

The Editor's Viewpoint

"About all the really good men who have ever lived have been in prison."—Elbert Hubbard.

"It is not a disgrace to have been in prison. Moses had to flee from the Egyptians. Socrates died in a cell. Christ was made a convict because he was a friend of the people, and was crucified as the first preacher of democracy."
—Henry D. Lloyd.

If you were to spend your life, working in the interest of what you thought to be a great purpose; if you were in receipt of thousands upon thousands of letters from men and women who were deeply grateful to you, many of whom even maintaining that you have actually saved their lives; many stating that your theories were making their homes more happy, that they had strengthened and beautified their own bodies and those of their children; if every evidence clearly showed that your work was accomplishing great good to everyone that came within its influence, what would you think, if the law suddenly stepped in and declared that you were guilty of crime?

**TWO THOUSAND DOLLARS
FINE AND TWO YEARS
IN THE PENITENTIARY**

To a certain extent, such an unlooked-for happening will give the reader a clue to my thoughts when I was first arrested for circulating through the mail, that which was termed "obscene literature." I must admit that I did not take my arrest seriously. How could a man do so who was simply trying to elevate the morals and raise the physical standard, of humanity in general? I had no idea that my offense was especially serious. It seemed to me that even if it were an offense it was simply a technical one, and that a small fine would be the extent of the penalty. When I made my last visit to the Federal Building at Trenton to attend the hearing of the motion of my attorney for a new trial, I can assure the reader that I had not the faintest idea of the surprise that awaited me.

Judge Lanning listened to the argument of my attorney in which he stated his reason believing that I was entitled to a new trial. The motion for a new trial was refused. The next move in the process of law was the passing of sentence. My attorney proceeded in a few words to call attention to the work that I am doing, and the responsible position that I hold in the mercantile world; that I was President of three large companies that have nearly one thousand stockholders, and that each one of these companies was engaged in enterprises which depend for their existence upon the education of the public in the building of fine, strong bodies. He called attention to the object of the serial to which objection had been taken, and to my endeavors in every way to follow the law as nearly as I could understand it. When my attorney stated that the plates of the story had been destroyed, Judge Lanning asked me to personally verify this statement, which I did, at the same time emphasizing the statement of my attorney that I had followed the law as nearly as I could interpret it, by stating that one of the special duties of the attorney connected with the publishing company, was to pass on articles which I thought might be unlawful. I made this statement to prove to the judge how closely we endeavored to properly follow and obey the law. But, I must admit, that he seemed to think that we were endeavoring to see how closely we could sail toward infringing the law without being punished.

All this detail may seem monotonous, but I can assure the reader that at the time it was decidedly otherwise, for when I stood up to be sentenced I realized that I was not to be dealt with easily. The judge read the statutes that I had offended. He briefly went over the

crime (?) that I had committed. He stated that there was not the least possible doubt as to the status of the story. It was "flew, obscene, lascivious," and, said the judge, "I fine you two thousand dollars and sentence you to two years in the New Jersey State Penitentiary at hard labor." I must admit that it took me some time to fully grasp the meaning of the terrible penalty that had been dealt out to me. Here I was branded as a felon, condemned to a term of years in the penitentiary, and for what? Doing that which my conscience believed to be my stern duty. Condemned as one catering to immorality, when in reality my work has been and will be just exactly the opposite in character. Everyone who has followed my career, who has read my literature, knows this. I must admit that it was a terrible shock. Strong man as I am, my senses seemed benumbed; the furniture in the court room seemed as though it swung back and forth before my eyes. Is it thus that a man must be paid for a life-work, for the benefit of his fellow men? Is the law so harsh, so unjust that it considers a man a criminal regardless of his motives, regardless of his work?

I must admit that some minutes passed before I recovered my normal condition. But when I did fully come to myself, when I realized completely the penalty that had been dealt out to me, I was thoroughly aroused. More than ever, before the pitiful need of the reform that I stand for, was emphasized. A man who stands for righteous principles, who is fighting for a just cause, is strengthened by opposition, by persecution, and this unjust sentence passed upon me increased my desire for activity, and accelerated my working powers,

I HAVE "GIRDED UP MY LOINS." I am going to enter this fight with all the intense energy of a man who is firmly convinced that he is in the right. I have worked for this reform before, but my efforts will be redoubled, my activities will be enhanced many times.

With this penalty staring me in the face, which, to my mind, is a disgrace to the nation, I am going out among the people, among my friends and my enemies. I am going out to preach the gospel that stands for manhood and womanhood, that stands for clean minds and clean morals. I am going to put my case before the people. I am willing that my verdict should rest with the people. I am willing that my life and my work shall be submitted to any tests that may be brought to bear upon them. I am not faultless. The fact I am teaching high ideals does not necessarily indicate that I have always been immaculate. I have made many mistakes. It is only through mistakes that one learns the truth; that one is able to rise to a higher and nobler plane. In this miserable prudish age, you can only learn through devitalizing experience. I am now better fitted because of this experience to perform the work that is needed to warn the future men and women against encompassing evils. I am now more qualified to send a warning to millions upon millions of young men and young women than ever before. In my appeal to the people, there will be much plain talk. There has been too much mystery and vulgar secrecy, and evil has resulted therefrom.

The title of my lecture will be PRUDERY AND DEGENERACY. Prudery, I consider the greatest crime of the century. Degeneracy, ominous, skeleton-like, stares the nation in the face. I believe I can prove to any intelligent audience, that the knowledge that I have been trying to disseminate through the aid of my literature, including the serial story that has been condemned by the courts, is most pitifully needed. That it deals with evils and vices that are at present the cause of a large portion of the increase of crime, divorce, insanity, weakness and general physical decrepitude that is met with in all civilized communities.

A partial list of the various halls and theaters in the principal cities where I will lecture is appended herewith, and I hope I will be greeted by enthusiastic audiences everywhere.

January 2, Boston, Converse Hall, Tremont Temple.

January 4, Philadelphia, Association Hall, Y. M. C. A. Building.

January 7, Baltimore, Lehmann's Hall.

January 11, Cincinnati, Auditorium, Odd Fellows' Temple.

January 14, Cleveland, Cleveland Gray's Armory Hall.

January 16, Chicago, Orchestra Hall.

GEORGE WHARTON JAMES, who is well-known throughout the entire country as an author and lecturer, has come forward and offered his services in behalf of the physical culture propaganda. He is certainly needed in the present emergency. Our efforts have been misunderstood long enough. An agitation campaign that announces facts so plain that even the most ignorant can fully understand them, must be waged in order

A NOTED AUTHOR AND LECTURER TO AID US

to make the general public see the truths that we are trying to teach. George Wharton James is an ideal physical culturist. He is big, strong, clean and wholesome. As a lecturer, to my mind, he is almost without a peer. His many years of experience as a Methodist minister, in his early days, out in the wilds of the Western country, have stood him in good stead. It has made a man of him, mentally as well as physically. He is endowed with a world of common sense, a mentality absolutely free from bondage, an individuality which is clear and pronounced. When you hear him talk, you realize that there is a real man before you. Strong, magnetic, forceful, you cannot listen to him without being affected. And he does not cater to beliefs with which he thinks his hearers might be imbued. He tells you the truth as he knows it. He uses verbal sledgehammers to drive home the plain facts that he places before you. Sometimes, his hearers are angered at the plainness of his speech, and yet, as he carries them along, they are usually made to see the reasonableness of his argument. This wonderful man who preaches a religion of love and kindness and truth, has a message that every reader of this magazine ought to hear. Nearly half of every year, Mr. James spends with the Indians. He lives their free life away from the conventionalities of civilization. He becomes an Indian in truth and fact. He adopts their costume, or rather lack of costume. And when he comes back to civilization and carries with him all the vigor and energy and physical magnetism of the savage, he is doubly capable.

Many of my readers will have an opportunity to hear this remarkable man. He will tell us what civilized man can learn from the Indian. He teaches the true physical culture. He lives the higher, the ideal life. He practices what he preaches. He is no pretence, no hypocrite, what he tells you to do he does himself, and he is a magnificent example of his own beautiful teachings. When you hear his finely modulated voice, ringing at times clear and strong, with quiet intensity and feel the wonderful magnetism of the man, you will realize more than ever what it is to have a magnificent body to add to the completeness of a human career. He is one of the very few lecturers I have heard that one seems never to tire of. You always want to hear more, and those of my readers who have the opportunity to hear him, I am satisfied will endorse this statement in every particular.

Professor S. Edwin Olmstead will accompany Dr. James and illustrate the astounding results of a physical culture life in the building of muscular power and beauty. Professor Olmstead will pose, showing his remarkable development, and will perform various marvelous feats of strength. He holds the world's record for putting up a one-hundred-pound dumbbell the greatest number of times with two hands, he having put this weight over his head fifty-five times in succession. In his performance, he tears three packs of cards with his hands alone, and many other feats that will show to a remarkable extent the value of physical culture methods in developing muscular vigor.

