PHYSICAL EDUCATION.

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THE INFLUENCE OF THE BICYCLE IN HEALTH AND IN DISEASE.

ABSTRACT BY C. M. BURSLEY.

There is hardly an organ in the body which may not be influenced, one way or the other, by proper or improper use of the bicycle. I propose to consider the subject from the following standpoints: First, the use of the bicycle in health. Second, the use of the cycle by persons diseased. I have collected statistics from a number of riders who have kept accurate records of the years they have been riding, and approximate records of the number of miles they have ridden in that time. In examinations made by me I have tabulated the most important features and find that these men have ridden from five to thirteen years, and in that time have traveled from 5,000 to 27,000 miles. They show an average chest expansion of 1 4-7 inches, heart usually hypertrophied, without dilatation, average age 31 4-7 years, chest expansion 95 per cent. above normal, 5 per cent. normal.*

This demonstrates two important facts very clearly. First, that men who have ridden a great deal for a number of years have acquired simple cardiac hypertrophy without dilatation; and second, that their breathing capacity is greatly in excess of that of the average man. The cardiac hypertrophy that I refer to is due to a simple increase of muscular tissue and is in the nature of a healthy growth, or development, induced by exercise. It is precisely similar to the hypertrophy which occurs in any other muscle which has been used a great deal.

For more than a century man has shown a tendency to develop the different qualities of the mind and has paid but little attention to the gradual degeneration of the muscular system, and to the consequential reduction of his powers of physical endurance. The dangers attending this physical degeneration of the race have of late years been gradually instilled into the public mind, and this has resulted in a healthful reaction. Men, and what is of almost equal importance, women, are gradually beginning to comprehend the advantages of physical development, and are in a fair way to understand that the highest type of man, taken as a whole, is not represented by intellectuality alone, but more properly by a judicious combination of mental and physical vigor. Ten or fifteen years ago it was exceptional to find business and professional men or women who practised any special form of exercise. To-day thousands are making physical exercise an important feature of their daily duties. As a natural consequence of this gradual but universal physical development which will only be attained in time, we must expect to observe a relative development of some of the internal organs, particularly of the heart and lungs. The simple hypertrophy of the heart, observed in most bicycle riders who have ridden to any extent, will gradually become common, and finally will be accepted as normal, and what is known to-day as the normal heart will then be considered degenerated.

A second glance at the table shows that all the riders have a greater breathing capacity than the average man. The chest of the average man expands an inch when the lungs are inflated to their greatest capacity, while in those I have examined the average lung inflation is represented by a chest expansion of one and four-sevenths of an inch, which is an excess of four-sevenths of an inch above that of the average man. This excess is unquestionably of great advantage to the individual possessing it, when it is taken into consideration what a great influence is

*The doctor takes this measurement at about the ninth rib. His figures indicate the possible increase above normal. ED.

exerted on the general health and on the proper performance of the functions of the various organs by a perfect oxygenation of the blood, and when there is added to this the action of a powerful, muscular heart, it can readily be perceived that bicycle riding, conducted properly and for a long time, induces a condition of cardiac and pulmonary development which must exert an enormous influence in maintaining the proper functions of other organs, in preparing the organism to resist disease, and in overcoming disease that has been contracted. The muscular system of the bicycle rider is, as a rule, uniformly well developed.

It is often claimed by those who are not properly informed that the exercise develops the muscles of the legs at the expense of the rest of the body. This is not so. On the contrary, the muscles of the back, chest, arms and abdomen are employed a great deal, not to the same extent as the muscles of the legs, but sufficiently so to consider bicycle riding an exercise inducing general development of the muscular system. Excessive work on the wheel is, for the average man, unquestionably injurious. This is particularly true of young lads, many of whom consider themselves the coming racing champions of the world. They can be seen in the streets and on the country roads, tearing along at the top of their speed, the body thrown forward, the back humped and the arms fixed and rigid, the chest necessarily contracted and preventing its proper expansion, at the very time when free movement of the chest walls is most necessary. In such cases healthy development is likely to be arrested, and cardiac dilatation, improvement of the blood and lowered vitality of the system are probable consequences. Parents and physicians should use their authority to prevent this abuse in the rising generation, and a youth who will not ride properly should not be allowed to ride at all.

It has been claimed that appendicitis can be sometimes attributed to this faulty position in riding. While it is undoubtedly true that persons who ride the wheel, no matter in what posture they ride, may have appendicitis, there is nothing in literature to prove any direct relation between appendicitis and bicycle riding as a cause and effect. Riding great distances at rapid speed is an abuse of the wheel which cannot be too severely condemned. It is not at all uncommon for large parties of riders of both sexes to go on what are called "Century runs," that is, to ride a hundred miles often within a limited number of hours. To many riders of experience, who are in good condition and possess excellent powers of endurance, this may not be a difficult feat to perform, but many others in making the attempt suffer from exhaustion which leaves its traces for several days. There are others again who travel shorter distances, but who ride at such speed that they return home thoroughly tired out. This, if it occurs only occasionally, is perhaps of little moment, but when the repetition is frequent it is undoubtedly injurious.

Moderate exercise, properly performed, invigorates the system, strengthens the muscles, and increases the power of physical endurance, but excessive and exhaustive exercise does none of these things; on the contrary, it is decidedly injurious to health and should never be encouraged. Under certain conditions diseases of the genetourinary tracts may with great probability either be induced or else, if they already exist, they may be aggravated. Cases of prostatitis, urethritis, and cystitis have been reported, which seem to show quite conclusively that the friction or jolting of the perineum against the saddle was the exciting or aggravating cause. Such cases are due to the carelessness or ignorance of the rider. An individual in riding the cycle, just as in riding the horse, should sit upon the gluteal muscles and not upon the perineum. All bicycle saddles can be tilted either forward or backward, and every person who rides should so adjust the saddle that the weight of the body is borne by the gluteal muscles and not by the perineum, otherwise it is quite probable that injurious results may follow.

