answer to this objection is, that pupils are at the outset, and continue to be, interested in taking these exercises. The purpose of these gymnastics is not to cultivate the sense of rhythm or to develop musical ability. The objector, too, should keep in mind that each movement has a rhythm of its own, and that the parts of some compound movements cannot be performed in the same time without preventing the right

physical effect. An incomplete movement is either nugatory or harmful.

It is also affirmed that the Ling system is one of mere movements; " that there should be a weight or resistance to overcome, in order to bring out the working force of the muscle." There is either weight or resistance involved in nearly every Swedish movement. The body and its parts, the floor, the desk, the chair, the walls, the next pupil, and sometimes special apparatus, furnish the resistance to be overcome. But the objector may mean that the resistance is not sufficient. This is not the opinion of those who have received the Swedish training. Formerly Dr. Hitchcock, of Amherst College, had the students use for class exercises ten-pound dumb-bells; now he has them use one-pound dumb-bells. When it is considered how difficult it is to adapt the weight of apparatus to individuals, it is not strange that Ling, an expert himself and a close observer of the effects of physical exertion, should have trusted nature and circumstances to furnish most of the apparatus for class drill; it was his office to furnish the training. One of the peculiar merits of his system is, that it does not expose the pupils of a class to the danger of over-exertion, to strain. Moreover, as one of his followers has said, " if the exercises with apparatus are exclusively or too frequently practised, the body loses its natural instinctive sense for equilibrium, instead of having it developed by practice; the sense for form and graceful position and movements of body is rather repressed, while the sense for equilibrium in certain artificial positions, such as rarely or never occur in real life, is more developed."

Nor, as is sometimes affirmed, are the joints and ligaments subjected to an unnatural pull or strain in free gymnastics. The Ling system carefully guards the health of bones, joints, and ligaments; and, helping nature do her work of developing the whole body, it never obstructs the way.

Fortunately for the schools, an opportunity for testing the merits of the Ling system has been lately given to Boston, through the generous patronage of Mrs. Hemenway, and under the skilful direction of Dr. Posse, an expert in the Swedish gymnastics. Twenty-two principals and eightyseven assistants of our Grammar Schools and one High School assistant are reported to have received some instruction and training in this system of physical culture. Seventeen of the twenty-two principals and a large majority of the eighty-eight assistants have expressed favorable opinions of the Ling system. Indeed, those teachers who have become best acquainted with this system and with other systems of physical training, express not only a preference for this, but also a conviction that it is the most rational and useful, and the most suitable for the schools. The conviction of these teachers has been strengthened by the interest taken and the physical improvement made by the pupils to whom they have given a part of the training.

Thus, in whatever light we examine the Swedish method of physical education, we see only good. Some may infer that the adoption of this method will result, on the one hand, in discouraging the natural, spontaneous plays of childhood, and, on the other hand, in discountenancing or dispensing with military drill in the schools. Neither of these inferences is just. The principle that spontaneous play is suitable in the nursery, and regulated play - work-play in the Kindergarten and for the lowest class in the Primary School, is well established. Gradually, in the process of education, the spontaneous must give way to the voluntary in physical as well as in mental exercise. Thus, during the last two years in the Primary School, some mental work and some physical training should be required; and, during the six years in the Grammar School, mental and physical training should go on together, with gradually increasing vigor and exactness. In the High and Latin Schools, physical

*education* should be made an essential part of education, and its means and methods should be better regulated.

The physical training of girls, were it well begun in the Grammar Schools, could be continued in the High Schools with excellent results. Here, as in Europe, "corrective exercises" could, under competent advice and instruction, be resorted to for removing defects in form and for other special development. Indeed, the time will come when pupils, on entering the lower schools, will receive physical examinations, and provision will be made for conducting "corrective exercises."

Nor can the physical training of boys in the High Schools be neglected without serious loss to them and to the community. Not only the boys who are too young for military drill, and who are "lounging shiveringly about," but also those old enough to take the drill, should receive an "allround" physical development. Entering the High Schools after receiving in the Grammar Schools careful physical training, they would be ready to continue this training, and to add the special training given by military drill. Thus the plan of General Moore, to make the "setting up" exercises counteract any tendencies of military drill to one-sided physical development, could be better carried out; and the moral discipline that results from military drill — discipline in prompt and exact obedience, in patience and self-restraint, and in united action — would be none the less secured.

In conclusion, the Board of Supervisors, agreeing with the Instructor in Hygiene that the Swedish system furnishes the true basis for physical training, makes the following recommendations:

1. That the Ling system of gymnastics be the authorized system of physical training in the public schools, and that it be introduced into them as soon as teachers are prepared to conduct the exercises.

2. That a competent teacher of this system be employed

to train the pupils in the Normal School and the teachers in the public schools.

3. That, for the coming year, provision be made for training at least the pupils in the Normal School, and the teachers of the first and second classes of the Primary Schools, and the fifth and sixth classes of the Grammar Schools.

Respectfully submitted,

ELLIS PETERSON, For the Board of Supervisors. 745567

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