I do not want any of my readers to miss this remarkable entertainment. It will unquestionably do much toward the extending of the physical culture movement in every community in which it is read. I am sending herewith the halls and dates that Dr. James and Professor Olmstead will appear, and I hope none of my readers will fail to attend.

- January 4, Akron, Ohio, Association Hall, Y. M. C. A. Building.
- January 7, Zanesville, Ohio, Memorial Hall.
- January 8, Newark, Ohio, Taylor Hall, Y. M. C. A. Building.
- January 9, Columbus, Ohio, Board of Trade Auditorium.
- January 11, Springfield Ohio, City Auditorium.
- January 14, Richmond, Ind., Gennett Theatre.
- January 15, Anderson, Ind., Grand Opera House.
- January 16, Indianapolis, Ind., Das Deutsche Haus.
- January 17, Vincennes, Ind. College Auditorium, Vincennes University.

January 18. Evansville, Ind., Grand Opera House.

January 21. Marion, Ind., Y. M. C. A. Hall.

January 22, Logansport, Ind., Stetiner Hall.

I WANT to find out how many friends there are of the physical culture movement. At the same time, I want a monster petition from every friend of this movement to present to President Roosevelt for a pardon in case my appeal to the United States Supreme Court is not effective. We have blank petitions each containing space for thirty-six names.

A PARDON PETITION OF ONE MILLION NAMES

I want every reader to help along the good work by securing the names of their friends on one or more of these petition blanks. I have had a little booklet printed, giving details of my case, which will make interesting reading for everyone who may desire to assist in annihilating the last atom of prurient prudery. Write to me direct, stating how many petition blanks you can use and how many of the little pamphlets you can distribute among your friends, and I will be pleased to send to you whatever quantities you may desire.

THERE is need of a League under which men and women who believe in the principles that we advocate can enroll. The reform that this magazine stands for, must conquer, or the decay and degeneracy that lead to oblivion will be the early and ultimate fate of this nation. Those who believe in the perpetuation of American manhood and womanhood, must awaken to the necessity of doing something.

THE STERLING PURITY LEAGUE

The Sterling Purity League has been organized for men and women who believe in the higher life. Who believe in clean, wholesome bodies, free from the vileness of prurient prudery. There are thousands upon thousands of men and women in this country at the present time who would enroll in this League if they had a chance to consider the principles that we stand for, and the reform for which we are struggling. Prurient prudery has ruled this country about long enough. It is time for men and women of high ideals, with clean minds and wholesome bodies, to rise up and have something to say as to the needs of to-day. When a man who, like myself, is endeavoring simply to bring about a tragically needed reform, is arrested and persecuted and actually convicted of a crime, and condemned to penal servitude, and treated in every way like a common felon, it appears to me that it is about time something was done by those who stand for the high ideals that the physical culture propaganda has been advocating from its very inception.

The Sterling Purity League has a banner under which every clean minded man and woman can enroll. It is a banner that stands for a happy home as against that home guided by ignorance and excesses. It stands for fine, strong, healthy and beautiful children, as against the frail, delicate and miserable weaklings that are everywhere being brought into life by the advocates of prurient prudery. The physical culture societies that have been organized in various communities have no doubt accomplished a great deal of good, but they have been misunderstood, just as have been my own objects. Under the new name, the objects that we have in view, cannot be misunderstood. The name plainly tells just what we stand for. And those who believe in the principles and who are willing to strive and struggle to bring about the objects that we have in view are invited to join us. Nay, more than that. You are commanded to go and do your duty in accordance with the demand of your own heart and of your own conscience. No man can sit still calmly when he sees the miserable degeneracy that is everywhere becoming evident in this age because of the pitiful need of the reform that we are endeavoring to bring about. In another part of the magazine you will find an article giving full details of the organization of this League. I hope every reader of this magazine will become a member. I hope that every reader will feel that it is his duty to assist in the formation of local Leagues, and that this marvelous reform may be carried to the uttermost ends of the earth.

Meantime we have to thank those of our readers who have given practical and ample expression to their sympathy with myself in regard to the costs entailed upon me by the sentence recently imposed by the Federal Court at Trenton, N. J. I intended publish-

ing a full list of the names of the generous donors in question in this issue of Physical Culture, but finding it impossible to prepare this list in a satisfactory manner, I shall defer publishing it until the next number of this magazine.

THERE are enough men and women in this country working for the betterment of mankind to secure absolute control of every elective office. Why cannot we all get together? Why must we be continually pulling away from each other? We are all working for the same object. There may be a little difference in details, but in the main, we are trying to uplift mankind. We are working for

**MESSAGE TO REFORMERS
EVERYWHERE**

temperance—most of us for total abstinence. All of us believe in those things that tend to improve the morals and thereby the manhood and womanhood of the race.

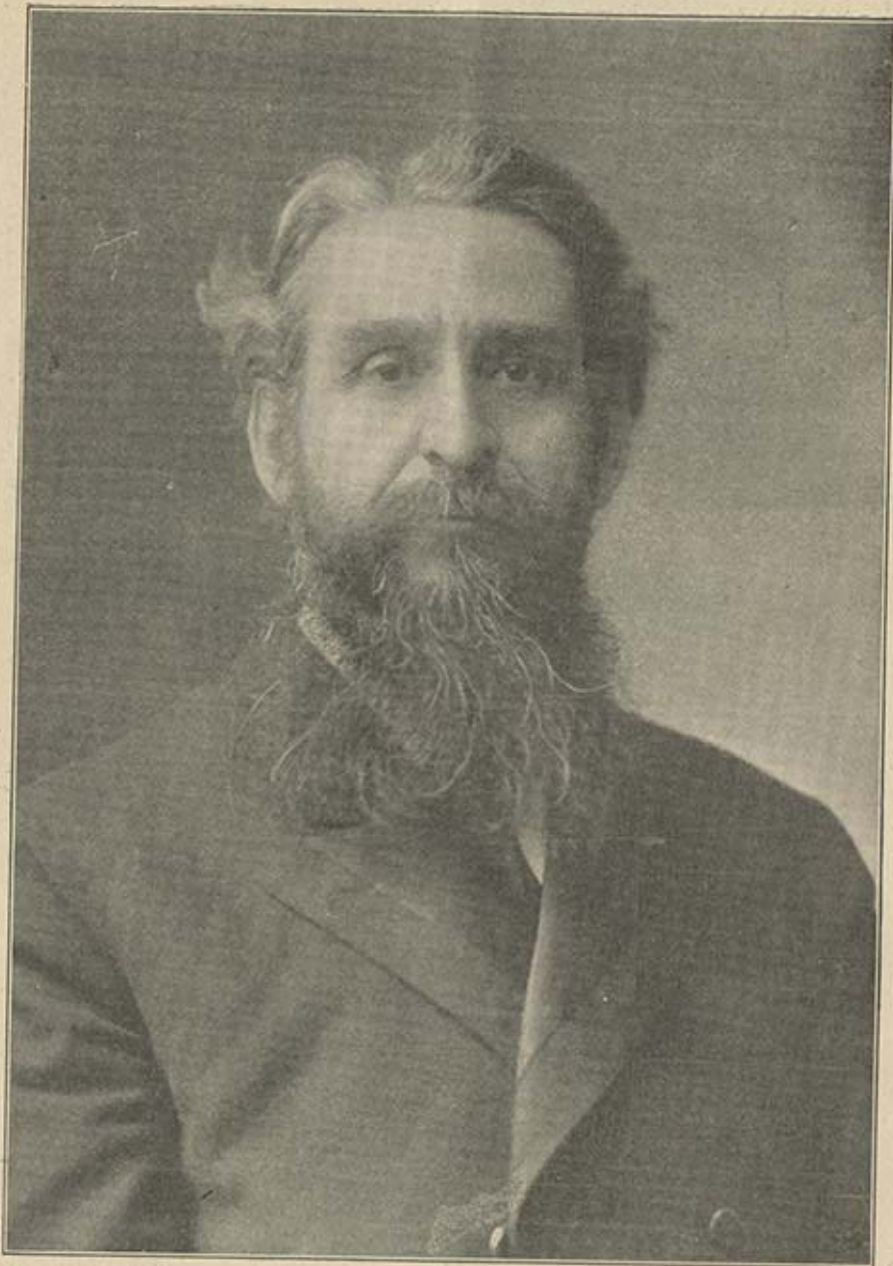
Let us suppose that all the socialists, the prohibitionists, members of the W. C. T. U. of the Y. M. C. A. and every church organization that stands for human betterment, were to combine their forces at the polls at the next Presidential election. No one can doubt the result. The man who had been nominated and who had agreed to stand by the principles for which these mighty forces and organizations are working, would be elected. He could not possibly be beaten. No power on earth excepting criminal machinations of unscrupulous and prominent politicians could defeat such a mighty movement.