The use of the wheel by persons diseased, when considered in the light of a therapeutic agent, is a subject of considerable importance. It also leads us to inquire whether there are not physical conditions under which the bicycle should be absolutely prohibited. In certain diseased conditions of the heart bicycle riding may prove very beneficial, and in slight valvular affections, bicycle riding when properly prac-

tised, may prove of great service, because it improves the nutrition of the organ and develops the muscular fibres, thereby enabling the heart to perform its work more effectually. But no one suffering from any cardiac affection should ever ride a wheel unless advised to do so by his physician; and in such instances the physician should make frequent examinations in order to determine whether benefit is being derived from it or not.

Where exercise is advisable in heart affections, I know of no better method of obtaining it than by the proper use of the wheel. But bicycle riding can cause as well as cure cardiac degenerations. This is particularly liable to occur in subjects whose cardiac muscular fibres are abnormally weakened from disease, dissipation, or from long neglect of such exercises as are requisite for maintaining the heart in a healthy condition. In valvular lesions also immoderate riding will unquestionably aggravate existing abnormal conditions. In short, it may be said that bicycle riding may benefit or injure the heart, according to the condition of the heart and the manner in which the individual conducts his exercise, and the general principle may be adduced that, while the moderate use of the wheel is conducive to cardiac development, the excessive use endangers cardiac degeneration. What has been said in relation to cardiac diseases applies in the main to pulmonary affections. Moderate exercise of the lungs by the use of the wheel practised systematically and for a long time will undoubtedly retard and perhaps completely arrest some degenerative changes in the lungs. On the other hand, I can conceive of nothing which will be more injurious to certain abnormal pulmonary conditions than the excessive use of the wheel. The same general rule can be formulated here that is applicable to the heart, that is: That the moderate and proper use of the wheels results in pulmonary development, while the excessive use may be followed by injurious consequences. In functional dyspepsia and constipation it has been known to be of great benefit, but only when followed systematically.

There are two other conditions I wish to refer to in which the use of the wheel has exerted a beneficial influence; these are gout and diabetes. Possibly both of these diseases are benefited by the great quantity of oxygen consumed, and by the improvement in digestion and assimilation. If we accept the view that the manifestation of gout depends upon excessive formation of uric acid in the system, it can be readily understood, theoretically at least, how bicycle riding can modify or arrest this process. First, by the improvement of the digestion and assimilation; second, by greater demand upon the nitrogenous compounds required by the repair of the muscles; third, by increased oxygenation of the blood which increases the elimination of mates; fourth, by the further elimination of morbid material through the increased activity of the sweat-glands. In diabetes the amount of sugar excreted is diminished when the bicycle is used. The explanation of this fact seems to be reasonable, and is similar to that just offered in reference to gout Bicycle riding is one of the best forms of exercise for maintaining health, and in many forms of disease, when used cautiously and under medical supervision, is found to be of inestimable advantage. —*Graeme M. Hammond, M. D., in Medical Record, February 2, 1895.*

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Man presents physical, mental, and spiritual aspect. We believe that a normal development of the physical is a necessary antecedent to the normal development of the mental and spiritual. We speak on physical education for this reason and on this basis.

Entered at the post office at Springfield, Mass., as second-class matter, March 7, 1891.

The American Association for the Advancement of Physical Education has at last taken on a form that promises definite and practical utility. The steps preliminary to this are briefly as follows:

The editor of this magazine proposed to the council and through them to the society, at the meeting held in Chicago in '93, that the society have subdivisions for each section of the country; each meeting an-

nually, the general society meeting only once in two or three years. This proposal was favorably considered by the council, and also by the society; but it was felt that so radical a measure should receive longer thought, and that those not present at the meeting should have an opportunity of expressing themselves. Accordingly it was referred to the next meeting of the society, at New Haven, in '94; the matter came up for discussion again, and was again favorably considered, and forms of organization were considered more in detail. A committee was appointed, with Dr. Hartwell chairman, to draw up and present a suitable form for organization, with the recommendation that the general form of the North American Turnerbund be adopted. This committee reported at the New York meeting in April first, orally. After approval of the general plan they were instructed to at once put the plan to paper in detail, and report at the business meeting. This was done and after some discussion the report was accepted and adopted.

There were a few who felt that the action was hasty in view of its far-reaching importance, and also that the effect of each provision should be better known and understood before it was adopted. On the other side it was said that the matter had been discussed now at three annual meetings, and that nothing except experience would enable the committee to foresee the detail working of each provision, and that the only way to proceed was to adopt, go ahead with the new organization, and then alter it wherever it was found to be weak.

Instead of electing a new set of officers, those then in office were instructed to hold a meeting in Boston, before June 1, and elect a council according to the provisions of the new constitution. This was done on May 25, and the following members and substitutes were elected. They are to elect officers from their own number. Dr. E. M. Hartwell, Dr. D. A. Sargent, Mr. Chris. Eberhard, Dr. G. W. Fitz, Dr. Edward Hitchcock (Amherst), Miss A. M. Homans, Mr. Ray Green Huling, Miss Hope W. Narey and Dr. Channing. Substitutes: Mr. Hermann Boos, Miss Ireson and Miss Mary Allen.

There are of course a number of changes which experience will show to be necessary in the new constitution.

We do not understand at present how the membership in the national body is constituted. The general constitution certainly provides for individual membership, while the statutes seem to provide for society membership, with voting restricted to a limited number of delegates. To put the matter concretely: Can one join the national society without joining a local society? If so, is he a voting member? If there are no individual members what does Article III on membership mean? We anticipate that adjustment is needed.

In a number of cases the term Gymnastic Union (N. A. Turnerbund) is used instead of A. A. A. P. E. This can easily be corrected by Dr. Hartwell who was given editorial power.

The advantages which it is hoped this new form of organization will secure are briefly:

1st. That it will gradually stimulate the formation of local Physical Education societies in every place where there is interest in the subject, and that these societies will be largely effective in adding to the local interest already awakened.

2d. That there may be more frequent meetings of the membership, in the various sections, than there have been in the past. Each section and district convention and council can be as effective as the national council has been.

3d. The affairs of the national council can be more easily and effectively administered, as the membership will all come from one locality, and thus can have frequent meetings.

The society is out of debt, has a good council and its affairs are certainly in a most promising way.

We have placed as our leading article in this number an abstract of a remarkable paper on wheeling, by Dr. G. M. Hammond. His points as to the ultimate effect of bicycling on the heart and lungs are certainly most interesting. We commend the article to all of our readers.

OF WHAT USE ARE THE PARALLEL BARS?

TRENTON, N. J.

TO THE EDITOR OF PHYSICAL EDUCATION:

DEAR SIR—There is a question, which, to the orthodox gymnast may seem absurd, but upon which I would like some light. It is, what is the use of the parallel bars?

It seems to me the Swedes are largely right in the general idea of *educating* those muscles that are used or likely to be used in ordinary life,—and that might include work on horizontal bar and rings as training the muscles used in climbing,—but from that standpoint the parallel bars are barred. Further, take the fundamental position of "rest," we have such an authority as La Grange to condemn it. Or, consider the upper "arm rest;" the large artery and nerve of the upper arm are placed between two hard substances, the bone and the bar.

The characteristics of agility and courage can be developed as well by other apparatus, and considering the above objections I find myself leaning to the conclusion that, time-honored as they are, the parallel bars should be relegated to athletic clubs and other institutions where the purpose of exercise is simply sport.

One fundamental point in physical training is an erect carriage with shoulder blades well back, and the strong tendency of parallel-bar work is to interfere with that by the pronounced development of the pectoral muscles. Any light you can shed on this question will be welcome.

Yours truly,

H. B. BOICE.

The editor will not attempt to make an answer except for himself.

When in college he was led to devote himself with some considerable degree of faithfulness to the old style of work on the parallels. He was tall, slender, and had just been growing with great rapidity. The result of a large amount of work involving "dipping" was that at this critical time his shoulders were drawn forward, and all the characteristic results of this work were shown in him. These results will probably never be entirely recovered from, for six years of constant endeavor have so far failed to make the erect carriage automatic.

After such an experience he would naturally be opposed to the use of the parallels. He still believes, however, that they have a definite place of usefulness for certain valuable kinds of work, *i. e.*, that in which the arms are kept straight and in which the weight is not supported by the arms, except momentarily. It will be seen at once that this excludes a large part of the work ordinarily done, but we believe that it is this work which produces the evil results that have been referred to. One further caution should be observed. The chest should always be kept in an "active" position, also neck rigidly erect. Even if it is granted that we thus avoided the evil results, we still have not indicated for what they are valuable.

In the first place we affirm that there is no indispensable piece of apparatus. Each piece is valuable in that it enables us to add variety to the work. The parallels are especially valuable on account of the large variety of work available for beginners, and also that they lend themselves easily to large classes. Two can work at a time, one on each end, and completed exercises of a very short character can be selected; in all of these respects comparing favorably with any other piece of apparatus.

Wisely used we consider them valuable but not indispensable. There is nothing in the gymnasium but what is dispensable. The gymnasium itself is not indispensable. The thoroughly trained teacher of gymnastics is the one absolutely necessary center to which room, apparatus, etc., are useful tools.

WHAT BECOMES OF FOOTBALL GRADUATES?

The following article on "*Ex-Athletes*," from the Young Men's Journal is of much interest. It does not admit of any conclusions but raises many questions. How do these men compare in life with the average of their classes? Would a list of the honor men show up any better? What will the comparative standing be twenty years from now?—ED.

EX-ATHLETES.

As the years roll in and out people, who are more or less interested in sporting events in an amateur way, wonder what has become of the many heroes of the past, who gained fame on the gridiron.

"What becomes of all your football heroes?" recently asked a gentleman whose name is familiar in two hemispheres. "Do they make their mark in the battle of life, or does their college training simply qualify them from a physical standpoint? I never hear of them after they leave college, except

perchance to run across their names in signed football articles."

This started an interesting debate upon the value of a football education to fit a man for the universal struggle for wealth and position. The opinions were varied, and an investigation was started concerning the present standing of the so-called football heroes of the last decade or so. The result was interesting and conclusively showed that none of the stars of the college gridirons had set the world on fire, although, as George Adee of Yale, said, the football lions of other days are, strictly speaking, young men still.

Only one prominent player has made any advance in the political world, John Simpkins, end rush for Harvard in 1885, representing Massachusetts in Congress. In the financial world Robert Bacon, of Harvard's 1880 team, has worked himself up to a partnership in the firm of Drexel, Morgan & Co., while Frank Loney, captain of Princeton's 1880 team has amassed a fortune dealing in Western real estate. Several are fairly prominent in the law, but on the whole the heroes of the football field have scarcely distinguished themselves in their several walks of life.