Now, why cannot this amalgamation be brought about? If it could be, there would be a mighty political revolution. Thereafter, the contest at the polls would cease to be a matter of dollars and cents, but would instead, begin to be a contest between those who stood for principles that stand for a better manhood and a nobler womanhood, and those who represented the old and evil order of things. There are thousands upon thousands of physical culturists who believe in the theories advocated in this magazine, who would gladly vote for a candidate who openly avowed his intention of working for the enactment of those laws that tend to build a better race. Manhood and womanhood of the highest degree is a crying need of to-day. Degenerating influences everywhere are being absolutely ignored. They are being worse than ignored, they are being used as a means of furnishing graft and power for corrupt politicians. In other words, crime is being condoned and even encouraged by those whose sworn duty it is to see that the laws are obeyed.

Why cannot every publication who is working along the same lines as PHYSICAL CULTURE magazine, striving for a higher morality, for a better manhood and a nobler womanhood, begin the preliminaries of forming a powerful combination to the end that the principles for which we all contend, may not only be recognized at the next Presidential election, but will become a force against which, those whose ideals are made up entirely of dollars and cents, cannot possibly contend? Let the party that will endorse and stand for these principles be an old one or a new one—there is really nothing in a name—it is the principles for which that name stands that are of importance. Whether that party which may stand for these principles be the Republican, the Democratic, the Socialistic, the Prohibition, or the Populist, it makes but little difference.

Let us all get together, every force working for the principles so tragically needed at the present time, to bring the human race out of the mire and muck of the current degenerative conditions. Of course, those who are satisfied, those who believe that we are doing the best we can, those who believe it is necessary for men to be benumbed with alcohol, doped with tobacco, and paralyzed with immoralities and excesses of all kinds, will hardly look with favor upon such a move. But men of this kind are passing. We are approaching a new era. The growing boys and girls are progressing—they do not see perfection in the old order of things. They are anxious for a change, and this change can just as well be along the lines that give us men and women in the truest and highest sense.

Bernarr Macfadden



Dr. George Wharton James, who is to Lecture for the Advancement of the Cause
of Physical Culture

(See Editorial on a Preceding Page.)

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PHYSICAL CULTURE

DEVOTED TO HEALTH, STRENGTH, VITALITY, MUSCULAR DEVELOPMENT, AND THE CARE OF THE BODY

Vol. XIX

JANUARY, 1908

No. I

General Exercises for Beginners

By BERNARR MACFADDEN

AT the beginning of the New Year, it is a common custom of those who perhaps have previously been living a careless and perhaps unhealthful life, in respect either to physical, moral or mental habits, and who are able to realize their imperfections in this regard, to "turn over a new leaf." New Year's Day, owing to the very nature of the occasion, seems a fitting time to make a new beginning in any line of activity. Thus it is very possible that a great many who have been careless in regard to matters of health, may conclude at the beginning of the month of January, to adopt a more rational mode of life for the future. They will thus acquire and maintain that high degree of physical energy which is essential not only to success in any given field of activity, but even to the complete happiness of an individual.

There are undoubtedly those who may have been accustomed to the reading of this magazine or other literature



Photo No. 1.—First assume a position similar to the here illustrated. Now strike straight forward, vigorously, to arm's length in front. Return to first position, and repeat the movement a definite number of times, to be determined by your own strength. In all these exercises, the movements indicated should be continued until the muscles involved are slightly fatigued. Now, starting from the same position, strike out energetically to arm's length at each side, repeating this movement as in the first instance. Next, strike vigorously downward the same number of times, and finally straight upwards, high overhead. It will be noted that if any of these movements are found too energetic with dumb-bells, the latter may be laid aside, and the movements can be performed with empty hands.

of a similar nature, but who, while they have realized the advantages of a sound physique, a good circulation and a wholesome state of body and mind generally, have yet been more or less negligent, and occupied with other affairs to the extent that they have failed to put into practice what they



Photo No. 2.—Stand first with both arms hanging at the sides as indicated. Then, with elbows rigid, swing the arms upward at the sides to a position high overhead. Repeat the movement until tired. Next, starting from the same position, swing the arms straight forward and upward until high overhead.

have learned in regard to methods of building and maintaining health, strength and vitality.

Accordingly, on the threshold of another year, it seems fitting that I should introduce some exercises suited

to the use of beginners, or those who are incapable of adopting movements of a strenuous character. I am therefore offering herewith, a system of all-round light exercises, which are intended to strengthen and develop practically all parts of the body. The movements are of a simple nature, but will be exceedingly effective, and if practiced faithfully, will make a remarkable change in a month's time, in the condition of one who is not accustomed to daily exercise. Of course, for those who have been practicing various forms of physical culture for a long time, these movements will not prove of any exceptional value, though they will naturally be useful as a means of warming up for a bath to almost anyone, especially those shown in photos four and five. Next month I propose to give another series of general exercises for developing and strengthening all parts of the body, but the movements will then be of a very vigorous character, for more advanced students, or those who are already strong enough to adopt such energetic measures with advantage. No doubt most of those beginners or others who take faithfully during the next month, the movements herewith presented, will be ready by the first of February to begin the practice of the more vigorous movements which I will introduce at that time.

The reader will note that dumb-bells are shown in the accompanying photographs, though I would state that these are not entirely necessary. They perhaps serve to make the exercises more interesting, but the movements will be of equal value without them. As you grow stronger, however, they will, if you use them, enable you to make the movements more energetic.

Inasmuch as the New Year is a good time to begin the practice of exercises in case one has been negligent in that respect, the time is equally suited to the commencement of other habits of an equally beneficial nature. Of course, in the nature of things, these remarks are intended chiefly for those to whom the general scheme of physical culture is new, or who, as suggested above, may be familiar enough with it, but have neglected its actual practice.



Photo No. 3.—First take the position illustrated above, with hands extended to arm's length in front. Now quickly and vigorously swing the arms sideways and backwards on a level with the shoulder, as far as possible. Repeat the movement until tired. Remember to bring them back to the starting position with just as much energy as you use in bringing them backwards. Now, starting from the same position, swing the arms straight upwards and backwards high overhead. The movements illustrated by photographs 2 and 3 are to be especially commended to those suffering with round shoulders.

I have repeatedly emphasize the fact that physical culture in a broad sense means more than mere exercise. It means the higher cultivation of muscular energy. It means the adoption of other means that are inclined to work for the building of improved health and increased bodily energy. It includes all habits as well as all conditions of life which are favorable to the develop-

ment and strengthening of the functional system, and in fact all of the internal vital organs. Physical culture demands the breathing of pure air, the use of foods best suited to the needs of the body, the wearing of suitable and hygienic clothing, internal as well as external cleanliness, the avoidance of stimulants and narcotics, and a generally wholesome plan of life in every respect. Physical culture not only means the development of muscular strength, but it means the acquisition of functional energy. It might even be called vitality culture or life culture.

One of the most prominent of the mistakes common in this perverted age is the abuse of the digestive system. This is not only true of those who are



Photo No. 4.—Starting with the position shown above, with knees straight and rigid, the dumb-bells touching the floor in front of the feet, swing the arms high overhead, and quickly bringing the body upward and backward as far as possible. Repeat until slightly fatigued. Then, starting in the same position, raise the body, and swing back far to the right, and next swing back far to the left, and continue to alternate right and left in this manner until tired. This movement can be done by standing with the feet far apart, and swinging the bells back between the legs with each downward movement.

entirely ignorant on the subject of diet, but also of those who become more or less enlightened in this regard, but whom the force of previous habits, and the impelling power of environments and home influences, have prevented



Photo No. 5.—First, raise the arms high overhead, then bending the body, swing first far to the right, then far to the left. Continue the bending from one side to the other in this manner, until tired.

Next starting from the same position, with the arms held in the position illustrated, swing the upper body in a circle. First from right to left a number of times, and then from left to right. In this circling movement you should bend far backwards, forwards and to each side as the body makes the revolution.

from adopting the reforms which they know would be advantageous. It is not my purpose here to enter into an exhaustive discussion of dietetics, for that has been done "many a time and oft." It is a truism that "the world

needs not so much to be informed, as to be reminded," and I therefore make only the briefest reference to this subject. In fact any discussion of what special foods are advantageous and what foods are inadvisable in individual cases, would require a vast amount of space. I would say, however, that apart from the question of *what* foods should be used or avoided, there are two other general dietetic errors which are probably even more important in most cases, than the character of the food used. These evils are the practice of over-eating and of eating too fast, for the question of *how* and *how much* one eats is frequently overlooked even by those who are interested in *what* they eat.

I would suggest here, briefly, that most individuals could be far more satisfactorily nourished, and obtain better health and greater energy if they would eat from one-half to one-quarter the amount of food that they are accustomed to, particularly if it were masticated in such a manner as to enable the process of digestion to be accomplished in the most perfect manner. It is only necessary for me also to remind my readers of what by this time nearly everyone is aware, that proper mastication and insalivation of food is essential to its proper digestion and assimilation. Accordingly, if you are accustomed to rapid eating or even moderately fast eating, it would pay you to "turn over a new leaf" in this respect on New Year's Day, and to pay careful attention to the thorough mastication of every morsel of food. I assure you that from an epicurean point of view you will get far more enjoyment out of your food if it is masticated to the extreme before swallowing.