Following is a hastily gathered story, necessarily curtailed as to the details:

Walter Camp of Yale, the most noted man in intercollegiate football to-day, is with the New Haven Clock company. His income is augmented by writing expert football literature, and it is safe to assume that his coaching also brings a financial return.

Alexander Moffatt, Princeton's rattling fullback and 1888's captain, is general agent of the New York Electric Equipment company at Duane and Elm streets, New York city.

"Snake" Ames, Princeton's most famous player, and the greatest college pitcher of his day, is largely interested in Western mining and iron works, although they came to him in the shape of an inheritance. He has settled down in Chicago and, speaking in the sporting sense, is "on Easy street."

Perry Trafford, Harvard's great guard, who faced the never-to-be-forgotten Heffelfinger when the crimson defeated the blue in 1890, is a lawyer on Wall street and said to be doing fairly well.

Heffelfinger, who disputes with Frank Hinkey the honor of being the greatest player turned out at New Haven, is in the boot and shoe business at Minneapolis.

Bernie Trafford, Perry's brother, who captained Harvard in 1891 and 1892, is employed by the Bell Telephone company as traveling agent.

Doc. Edwards, Princeton's 1884 tackle, has out a modest law shingle in the Temple Court Building. He says that college football educates a man to bear adversity and the hard knocks of life with equanimity.

Billy Bull, Yale's kicking fullback of 1886, 1888 and 1889, is doing football for a New York evening paper. His kicking nowadays is directed at the editor's blue pencil.

Laurie Bliss, Yale's halfback, who came into great prominence at the Springfield Harvard-Yale game of 1892, is clerking it at A. G. Spalding & Co.'s, at Philadelphia.

His brother "Pop," does not appear to have any occupation outside of football coaching.

Hector Cowan, incomparable as Princeton's tackle in 1886, 1887, 1888 and 1889, is kept busy tackling evil from the pulpit.

Dick Peabody, Harvard's star fullback in 1884, 1885 and 1886, is also engaged in the good work,

So is Charley Gill, Yale's famous tackle of 1886, 1887 and 1889. Gill achieved as great prestige in the boat as he did on the gridiron, and his athletic training was displayed in his first call to a small village in Maine. There was no church, and the Yale crack shouldered an ax, hewed enough timber to build his meeting-house, after which he called upon the lumbermen to come and be saved. This sturdy minister has decided to go into missionary work, and will shortly start for Africa or China. The heathen of either country had better not interfere with this missionary.

Vance McCormick, Yale's captain and quarterback in 1894, is in the iron and coal business in Pennsylvania. Vance is in a position to take things easy if he feels inclined, for his father is in partnership with Don Cameron, and the firm's possessions are immense. McCormick is making his home in Harrisburg.

Harry Beecher, Yale's greatest quarterback, is in the insurance business; as is Walter Cash, Princeton's 1889 tackle.

A. J. Cumnock, captain of Harvard's 1890 team, is looking after his father's interests in the latter's woolen mills at Lowell, Mass.

John Cranston, Harvard's guard in 1889, 1890 and 1891, and the first man to wear the protecting nose mask in a football game, has gathered a nice berth, being the general agent of the New England branch of the Equitable Life Assurance Society. He is located at Boston.

Wally Winter, Yale's tackle 1890-'93, is swallowed up in the mighty West, but his fellow tackle, Hamilton Wallis, awaits law clients in a Pine street office, New York city.

F. W. Wallace, better known as "Kid," who made things hum while playing end rush for Yale in 1886-'89, is employed at the Ansonia Brass works, of which his father is president.

J. R. Finlay, still spoken of as the strongest man who ever played on a Harvard team, is mining somewhere in the Rocky mountains. He had been a guide to Pike's Peak before he came to Cambridge, and the effete East had no charms for him.

Clinton W. Bird, captain of Princeton's 1884 team, is the Boniface at the Hotel Winthrop, One hundred and Twenty-fifth street

and Seventh avenue, and is doing as well as the famous Mr. Reilly.

Tracy Harris, Captain Bird's great right guard in 1884, has offices in the Stokes building, Cedar and William streets, whose capaciousness would indicate that he fell into his right calling when he elected to take up the law.

Edgar Allen Poe, who led the orange and black when Nassau won its glorious victory over Yale at Berkeley, is a Baltimore lawyer. His prospects are very bright. His father is one of Maryland's ex-attorney generals.

Lawrie Riggs, Princeton's center in 1889, 1891 and 1892, is also in law at Baltimore.

"Slugger" Mason, Harvard's end rush, 1889-1892, is employed by his college chum, Cranston, in the Equitable Life Assurance offices at Boston.

Dudley Dean, who made the memorable run down the length of the field at Springfield in 1890, with Josh Hartwell in hot pursuit, was until recently private secretary to the president of the Atchison, Topeka & Santa Fe railroad, and is now domesticated at Massillon, Ohio.

J. H. Sears, captain of Harvard's 1888 team, has chosen journalism. He is at present editor of Harper's Young People.

Vic Harding, whose memory will ever be green at Cambridge for his work in 1888 and 1889, is also in the same line, being a reporter on a Chicago paper.

Captain Warren, of Princeton's 1891 team, is with the Otis Elevator company in the mechanical branch at Yonkers.

C. A. Porter and W. A. Brooks, the stars of Harvard's team in 1885, 1886 and 1887, are attending physicians at the Massachusetts General Hospital in Boston and also assistants in Harvard's Medical School.

"Sport" Donnelly, the Princeton end rush, whose abilities were so prominently displayed in behalf of the orange and black in 1889, is in Chicago.

W. A. Coolidge, who not only played great football for Harvard in 1881 and 1882, but covered second base in a manner which would bring the League managers clustering around him these days, has made his mark as a lawyer in Boston, and is attorney for the Boston & Lowell railway.

Tom Thacher, Harvard's end in 1880, has also prospered and has extensive woolen interests in Massachusetts.

Tom Nickerson, his side partner on the team, is an Episcopal minister in New Jersey.

J. S. Black, Princeton's splendid halfback of 1887 and 1888, tackled law, but did not make great headway with it. His father, Jeremiah S. Black was one of Pennsylvania's most eminent jurists in his day, and young Black may have thought there was enough law in the family.

A FIELD DAY. B. C. 400.

"Soon after, they prepared to perform the sacrifice which they had vowed. They also celebrated gymnastic games upon the hill where they were encamped, and chose Dracontius, a Spartan, to prepare the course and preside at the contest. When the sacrifice was ended, they gave the hides to Dracontius (for prizes) and desired him to conduct them to the place where he had made the course. Dracontius, pointing to the place where they were standing, said: 'This hill is an excellent place for running, in whatever direction the men may wish.' 'But how will they be able' said they, 'to wrestle on ground so rough and bushy'? 'He that falls,' said he, 'will suffer the more.' Boys, most of them from among the prisoners, contended in the short course (stadion, 606 3-4 English feet), and in the long course (6 to 24 stadia) about sixty Cretans ran; while others were matched in wrestling, boxing, and the pancratium. It was a fine sight; for many entered the lists, and as their friends were spectators, there was great emulation. Horses also ran; and they had to gallop down the steep, and turning round in the sea, to come up again to the altar. In the descent, many rolled down; but in the ascent, against the exceedingly steep ground, the horses could scarcely get up a walking pace. There was consequently great shouting, laughter, and cheering from the people."

RECORDER—Xenophon.
PHYS. DIR.—Dracontius.

C. F. B. Wall.

"LOCKER BUGS."—What are they? They're not in the lockers; they do no particular harm nor any *particular* good. We are told that several Branches are infected by the same species. They wander around the gymnasium till the "work" bell rings at 8.15. Then suddenly they vanish and appear again in groups in the locker rooms. Thus far they have done no material damage but other members are inclined to stop and look at them and lose a valuable dumb bell drill or Indian club exercise. As a rule these "bugs" are rather round-shouldered and occasionally one is bowlegged or knock-kneed. They need more light exercise and we hope they will read rule vi and by a process of evolution be transformed to a species with higher aspirations. If every member would give his attention to this matter this pestilence would doubtless disappear as did the wall flowers last year.

These bugs are seldom seen at the Thursday night or Sunday meetings. The meetings are for men. *Selected.*

CURRENT TOPICS.

E. M. HARTWELL, M. D.

The A. A. A. P. E. held its tenth annual meeting in New York city, at the Teachers' College, on Morningside Heights, April 25, 26 and 27. The arrangements for the meeting were well conceived and smoothly carried out; and the President and Council of the Association, whose efforts were most efficiently seconded by the Local Executive Committee, are to be congratulated on the character of the meeting, which was above the average of previous meetings.

The attendance, which was fairly representative in point of number of the active membership of the Association, was good; but New York and its neighborhood did not provide so large audiences, except at the Gymnastic Exhibition on Friday evening, as did Philadelphia at the seventh annual meeting. The number of associate members attending was hardly so large as usual, and the teachers of Brooklyn and New York, like the pupils of most of the leading normal schools of gymnastics, were more conspicuous by their absence than their presence. This was due to the fact that very few schools of any kind had vacation at the time of the meeting. Therefore, the purposes of the meeting were frustrated to a certain extent. However, the Association, which was most hospitably treated by the Teachers' College, had an opportunity to observe the admirable features and daily working of that interesting institution.

The Gymnastic Exhibition, held in the Armory of the 22d Regiment, was carefully planned and smoothly put through. As a big thing for one night only, it was well done and drew "a large and enthusiastic audience." It is doubtless well to fire the popular heart by means of exhibition; but the true aim of the A. A. A. P. E. is rather to reach the teaching class and school authorities by persuasion and argument.

The program of the sessions of the Association, taken as a whole, was an unusually varied and interesting one, and so much superior to the gymnastic program that it is to be regretted that the interests of the former were to a certain extent sacrificed to those of the latter; for we presume that the date of the meeting was set on account of the greater ease of securing gymnastic classes from the New York and Brooklyn schools during term time than in vacation. Considered as a whole, the Gymnastic Exhibition reflected very completely and characteristically the present chaotic views and methods of gymnastics in America. As usual the German Gymnastic Societies made a demonstration in force. Their classes showed a regard for precision, finish and "set-up" that has not been shown to an equal degree in any similar exhibition we have witnessed hitherto. This may be taken as an indication that the N. A. Turnerbund is alive to the situation, has determined on self-improvement, and is making progress. Herein is an evidence of vigor and sanity that the apostles of other sects and sets would do well to note and emulate.