Another reform which a great many persons could advantageously put into practice at this time, would be the discontinuance of the use of stimulating beverages. It is hardly necessary for me to refer to the use of alcoholic liquors or to the various forms of tobacco using. But what many do *not* realize is, that

tea and coffee are in many cases almost as bad as alcohol, and in some cases even worse. It is impossible to acquire the best condition while using these nerve-benumbing articles. In fact, the drinking of anything at meal-times is to be avoided, except in cases of very exceptional thirst, though if you gratify your thirst freely between meals, you will not have any desire for a drink at meal-time.

Nearly everyone has some habits of this character to which it would pay them to give attention at this time. Remember also, if you are of a procrastinating nature, that it would be just as easy to discontinue any of these habits now, as it will be one or two years from now, and probably a great deal easier.

There is probably no occasion for me to refer to the importance of ventilation, and the necessity of securing air as pure as can be obtained, at all times. The old readers of this magazine do not need even a reminder on this point, but I mention it simply to emphasize its importance for those who do not thoroughly appreciate the strict importance of this matter.

Another exceedingly important means of acquiring and maintaining vigorous health, is the practice of taking long walks each and every day, no matter what other vigorous exercises may be employed as a means of strengthening the muscular system. The practice of walking is exceedingly important as a means of improving the circulation, and building vitality. As a general thing I would say that one can really not maintain the most satisfactory condition unless he walks at least two hours each day. If you are accustomed to the use of street cars, or other lazy men's devices for saving time and foot wear, then this season of the year would be a

suitable time for you to make a change for the better in this respect. I know of no time better suited to this form of exercise than the cold weather which now prevails. You of course understand that it is necessary, in order to benefit from walking, that you walk in an energetic and thoroughly-alive manner. If you loll along and drag your feet tediously over the road, you will only tire yourself, without acquiring the least benefit. If your walks, however, are so pursued that deep, full breathing is induced, and even if a suggestion of perspiration is aroused, then you will find the walk invigorating and strengthening in all other respects. It is, among other things, conducive to the best mental activity. If you have any difficult problem to think out, go for a long walk in the open air.

There are many other things which I might mention, were it not for lack of space. I have referred to these things, however, to emphasize the fact that the mere practice of a few exercises each day does not constitute all that is included in the meaning of the term physical culture, and that the strict obedience to the laws of health in all other respects, is necessary if one would attain the most satisfactory and complete existence of which his nature is capable.

As I have suggested, this is a good time for each and every individual to have a good talk with himself in regard to all matters of this kind, and to make such changes as he can see will be advantageous to him. He may have made a beginning of this kind before, and perhaps several times before. But, if necessary, he should begin again, and yet again and again, until the various health-building, life-sustaining measures, shall have become a part of his daily life and experience.

If physicians, instead of seeking to improve nutrition and restore health and vigor by feeding and stimulating, would commence where life begins, and improve the first function of life, by processes which are obviously correct, better results would be attained.—Dr. Robert Walter.

The nutritive results of muscular contractions are taken up by the nerves still more than by the muscles. Thus exercise becomes efficient in strengthening and developing the nervous system and in maintaining it in its normal condition.—Baron Nils Posse.



Taking to the Water at the Foot of Depot Lane

An Amphibious Automobile

By MAURICE J. HENDERSON

Photos by I. P. Giffette

THAT which some persons facetiously call the "duck" automobile, is graphically pictured herewith. Perhaps the better title for the invention would be the amphibious automobile, inasmuch as it is equally at home on both water and land. By what means it accomplishes this apparently impossible feat, will be told later.

Monsieur Jules Julian Raveller is a Parisian by birth and an automobilist by nature. He is still a comparatively young man, and rumor has it that when but a baby, his favorite toy was an automobile horn of the then crude form. When he became older, he was never happy unless tinkering with a horseless carriage, studying its various parts, or risking his neck by testing its powers, while the odor of machine oil was like incense unto him. Under these circumstances, it is not to be wondered at that now that he has to manhood grown, he is looked upon in France and among enthusiasts on this side of the water, as an expert upon all points, matters and devices connected with motoring; or that furthermore, he is the inventor of several improvements relating to his hobby and is a daring and dashing, chauffeur.

But for some time past, M. Raveller has realized the fact that the automobile, as it now is, has its limitations, these being for the most part, those brought about by water. To a man of his type, there was something humiliating in being brought up with a round turn by an unexpected stream, an arm of the sea, or a broad river. He reasoned that if the automobile was to be of value to that type of humanity that loves to wander abroad and in those countries in which roads are a minor consideration, that it should be fitted for any emergency of the geographical kind just alluded to. And he, furthermore,

saw no reason why the 'mobe could not or should not take to the water as freely as a duck when the occasion arose. The result of all of which is the apparatus under consideration. It may be added, that M. Raveller is a man of independent means and resources, which probably explains why he did not show his "duck" at the more or less recent automobile shows at either the Grand Central Palace, or Madison Square Garden. For all that, the machine has enlisted the attention of a number of enthusiasts on this side of the water, so much so indeed, that a company has been formed for the purpose of putting in commission a number of them at seaside and other resorts, in which land and water are prominent features.

When on land, the machine looks something like a boat of a staunch build that has taken unto itself wheels. There is a screw propeller, but this is out of sight, or nearly so, when not required for the purposes of propulsion in water. M. Raveller claims that on a fair road, his automobile has attained a speed of thirty miles, and of nine knots when afloat. During recent trial trips made on the Hudson, and on available roads around New York, these speeds were not attained, however; something like twenty miles on *terra firma* and five or six knots on the bosom of the Hudson being the rule. But these were considered quite satisfactory, and the facility with which the "duck" plunged into the water, or emerged again to dry land, proved a source of astonishment, not to say interest, to those who were privileged to witness the trials.

To all intents and purposes, the machine consists of an automobile power plant placed on the body of a boat, which latter, as already stated, is fitted with wheels for use on land. The power consists of a two-cylinder, two-cycle, De Dion motor of twelve

horse power; the water-cooling radiators being placed on either side of what may be called the forward deck. The operator and mechanic sit side by side in a sort of cock-pit. Behind, is another deck which will accommodate two more persons. The steering wheel and the propeller are on the right side of the machine, as in an ordinary automobile. What is technically known as a double chain drive, is employed, the power being shifted from the wheels when in use on land, to the screw propeller when afloat, by means of levers. Or, in the

trial of the apparatus, a well-known aeronaut of New York City gave M. Raveller an order for a machine forthwith. As already intimated, a corporation is being organized for the purpose of constructing others.

The official trial of the amphibious automobile took place a little time since, notice having been given to a number of prominent automobilists, who met M. Raveller by appointment at a point on Broadway. From thence, the "duck" leading, and the ordinary everyday machines following, creditable time was



The Amphibious Automobile on Upper Broadway, Surrounded by Critics and Enthusiasts

case of a heavy head-on current, both wheels and propeller may be employed. It should be added, that the wheels are of a disc pattern, so as not to impede progress in the water, and that they have solid rubber tires. When afloat, the steering is done by a rudder and the front wheels. On land, an involved system of springs yields very easy riding.

The inventor has very appropriately christened his device the Waterland. It weighs about 1800 pounds, and can be duplicated for somewhere in the neighborhood of \$6000. After the first

made to 157th Street, at which point, General John F. Cutting boarded the freak. Next, a steep hill was descended, Depot Lane being its name, which led directly to the Hudson. Without any hesitation whatever, M. Raveller headed the "duck" for the water, there was a splash and in a second or two, the apparatus was afloat and steaming up the river. Then it was that the truth of the simile of one of those who was watching the experiment from the bank became manifest.

"It is a gasoline launch with automobile wheels," said the spectator. And

the others agreed with him. After manoeuvring up and down the river for some little time, the Waterland headed for the bank, drew her propeller up out of the water and was on dry land, making her way up the hill to Broadway. It should be added, that neither the General nor the inventor had a drop of moisture on their clothing. They were as dry as when they had begun the experiment. At this juncture, a lady volunteered to take a trip, as did another gentleman, and once more the queer craft turned in her own length almost, and headed down to the water, which

readily overcome, is certainly something that the War Office of this or any other country, cannot afford to ignore. It should be stated right here, that the Washington authorities have made an engagement with M. Raveller to the end of arranging for tests of his apparatus. If these are satisfactory, it is very likely that the "duck" in some form or the other will become a portion of the fighting or auxiliary forces of Uncle Sam. Given an armored "duck" equipped, say, with a rapid-fire gun, let her crew be sharpshooters as well as experts in the gentle art of killing one's fellow creatures, and



The Waterland I, Speeding up the Hudson

she took with a fine splash. To make a long story short, the series of tests were most satisfactory, and the lady in particular was loud in her praises of M. Raveller's invention.

It is hardly likely that the machine will come into general use, but, nevertheless, there are possibilities before it, especially for purposes of war and exploration. An automobile which is independent of lakes or streams and which is so constructed, that the impedimenta which it meets with on ordinary roads, or when going across country, are

there seems to be no doubt whatever, but that she would prove as formidable as she would be distinctly interesting.