In addition to the Gymnastic Exhibition, which occupied the evening of Friday, six sessions of the Association were held; the evening session of Thursday and a portion of Saturday morning's session being devoted to business. The principal business discussed was the scheme for reorganizing the Association, which was reported by a special committee of the Council, in accordance with the vote of the Association at its New Haven meeting in 1894. The salient features of the proposed reorganization were fully discussed during a prolonged session on Thursday evening, and the scheme was adopted *en bloc.* The committee of the Council was directed to make a detailed report in print, on Saturday morning, embodying the principles set forth in its preliminary report. The officers of the A. A. A. P. E. were authorized to hold over till the new National Council should be organized; and to call a convention of the New England members of the Association to elect nine members and three substitutes, of the new National Council of the Association. On Saturday the new constitution, by-laws, and statutes of the Association (modeled after those of the N. A. Turnerbund, but retaining such features of the old organization as were most pertinent) were adopted; and the Council voted to call a convention of the New England members, to be held in Boston, at the Boston Normal School of Gymnastics, on Saturday, May 25, for the election of members of the National Council of the A. A. A. P. E.

The reorganization scheme met with surprisingly little opposition, considering its revolutionary character. In fact, the opinion was generally held that the time had come to attempt a more vigorous and aggressive campaign of education for the advancement of physical education wherever local interest in the cause could be found or planted. The main purpose of the reorganized Association will be to multiply local "Physical Education Societies" for the promotion of the objects set forth in Article 2 of the amended constitution of the Association, which reads as follows: "The objects of this Association shall be: to awaken a wider and more intelligent interest in Physical Education; to acquire and disseminate knowledge concerning it; and to labor for the improvement and extension of gymnastics, games and athletic pastimes in the education of children and youth." The aggregated Societies of a state form a District; the Districts of a geographical section form a Section; and the ten Sections into which the country is divided for the present constitute the A. A. A. P. E. The affairs of the Association as a whole are to be managed by the National Council. The members of the National Council are to be chosen by the convention of that District which is selected by the National Convention (composed of delegates from the Districts in the Association,) to maintain the National Headquarters till the next National Convention shall be held. Boston was chosen at the New Haven meeting as the first National Headquarters.

The affairs of the A. A. A. P. E. for the next two years certainly and possibly for the next four, will therefore be in the hands of the members of the National Council, who shall be elected in Boston, on the 25th of the present month. The component organizations of the Association, *i. e.*, Sections, Districts and Societies, are to be organized similarly to the Association in respect to officers, standing committees, etc., at annual meetings. The early organization of District Associations in Ohio and Michigan was announced at the meeting in New York. We look for wider interest in the advancement of physical education as a result of the multiplication of local societies, and for more concentrated, strenuous and sustained effort towards securing the objects of the Association. Since the Association and each of its component parts will have an executive committee composed of persons who can meet together oftener and act more effectively in the management of the affairs of their respective organizations than was possible in the case of the Council of the A. A. A. P. E., whose members were too often chosen to propitiate divergent or antipathetic interests and always represented widely separated localities, every great city in the country should become the centre of an aggressive local movement against popular indifference and ignorance as regards physical training, and at the same time it acts in concert for common ends with every other city or town that develops hopeful activity in the same field of endeavor. Raiders and guerrillas may bring on a contest—but an army corps is needful to wage a campaign—the greatest present need of physical education in America is to stop raiding and begin campaigning.

As has been already intimated, the program of the general and section meetings at New York was of more than ordinary interest. This was partly due to the number of papers presented, but more largely to the variety of topics treated, and the comparatively large number of new essayists and speakers who took part. We do not recall any meeting of the Association in which so many papers evoked such full, free and animated discussion. This bespeaks a growing and diversified interest, both in formal physical training and in the subjects akin or germane to it. If the noble army of cranks was represented at the New York meeting, it was not made evident in the usual manner. On the whole, the sessions in charge of the Committees on Anthropometry and Vital Statistics of Gymnastics respectively struck the writer as the most noteworthy of the meeting. They certainly gave rise to more discussion than was indulged in at the general sessions. The committees in question had evidently taken greater pains to secure interesting papers and to provide questioners and objectors than has been customary hitherto; they deserve special credit for so doing. Lack of space forbids any attempt to characterize individual papers, but it may safely be said that the Proceedings of the Tenth Annual Meeting will be better worth reading than most of its predecessors, especially if its issue from the press be prompt instead of unconscionably delayed. We are tempted to make favorable mention of several papers, but deem it wiser to await their publication.

BICYCLING.

C. M. BURSLEY, ASSOCIATE EDITOR.

While standing at the foot of State street hill the other day watching the bicyclists who were riding up the hill, I was very much struck by the pedaling of one of the riders. He had a fine ankle action and by the use of it was almost entirely overcoming the dead center which is the terror of every bicyclist on a hill. If the riders of the wheel to-day appreciated the value of good pedaling more and would pay a little more attention to the acquiring of a good ankle action, they would find that most hills that are so hard to ride now would be ridden with a great deal less effort. When riding, if a little care is taken, the free use of the ankle becomes as a matter of course. Good style in riding means a great saving of energy, and is one of the best safeguards against side slipping.

Right along the line of the above is another thing that bothers new riders; that is, lack of co-ordination in pedaling. While walking along Riverside drive in New York the other day our attention was called to a young man who was working hard to climb the hill. He was putting all the power into each downward push of the pedal that he was able, and almost equally as much on the other without knowing it; consequently, he was having a hard time. Right behind him were two young ladies riding along, talking and laughing with each other, apparently not working at all. New riders invariably find this difficulty, and good riders, too, when they first take up racing. The best way to overcome this is to get a pair of toe clips, and in riding hills try and lift the foot so that you will feel the clip press the top of it. A little practice of this kind and you will be surprised to see how much easier you climb hills.