It need hardly be added that for those explorers or travelers who can afford it, the Waterland will be a distinct desideratum. Instead of detours being made in order to hunt for fords, or to avoid sheets of water or rivers, a momentary adjustment of the machinery would obviate these difficulties, and the desired point could be reached forthwith and with little difficulty.

Precisely what would be the effects of



Making a Landing after a Spin Afloat

such a trip on the minds or appetites of, say, hippopotami or alligators, the writer knoweth not. But the probability is, that these would be too disturbed in their mentalities to attempt

to gratify their gastric juices. At all events, the Waterland is not merely a novelty, but a distinct advance on the ordinary, everyday and barn-yard type of automobile.

SOME FACTS ABOUT THE HUMAN SKIN

On another page appears an article describing the structure and functions of the wonderful covering provided for the human body by Nature. In addition to the purposes referred to therein, the skin also serves not only as a thermometer, but as a means by which an abnormal increase of heat in the body may be rapidly and safely disseminated, and also a means by which, on the other hand the internal heat of the body may be conserved in a cold environment. The sweat glands of the skin pour forth a secretion at all times. This perspiration, in the majority of instances, is not great enough to be apparent, because under ordinary conditions evaporation of the sweat takes place as rapidly as it is poured forth. However, when the surrounding temperature is great, the sweat glands work more rapidly and the perspiration is

often very apparent. When the temperature of the air is low, a sub-normal amount of sweat is produced. This excretion is a great aid to the kidneys in casting off broken-down materials.

The hair—which originally covered in great quantities the larger part of the surface of the human being, but which by civilization has been reduced to a minimum—was intended as a protection instead of clothing. The hair which still remains to the modern human being is mainly situated on those parts of the body where profuse sweating would interfere with physical comfort and ability, or where an elastic pad is needed against pressure.

The layer of fat in the subcutaneous tissue acts principally as a jacket, to maintain, against sudden external changes of temperature, the equilibrium of animal heat within the body.

Feb. 1905

Latest Feat of the Grand Old Man of Pedestrianism

By HARRY J. BROWN

EDWARD PAYSON WESTON has been recently plugging along in a successful effort not only to duplicate his famous walking feat of traveling from Portland, Me., to Chicago, but also to break his record. He is now in his sixty-ninth year. When he was twenty-nine years old, he walked the distance—something more than 1235 miles—in thirty days, without counting Sundays, on which day he rested.

The actual time which Weston occupied in making the trip in 1867 was 52 days and 23 hours. He calculated to better that time by 24 hours in this trip, in spite of his advanced years.

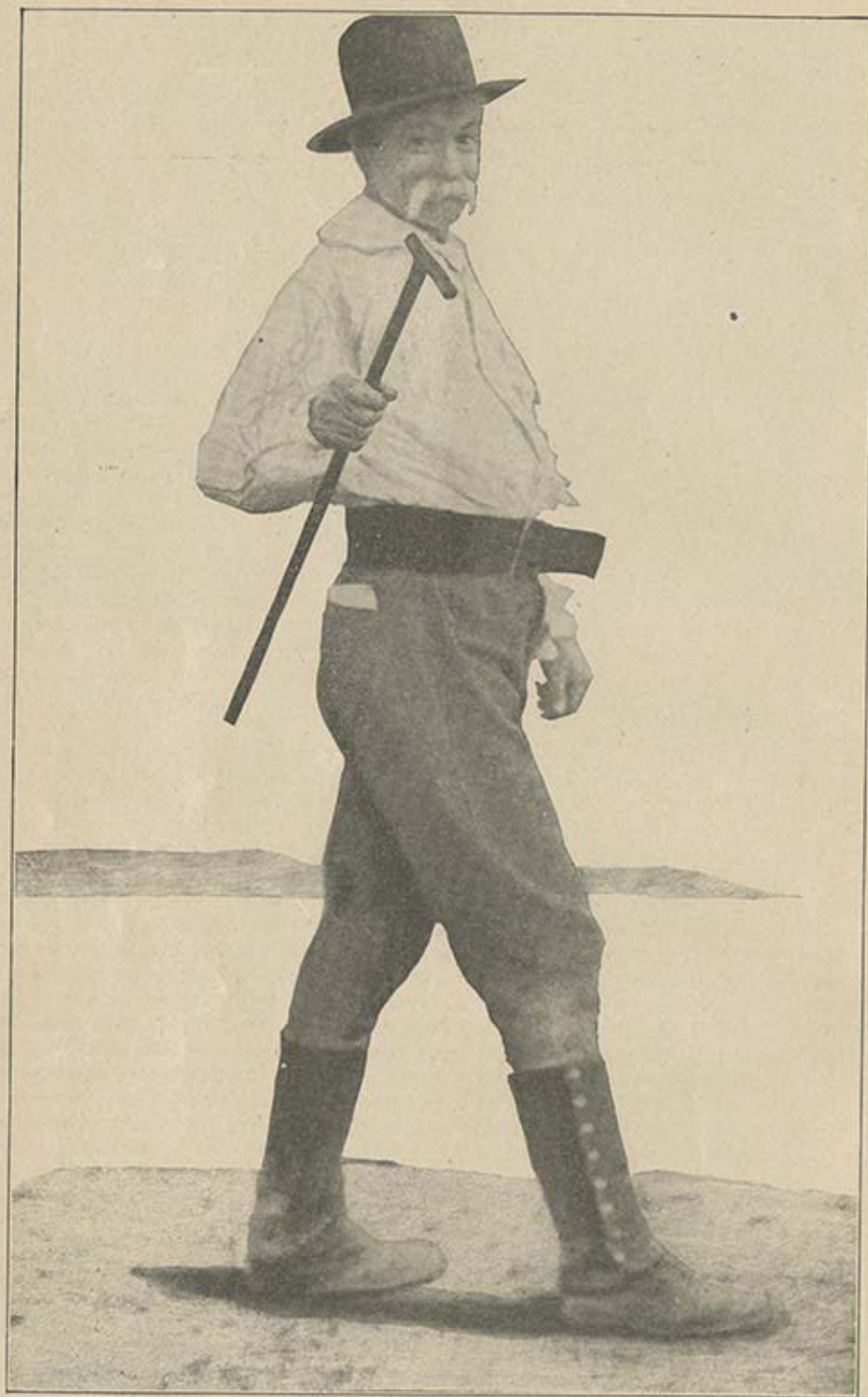
The feat, which was remarkable enough in a man of twenty-nine years of age, is wonderful for a man of sixty-nine years. Few men of thirty could average 50 miles a day for a week, yet this man, in his advanced years, proposed to maintain the average named for nearly a month. Weston was convinced that he could do the trick without distressing himself, and believed that he would leave the road at Chicago in better condition than when he took it at Portland.

In spite of his gray hairs, he gives one the impression of being younger than he really is, and his vitality and wiry vigor are astonishing. He stands 5 feet 7 inches in height, weighs less than 130 pounds, but is as hard as nails. The usual deterioration which is noticeable in men of 70 years of age, in the tissues of blood and vessels, is entirely lacking in him, according to the reports of well-known physicians who have examined him. He came off the road a year ago, after a long walk, with no acceleration of pulse and with a perfectly normal temperature, as though the feat was an ordinary everyday stroll. And such he claims these undertakings to be.

Weston had made no preparation for his long walk to Chicago in the ordinary sense. He believes that training is most artificial and unnecessary, and that in the main, it is harmful. It creates, he says, a condition which is unnatural because it is not sustained, and which when followed by the usual lapses at the completion of the given task, injures the body very seriously; not to speak of the excessive exercise which one takes in the undue hardships imposed by the athlete upon himself in his preparations. He declares that for the man who takes uniformly good care of himself there is not the slightest need for training, and that in the course of his long career, in which he has engaged in thousands of long-distance walking feats he has never trained for a single day.

The explanation of his superb condition lies simply in the regularity of his habits and the simplicity of the fare that he eats. Practically a total abstainer from liquor and tobacco, he is an excessively temperate man. He has never in his life, he declares, taken a drink over a bar. He uses no stimulants whatever during the contests in which he engages, and eats regularly. His daily dietary consists of two eggs, four slices of bread and a little liquid for breakfast, no luncheon and a light dinner, which includes two potatoes and such vegetables and fruit as are in season. He drinks at night a single cup of tea. He eats some little fish and poultry, but game rarely, and never lobsters or other rich foods that tend to upset the stomach by giving it extraordinary work to do. He especially avoids pastries.

He rises in the morning at eight o'clock and goes to bed at two, holding that six hours sleep is ample for anyone and that more tends to lethargic action of the bodily functions. He invariably



Edward Payson Weston

Feb. 1902

takes an hour and a half's nap after dinner. In his life, he has had a single illness—an attack of typhoid in 1871—and such minor ailments as he has had, like colds, he has invariably sweated out with exercise and cured in a day. Rain or shine, day by day, he walks from twelve to fifteen miles, except on Sundays, when he never takes exercise. He declares that it is with great difficulty that he shakes off the consequent torpor on Monday morning.

This is the life that Weston has been living always, and he believes it accounts entirely for his condition and exceptional vitality. He says it costs less in bodily fatigue and is less harmful to walk 100 miles in twenty-four hours than it costs the athlete to run 100 yards in ten seconds. He calls attention to the accelerated heart action and unnatural breathing that succeeds such unusual exertion, and declares they are harmful.

Weston is undoubtedly the greatest pedestrian that ever walked. He had a tremendous vogue some years ago. As his present walk to Chicago is a duplication of a feat of forty years ago, so his walk from Portland to New York in twenty-four hours, last year, was a duplication of his feat of thirty-three years before. He has walked from the early sixties to the late eighties almost continuously in public exhibitions, and incidentally has made tremendous sums of money. He had the patronage abroad, where pedestrianism is much more popular than in this country, of such men as Lord Rosebery, Lord Charles Beresford, the Duke of Montrose, Lord Algernon Lenox, Sir John Astley, Dr. Pavey, physician to King Edward, then Prince of Wales, and the interest of the Prince himself.

In 1877 he made a match with Dan O'Leary, then regarded as the greatest of pedestrians, for a belt given by Sir John Astley. He was some 26 miles behind O'Leary when nearing the end of the race, and pulled up eighteen miles on him, when he was induced to leave the track for two hours. Afterward, it was learned that O'Leary was ready to give up the race had Weston kept on at the time, but the retirement gave O'Leary a chance to recover some of the lost distance. So they finished,

O'Leary 520 miles, and Weston 510 at the end of 142 hours, the time of race.

Two years later, he walked 2000 miles in 1000 hours, and in the same year broke the record for a six-day walk and won the Astley belt by doing 550 miles in 141 hours and 56 minutes, winning easily from Blower Brown. Two weeks before, in practice, he walked 562 miles in a trial in the same time.

In 1884, he walked on the roads of England, 5000 miles in 100 days, fifty miles each day. What is more, he delivered a temperance lecture every night. In 1886 he walked again against O'Leary in a match and drove the latter from the track. The greatest distance walked in a day in a match, was 115 miles, though he did 127 in practice. The fastest miles he has ever done, were two miles in the match with Brown, and on the last day. He then made the 500th mile in seven minutes and fifty-one seconds and the next in seven minutes and fifty seconds. He has walked 58 miles in twelve hours, and 400 miles in five days repeatedly.

Weston completed his long walk on November 27th, at midnight, having beaten his own record of forty years ago by twenty hours. Considering the fact that, as already stated, he is sixty-nine years of age, the achievement is, from the ordinary viewpoint, of a marvelous nature, and speaks volumes for the powers of temperance and physical culture, of both of which the pedestrian is a prominent exponent. His creed is "Air is better than doctors." And his habits in general are those to which the physical culturist can furnish hearty endorsement. Given temperance and the regard of fresh air and exercise, which are the prime factors in the creed in question, it is no wonder that the plucky old man—he very much objects to the term "old" by the way—completed his long walk within the given time.

The words uttered by Weston at the end of his walk may be taken to heart by every human creature. They are these, "Pride, principle and pluck; those are the words that give me the reputation which I bear. Be plucky, have principle and possess pride, and you will win in every affair of life."



These Illustrations will give Contestants Ideas of Poses and Costumes Suitable for Photographing for Entry in Contest

Grand Prize Competition for Most Perfect Men, Women and Children

We Propose to Give Valuable Awards to Ideal Specimens of Both Sexes—Those Who Most Closely Approximate Ideal Standards of Strength and Beauty Will Receive a Prize of One Hundred Dollars in Gold—The Most Perfectly Formed Boys and Girls Will Also Receive a Gold Medal—The Parents of the Most Perfectly Formed Baby are Also to be Awarded a Gold Trophy—In Addition to These Prizes, There are to be Many of a Valuable Nature Which Will be Given to Those Who Do Not Succeed in Winning a First-Class Award

WE are glad to state that the number and the physical status of prospective competitors—men, women and children—in our grand prize competition are, if anything, greater and superior to those who have taken part in preceding contests. We have said as much as this before in recent issues of this Magazine and *Beauty and Health*, but owing to the fact being emphasized by each mail, we do not hesitate to repeat it. And among the many things which it teaches is, that the principles of physical culture are bearing fruit in a manner most gratifying to those who are more or less responsible for its principles and its methods. And it is further to be noted that the enthusiasm which characterizes the communications sent with photographs and measurements, is eminently characteristic of the true physical culturist. There is a reason for

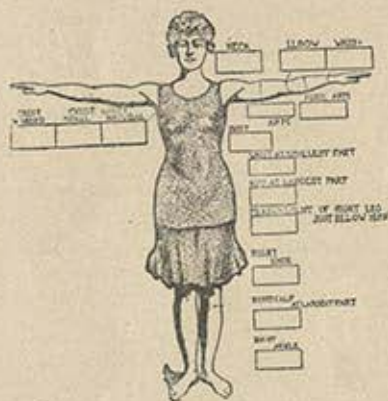
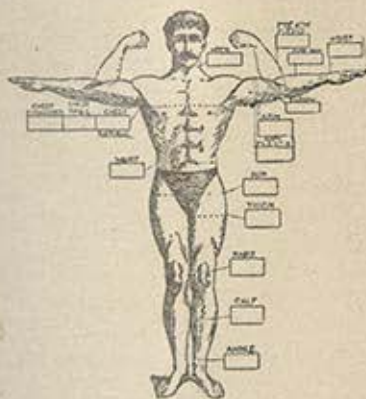
this. When a man or woman has been taught, or has discovered that mode of living which enables him or her to get treble the enjoyment out of life than was possible under old conditions, it is no wonder that in expressing their appreciation of all this, they are very apt to use terms and adjectives suggestive of their gratitude. Those who have become cognizant of what physical culture means in increased happiness, in renewal of hope, in added mental capacity and in the furtherance of the possibilities of life in general, may be readily excused if they voice their appreciation of these matters in terms of an unstinted nature. The physical culturist is nothing if not appreciative. The letters which we receive in connection with this contest, prove this fact.

There is one aspect of the contest on which it is proper for us to touch. It is not given to everybody to be a modern

GRAND PRIZE COMPETITION

Apollo, or up-to-date Venus. It is not every boy and girl who yields promises of magnificent manhood or superb womanhood. It is not every baby who justifies the pride, or who may seem to vindicate the hopes of the parents. But those who are not gifted in these ways, can nevertheless feel a distinct and hopeful satisfaction in regarding those who are thus blessed by Nature. In other words, we may not be beautiful, but we can nevertheless admire beauty. We may not be possessed of a stalwart, manly form, but there is no reason whatever that we cannot appreciate such. We may not be the owner of the curves and contours of the classic womanly ideals. But we can nevertheless, be as capable of ap-

possess, on the score of their physical qualifications. But after all is said and done, such gifted individuals are somewhat in the minority. That fact, however, should not, and does not prevent the majority from appreciating the gifts which Nature has denied them, or of which they have deprived themselves through sheer ignorance or wrong living. However, the first step towards reformation is a recognition of faults, physical or mental, so the philosophers tell us. Hence it follows, that if those of us who have lived a wholesome life somewhat too late to bring about a revolution in our forms, may nevertheless console ourselves with the thought that such revolution has become part and portion of our dietetic and our



These Drawings Show Measurements which Should be Supplied by all Competitors with their Photographs

preciating such as if we, ourselves, were the possessors of these charms. What is more, we may be bachelor or maid having no children of our own, and yet be fully capable of understanding and realizing the joy of parenthood.

It is because of all this, that the contest under discussion promises to be of interest to the larger public. Of course, those who take an active part in it, will feel a peculiar and special pride in being so gifted by Nature that they can enter the competition with a reasonable certainty of winning one of the prizes. And what is more, those connected with them either by friendship or family ties, must share in the feeling of self-congratulation which they themselves

hygienic lives in general. In other words, although we may be neither Apollos nor Venuses, we are, nevertheless, wholesome men and women who, lacking perfection of strength and beauty, are fully equal of appreciating these qualities in the case of others.

Let us repeat what we have already said in regard to the prizes. In the first place we propose to give one hundred dollars in gold to the most perfectly formed man. There will also be twenty additional prizes consisting of valuable works on physical culture, yearly subscriptions to our magazines, and so forth.

We will give one hundred dollars in gold to the most perfectly formed woman

A gold medal will be presented to the boy under fourteen years of age who most closely approximates ideal standards. For the twenty youngsters who come next in the way of measurements, etc., there will be prizes consisting of physical culture books, subscriptions, and so forth.

A gold medal will be presented to the most perfectly formed girl under twelve years of age, and we also propose to give twenty additional prizes of a valuable nature to other well formed girls.

A gold medal will be presented to the parents of the most perfectly formed baby of physical culture birth and breeding.