The old axiom, "where ignorance is bliss 'tis folly to be wise," applies with special force to the bicycle era. The fellow who never rode a bicycle is missing one of the most healthful and exhilarating pleasures of life. With him "ignorance is bliss." To become a skillful rider requires perseverance and toil.

Any one walking along our streets cannot fail to observe the large number of really fine lady riders and additions are being made to their numbers each day.

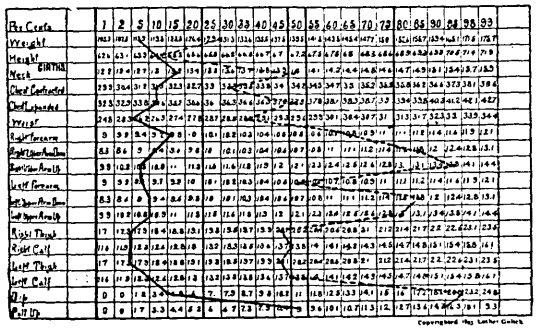
To these we would like to address a word of advice. A lady who is gifted with special cycling ability cannot be expected to refrain from enjoying her special powers, but she should be very careful in manners and behavior. There is no harm in riding far and fast; there is distinct harm and great injury to the sport in any sort of female racing; in rowdy behavior on the road; in masculine dress and manners; by this we *do not* mean any neat bloomer costume, but the knee tights and jackets assumed by some. Any woman who cannot remain feminine in nature and behavior when on a cycle would do well not to mount one at all.

I was talking with a friend of mine the other day, who is a business man and used to be a great lover and rider of the wheel, but who for the past year has given up wheeling. I asked him the question, "Why have you given up bicycling?" His answer was, "Have not the time for it, too much work." I could not help telling him that he was making a mistake and that it was the worst thing he could do, doing brain work, as he was, to give up exercising his body. A man cannot get the best results unless his body is in the best of health. One can accomplish more in eight hours under such circumstances than he can in twelve if he be in poor health. It is absolutely essential for success for the busy man to take regular exercise. Bicyling requires less time than any other exercise and offers the greatest possible benefits mentally and bodily—taking a man away from the bustle and care of the office, filling his lungs with fresh air, starting the blood moving rapidly and building up an appetite that will make all food "taste just as mother's used to." No matter how busy a man may be he should not let a day go by without taking a ride. If a man looks at health as a means of being able to do more and better business, no one would be too busy to ride.

MEASUREMENTS.

W. H. KINNICUTT, ASSOCIATE EDITOR.

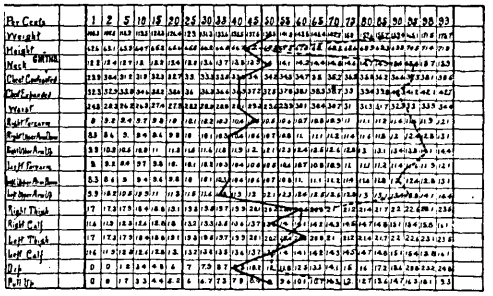
In reading a chart we must bear in mind that its value to an individual is relative and not absolute; that is, there are so many conditions which affect, some even limiting, our physical conditions, that it is impossible to establish an absolute standard which all can reasonably be required to attain. Individual temperament and heredity undoubtedly have much influence upon the attainable degree of physical perfection; no doubt also early training and the physical habits of childhood increase or decrease the future physical limits. With these possibilities in mind we can secure much actual help from the use of our chart, but without such consideration we would soon get into difficulty.



On the chart is shown the training of two ndividuals, both of whom would be classed as small men, as both have the same actual height. The one represented by the black line, though small, is well-formed and symmetrical, the other (dotted line) shows unusual muscular development. The first has been a man of moderate physical activity while the second from childhood has been a constant attendant at the gymnasium.

It is safe to say from a knowledge of the individuals, that the first, though of the same general temperament and age (about twenty-eight years) as the second case, can never hope to secure the development of the other. This, a consideration of the charted lines alone could not demonstrate.

The black line here represents a finely built man who has always been prominent in all-round athletics, a thoroughly healthy man, yet of a highly nervous temperament. A season's vigorous work in the gymnasium produces but the slightest change in his "line." The dotted line represents a man of



similar age and of same actual height, apparently similarly endowed by nature. A comparison of the histories of the two men shows a similar amount of physical exercise, but the mind of the first made him a natural leader among his fellows, while the other and much more phlegmatic man showed no such instinct. The temperaments of the two men differ to a marked degree, as well as their appearances, the first being dark-eyed and black-haired, the other fair, blue-eyed and flaxen.

The probable impossibility of the first to emulate the second in physique the chart cannot show.

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C F. B. WALL, Springfield, Mass.
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BOOK REVIEW.

Methods of Chest Examination. Supplementary to Auscultation and Percussion. By Edward O. Otis, M. D. Reprinted from the Boston Medical and Surgical Journal, April 11, 1895.

Dr. Otis has written a very suggestive article on the above question showing the great value of the spirometer in diagnosis of diseases of the lungs. It should be read by every person who has physical examinations to make.

Barnjum Bar Bell Drill. R. Tait McKenzie, M. D. Demonstrator of anatomy and instructor of gymnastics in McGill University; late house surgeon Montreal General Hospital, etc. Published by the

Triangle Publishing Co., Springfield, Mass. Twenty-six pages. Price, one dollar. Illustrated by 252 half-tone cuts, one by one and one-half inches.

This drill has been in use in many parts of the country for a number of years and has now for the first time been suitably published. The book is elegantly printed on coated paper, but one side of each sheet being used. Every movement is shown by a reproduction from a photograph of the work actually being done. The muscles chiefly used by each exercise are named.