In addition to the foregoing, we will offer special prizes to that man or woman in your community whom you deem to be best qualified to receive them. The only terms which we make in this connection are, that your town must be over three thousand inhabitants, and that your vote is in accord with the majority.

The contest throughout will be conducted through the medium of photographs and measurements of the competitors. These photographs should be sent as soon as possible, and it need hardly be added, that they should exhibit to perfection the physical development and attractions of their originals. Accompanying the pictures, too, must be the names, ages, weights and measurements of the competitors, the latter in accordance with the line cuts given with this article. Photographs of competitors should be of such a description as to show their proportions hampered as little as possible by clothing. As far as men are concerned, the photographs reproduced herewith will show the type of garment or fleshings as they are best suited for our purposes. Female contestants should use underwear of a dark color. These are easily procured at any dry goods store. In putting them on for photographic purposes, we should warn our fair readers

that wrinkles are very often productive of poor effects when the wearer faces the camera. The better plan is to first put on a pair of underdrawers. Then put on the vest or upper garment. Now draw on the stockings, which must be pulled smoothly and tightly over the drawers. Next draw down the vest, and fasten its rear and front edges together between the legs with a safety pin in such a fashion that wrinkles are practically eliminated. The result will be that smoothness of contour and outline which is shown in the pictures of the female contestants in the last physical culture exhibition which are given herewith.

As far as boys are concerned, it is better that they are photographed in trunks only. In the case of girls, it should be remembered that the less clothing they wear the better, in order that the Committee of Selection may be enabled to readily pass upon their physical attractions. Babies had better face the camera nude.

It is distinctly understood that when competitors send us their measurements and photographs, their so doing implies the right of our magazines to publish these, together with all information relative to the original. Don't forget to send us full details about yourself, such as whether you are a physical culturist wholly or in part; a user of ordinary diet; an athlete or otherwise; married or single, and so forth.

The date for the awarding of prizes will be announced later. In the meantime send on your photographs and measurements. It may be added, that those who win prizes must agree to have their measurements verified by a reputable local physician.

Study the poses and the garments of the contestants in the last exhibition that are given herewith. You will then be enabled to gather an idea as to the type of the poses which are most acceptable to this publication, together with the garments which are most appropriate for the purposes in question.

The Confessions of an Insane-Asylum Keeper

By ONE WHO KNOWS

Revelations Which Should Touch the Hearts and Prick the Consciences of the People at Large—The Average Asylum is a Veritable Hades of Cruelty and Brutality—This is the Third Installment of these Exposures and the Infamy to be Revealed During the Series is as Heartrending as it is Appalling

NUMBER THREE

This series of articles is founded on information given us by a resident of New York City, who for many years acted as keeper in a number of insane asylums—State and private—in various portions of the country. Like a good many other individuals he was by force of circumstances compelled to follow an occupation which he heartily disliked. It was not until recently that the opportunity came to him for which he had for long been desirous, namely, the following of another avocation. The position which he now holds, brings him into contact with men of more or less prominence, including a number of politicians. It is for this reason that, at his earnest request, we do not use his name in connection with the articles, for were his identity disclosed, it would in all probability, mean his dismissal within twenty-four hours.

We say this because we do not as a rule, believe in publishing anonymous articles. Our readers are usually entitled to a knowledge of the name and standing of the author whose pen-products are presented to them. But in this case it is different. And hence this explanation. In the meantime, however, we beg to assure our readers that we have taken pains to investigate the truth of the statements which will be made in this series of articles, and we give our personal pledge that they are true in each and every instance, in large and small detail. It need hardly be added that we are in close touch with the author, and if the time ever arises that it is necessary to produce him, we are in a position to do so.

For a long time we had been trying to get definite and detailed information regarding insane asylums, but failed to do so. The medical men who had been identified with these institutions would not, for obvious reasons, confess to any wrong doing, while the minor employees were in nine cases out of ten, so ignorant and untrustworthy, that we did not feel justified in accepting the facts which a great number of them were ready to tell, and which although we knew to be true, could not be published for the reason just inferred. We think ourselves fortunate therefore, in having secured the co-operation of a man whose powers of observation and memory, intelligence and honesty are unquestioned. It is our hope that these articles will so stir the public and official consciences that the abuses about to be recited will be modified if not eliminated altogether.—BERNARR MACFADDEN.

ONE distinguished patient, an ex-Major General of Governor Hill's staff, was at Bloomingdale suffering from paresis. He had a "special attendant" who did as little for him as possible. The unfortunate man's ailment was such that he ought to have had a continuous supply of under-clothing and bedding. In order to keep him even moderately clean, he required thirty-four sheets within twenty-four hours. But did he get them? Well, hardly. The total allotment of sheets for eight patients, including him, was forty-eight per week! And when I tell you that each of these patients was in nearly as bad a condition as was the gentleman mentioned,

you may be able to realize the horrible sanitary conditions in which the unfortunates lived. Fortunately, or unfortunately, the senses of the keepers are blunted, or else it would be absolutely impossible for them to do their daily work under the conditions to which I have just alluded.

Speaking of paresis reminds me, that in almost all institutions, the patients who are suffering from this type of insanity are allowed to sleep as much as they please. But at Bloomingdale, this order was ignored at the caprice of the attendants. And I have seen sufferers, half-dead with slumber, aroused out of their cots in order that the cleaning of the floors might take place, or even

set to work in order to lighten the labors of the keepers.

The food of the patients was something awful, and the same remark stood good of that supplied to the minor members of the staff. I have many times, arisen from the table without taking a bite because of the nearly raw and putrid meat which was served for the attendants. The vegetables were often literally rotten, and as for the cheese, pickles and so-called jams, they were totally unfit for human food. This, too, in spite of the fact that the appropriation for attendants' food is of a pretty liberal nature.

If this condition existed among the attendants, you can understand how it was with the patients. The truth was, that these latter were half starved, and if they attempted to remonstrate they "got what was coming to them" in the shapes of kicks, thumps, and verbal abuse. Everybody concerned suffered by reason of the food. A man who is hungry is rarely good natured, and when the hungry men and women happen to be keepers of a crowd of insane folks, the consequences are apt to be unpleasant for the latter.

Outside of the question of meals, the attendants were badly treated anyhow. In most cases, they worked from fourteen to sixteen hours a day. If one of them became sick, he or she was to the hospital ward, all salary being stopped in the meantime. The laws of New Jersey and New York direct that there must be one attendant to every ten patients. The Board of Lunacy, however, changes this law in order to suit itself and the result is that neglect of patients to which I have just alluded. One of the most disreputable features of the institution was, that women attendants were sometimes put in charge of the men's sick wards and what is more than that, had men-keepers under them. This kind of thing led to much dissatisfaction on the part of the male employees and did not tend to purify the moral atmosphere of the place. It was generally reputed that the "women bosses" had a pull with the doctors, or with certain of the members of the Board of Lunacy.

One thing which always shocked me

was, that the toilet arrangements were so poor that very often no hot water was available for bathing purposes. Nevertheless, the patients were compelled to bathe, no matter what the weather was, while their physical conditions were absolutely ignored. The consequence was, that at certain times, women who were compelled to plunge into baths of cold water had their healths and even their lives endangered.

Although there are four surgeons on Ward's Island, the services of outside specialists were called upon whenever it was necessary to perform an operation on a patient, even if such operation was of a simple nature. Of course, the taxpayer has to pay the price of this kind of thing. Why this arrangement stood good, I never could make out, but the general belief was, that it represented a graft for somebody. I may add that nearly all of the so-called doctors in the different insane institutions to which I was attached, were of the "cub" variety and that the patients consequently suffered because of their "investigations."

The worst managed insane asylum of which I have personal knowledge was at Rome, N. Y., at the time that a Doctor Bernstein was Superintendent. Subsequent to him leaving, there was an investigation of the institution, with the result of a general clearing out of everybody concerned, and a much needed purification of the buildings in a sanitary sense. As, however, the asylum as it then was, can be duplicated in many cases in other parts of the country, I am going to tell of some of the things which I witnessed during my service there.

There were a lot of women patients at Rome, and many were the tales told of the manner in which these poor creatures were treated by the male keepers. There were stories of little babies being mysteriously taken out of the institution late at night, of female patients becoming victims of certain diseases, there was an elopement between a "trusty" and an insane woman. None of the patients were given underclothing, no matter what the weather was. Women wore wrappers, some were without petticoats, and thus

Feb. 1905

equipped, they were sent out for exercise in the coldest weather, in spite of their piteous protests. On one occasion, I couldn't stand the sight of the shivering creatures being forced out-of-doors when the temperature was below zero, when a full-fed man, clothed in heavy garments, would have felt the cold. So I entered a vigorous protest against the brutality. The reply given me by the female superintendent of nurses was, "Oh, let them freeze. It will do them good."

As for the men patients, they had khaki coats, and sometimes, but rarely, a rough undershirt, trousers, shoes and stockings. Those who did have underwear, were not allowed to change it for weeks at a time, and you can imagine what the result was. Some of the patients literally stunk, were covered with vermin and occasionally, in self-defence, the attendants had to turn the hose on them.