PERSONALS.

BRITISH NOTES.

At Birmingham, Mr. J. M. Hubbard, at the hands of hundreds of gymnastic-loving individuals, was the recipient of a two days' jubilee benefit, which was an unqualified success from beginning to end. Mr. Hubbard is just fifty years of age, thirty of which he has spent in Birmingham as teacher of gymnastics.

Mr. Wallace Maclaren has just brought out a new and enlarged edition of his father's popular work entitled "Physical Education." No alterations have been made, but much has been added with the effect of bringing it more up to date.

At Dublin, before a tremendous audience, Liverpool once more won the Challenge Shield of the N. P. R. S., and again the silver trophy reclines for a year by the banks of the Mersey.

The United Kingdom Amateur Gymnastic Championship was held late in April at Birmingham, bringing the largest and most representative entry ever known for such an event. Twenty-five entered and nineteen competed. The items were Horizontal and Parallel Bars and Flying Rings. Some good work was shown; but all the visitors worked indifferently, or rather below their standards. Platnaeur, Green and Ware eventually won the gold, silver and bronze medals given by the N. P. R. S.

The German Gymnasium at Kings Cross, lately gave their annual display to a very good audience; the usual items given were well received, especially the mass drills—the place badly needs a thorough overhauling, cleaning and decorating—the general dinginess being very oppressive.

At Leeds on May 4, the United Kingdom Amateur High Jump Championship was brought off under N. P. R. S. rules. After a good struggle, H. Vickers (Liverpool Gymnasium) cleared five feet ten inches and gained championship honors. Aitkin (Liverpool) second and Fenwick (Dundee) third.

The Exeter Hall Gymnasium Annual Competition has just been concluded; it included a mile run, swimming, high jump, rope climbing, strength pulls, movements upon five different gymnastic appliances and proficiency on two drills.

ASSOCIATION TRAINING SCHOOL NOTES, SPRINGFIELD, MASS.

Max J. Exner, '92, Carleton College. Northfield, Minn. He has been raising money for athletics by means of Basket Ball games. The athletic association depends largely upon the proceeds of the annual gymnastic exhibition. He has brought out hoop drill, bayonet drill and also fancy marching for women. Expects to graduate next year.

P. L. Foss, '92, Indianapolis, Ind. Cycling club has been started amidst great enthusiasm with a wheelmen's banquet. Sixty-three charter members. Two regular runs per week, starting at 7.30 p. m. Will have a series of road races this summer with the following distances: 5, 10, 15, 20, 25, 30, 35, 40, 50, 75 and 100 miles. The following were the toasts at the banquet: "Is Wheeling Healthful?" Dr. Heath; "Bicycles and Bloomers; Which is Pleasanter, to go out Wheeling with a Lady or Gentleman?" Archias E. Winter; "The Gospel Wheel," Mr. Appleby; "What is Meant by 'A Wheel in Your Head'?" H. L. Whitehead; "How to Teach a Lady to Ride," Mr. Bishop; "The Wheel of To-day and of Yesterday," T. A. Hildreth; "The Bicycler's Right of Way," Mr. Good; "Bicycling in Europe," Dr. Wynn. He has recently completed an all-round contest of twenty-four events; three events were done each week, Monday evenings; conducted same as regular class work. No man excused, whether he could do it or not. Scoring done on the Pentathlon plan, the three highest receiving gold, silver and bronze medals. He has dropped the old idea of trying to manage several lines of work at the same time. Is trying to arrange work so that each will come at a certain period of the year. Expects to hold the gymnasium men through the Summer by bicycle runs and First Aid class.

W. T. Owen, '90, New Bedford, Mass. Gymnasium attendance picked up, especially among the business men. Basket Ball successful. Visitors' gallery open to visitors every Saturday, and occasionally other evenings to ladies. Much interest has been shown. Lang Ball has been pushed with business men's class, more so than Basket Ball. The abdominal work in Lang Ball has been found to be very beneficial.

H. F. Kallenberg, Instructor '90, University of Iowa, Iowa City, Ia. Basket Ball has been a drawing card during the year. Will be at Summer School, Lake Geneva, this year. Has been using a leather strap in place of rope for high jump, one-half inch wide, one-eighth of an inch thick, small weights on the end. Great advantage over rope in that it never wears out and the weights do not come off. Championship matches between the two leading teams of the Girls' Basket Ball league. It was won with a score of 1 to 0. Game is already arranged for an intercollegiate match between the girls of University of Iowa and Iowa College.

DURANT GYMNASIUM NOTES.

Miss Carrie S. Osgood, '93, re-opens her classes at North Conway, N. H., about June 15, continuing through the season.

The normal class for this year closes on May 29, at which time the Alumnæ Association holds its annual business meeting, and election of officers; and its social re-union of members, active and honorary.

Dr. Mara L. Pratt, teacher of Medical Gymnastics, spends the summer in the West, with various engagements in the educational line, as talks before the "Twentieth Century Club," in both Detroit and Chicago; to a "Mothers' Club," in Chicago on "Pre-natal Influences," and is also given a reception at the "Great Eastern," Chicago, by teachers of that city.

Miss Annie Payson Call, teacher of Delsarte work, sails for England, June 26, on the Cephalonia. She expects to spend the summer resting, chiefly in Cambridge.

Prof. Hermann Boos, instructor in German Gymnastics, sails on the Fürst Bismarck, May 28, to take a course of study at Vienna and Stockholm, especially in Medical Gymnastics.