I have already hinted at the diseases which were rife among a group of the women patients. One of the female nurses lost her eyesight by reason of this. She wiped her face on a towel which had been used by one of the diseased women and the poisonous matter entered her eyes. The incident gives point to the scandalous arrangements which made it possible.

I can only merely hint at the immorality that prevailed in the asylum from top to bottom. One of my duties was to go the rounds of certain buildings that were only used during the day, and see if everything was safe. Many and many a time I had to "shoo" couples out of these buildings after dark, and usually they proved to be one of the women patients and one of the male attendants. Sometimes I came across one of the doctors paying attentions to a woman. A protest or a report of such cases, would have only brought dismissal and so, like the rest of my associates, we used to take no notice of such things.

The treatment of the attendants themselves was not much better than that of the patients in the matter of food and lodging. I remember, on one occasion that the coffee served to us was literally putrid. It had a green

scum on it and its odor was abominable. On our protesting, we were told to take the stuff off with a spoon and drink what was underneath. I need hardly say that we did not. Something like a mutiny followed, the result being that for some months afterwards, we were fairly well treated as far as the food was concerned. The patients were less advantageously placed. In this connection, I can only say that I never saw such a reckless disregard of the first rights of a human being so brazenly manifested as at the Rome Insane Asylum. The patients had no rights whatever. They lived under a tyranny of blows and starvation against which there was no protest. The chief food of the insane was what we called "mystery," which was hash, made of all kinds of scraps and materials. And I hardly think it was a fitting food for invalids. Dinner was supposed to be the chief meal of the day. As for the patients, sometimes this was omitted, and at the best, the meals were irregular and the food was almost indescribable.

I have no desire to bring charges of graft against the ex-authorities of the institution, but I cannot understand how, in view of the liberal appropriations which were made for the maintenance of the insane, that a regime of starvation should be the rule of the place. As illustrative of the methods which were in order here, I will relate one or two instances which survive my recollection. For instance, the bed of one of the patients was in a filthy condition. No clean clothing was available and the mattress was saturated with dirt. This fact was reported by one of the attendants to the doctor in charge, the man at the same time suggesting that the bed should be liberally treated with disinfectants. The humane answer was: "Let the fellow suffer. He is responsible for the bed being in the state that it is, and he can't have any disinfectant."

On another occasion, a patient suddenly developed a very high fever. If I recollect aright, his temperature ran up to 103, and it was evident that heroic measures were necessary in order to save his life. The doctor prescribed an ice bath forthwith. But there was

no ice to be found in the asylum outside of that used for the doctor's ice chest! This, of course, could not be spared for the purpose of saving a mere patient's life. Finally, an attendant managed to get from an outside source, a chunk of ice which was made into an ice-cap and put on the sufferer's head. The latter had a long siege of sickness and barely escaped with his life.

For some reason or other, insane people seem to suffer from ingrowing nails. Also, for a variety of reasons, sprained ankles are not uncommon among them. Among the patients at Rome, were a number of such, but they were compelled to walk and exercise nevertheless. There was no question of their faking, for the most cursory examination of their feet and ankles would have proven that their sufferings were real. But this did not excuse them, and I have seen the poor creatures limping along groaning with pain, and in some cases, with their toes discharging blood. However, and as I have said, an investigation was finally made and the asylum received that raking over which it so richly deserved.

In happy contrast to the horrible conditions just spoken of were those obtained at Danville, Pa., Insane Asylum during my stay there as an attendant. This institution as it was then managed, and as I believe it is managed to-day, gives proof of the fact that with a humane superintendent and a staff of conscientious physicians, the lot of the demented cannot only be greatly alleviated, but in addition, that cures and many of them can be effected. I am given to understand that the list of those discharged as cured at Danville, is larger than any other institution of its kind in the United States, and I have no reason to doubt this. Kindness should be the keynote for the treatment of the insane, for the simple reason that anything which tends to add to the mental irritation of the demented, must necessarily increase the diseases from which they suffer. On the other hand, kindness is the same thing as rest, and rest is the main factor in the cure of the mental maladies, so I have been told by doctors and as I have myself observed.

In the first place, the gentleman who acted as superintendent was a religious man in the sense that he believed that his first duty was towards his unfortunate insane neighbor. In the second, he saw to it that those who were subordinate to him, should carry out this principle in their daily duties as far as possible. He did his utmost to make the poor creatures entrusted to his care feel that they had in him, and his associates, friends of the very sincerest kind. But right through this humane policy there ran the threat of necessary firmness. There was no mawkish sentimentality about the superintendent and when the occasion arose, he did not hesitate to use physical force to assert his official authority. Taking him all round he was one of the finest specimens of manhood that I think I have ever met and it was due to this man that the institution has such an enviable reputation in the medical and political worlds.

Some people criticized him on the score of his preaching the Sunday sermon, and of having nightly services in the chapel attached to the asylum. Also some fun was poked at him because of the religious notices with which he insisted on decorating the walls. But these were, after all said and done, manifestations of his sincerity instead of suggestions of a pose. It was, so I am given to understand, mainly through him that the Pennsylvania Legislature radically reformed the lunacy laws of the State. Thus, attendants were only allowed to work eight hours on a stretch; their salaries were increased, and every candidate for a position of this sort had to pass through a searching examination in regard to their physical moral and mental status. A commission was appointed which, at regular intervals, visited the asylums, such commission being empowered to make further suggestions for the benefits of the institutions, and, if necessary, recommend dismissals of those who were delinquent in their duties, and much more of the same. When the time came that I had to leave Danville for business reasons, I can assure you that I did so with regret.

(To be continued.)

Feb. 1905

"When Doctors Differ, Who Shall Then Agree?"

An Absolutely Healthy Representative of This
Magazine Calls on a Number of Allopaths, De-
scribes His "Symptoms" and Receives From Each
A Diagnosis and Prescription of a Totally Dissimilar
Nature—The Doctors Not So Much to Blame as the
System Which Teaches Them to Make Such Blunders,

By CHARLES H. GRAHAM

In publishing the following interesting and instructive matter, we do not wish it to be construed into an attack upon the allopathic doctors who were visited. There is no doubt whatever but that these gentlemen did their best for the alleged patient with the aid of the light that was within them. Unluckily, this light, furnished by the medical schools in which the doctors in question studied, is always dim and usually misleading. The truth of this remark is made manifest through the medium of the interviews which follow. As has been said, the practitioners apparently and honestly attempted to diagnose the case of our representative. In one or two of the interviews, the latter lays stress upon the means which the medical men took in order to ascertain his state of health. No stone was left unturned to ascertain the facts of the case. No effort known to so-called medical science, was neglected in order to establish the truth. And yet, in spite of all this, each and every one of the physicians involved, made a blunder and a large one at that. The moral is of an obvious nature. It is, that the methods and not the men concerned, are to blame. The system places a premium upon charlatanism, while at the same time condemning the honest man to do that at which his conscience must often revolt. It is an accepted fact that in a diagnosis of a disease under current medical laws, such diagnosis is of an eliminative order. In other words, that when a patient exhibits a number of symptoms, these are weeded out until they fit the disease from which the individual is supposed to be suffering. Now we submit that there is nothing safe or sound about this whole business. It is more or less guess-work from beginning to end. We are told that the medical profession is the only one that is in a constant state of advancement, by reason of the facts already stated. From the "scientific standpoint," this may be eminently satisfactory. But from that of the patient, it is distinctly disquieting. When a sick man goes to a doctor, it is with the supposition that the latter knows enough to name the disease which afflicts the sufferer. And on the basis of his so doing, he is supposed to prescribe the appropriate remedies. But in view of the experiences of our representative, it seems that the contrary is the case. "Guess, and if you guess correctly all will be well, but if you guess wrongly, so much the worse for the patient," is the religion of the medical schools of to-day. Let it be repeated that the men who promulgate the teachings of these same schools, are in the majority of cases honest; anxious to do their best for their practice and filled with a desire to effect a cure. But for all that, their hands are tied; they work in the dark; they grope blindly, and if the patient recovers, it is in spite of their treatment and not by reason of it. With this then, we let the story of our representative stand, asking our readers to give it that consideration which it undoubtedly warrants.—Bernarr Macfadden.

THE first physician on whom I called, was Dr. J. Frank Fraser, 245 West 34th Street, New York City. I told him that I was bothered with pains in my forehead and twitching sensations in the legs. After asking me many questions as to why I had called on him, who sent me, and so forth, he subsequently branched into details concerning my private history and at length concluded that he had ascertained all those facts about me which were necessary in order that he

might correctly diagnose my case. Next, he used the stethoscope on me and pressed one or two pins into my stomach and the small of my back. He also used a wooden ruler on the muscles of the right leg, which, as I understood him to say, was the "aggravation test." I may add that I had tried the same thing many times at school when a boy. Dr. Fraser stated that as I could not keep my leg still when he struck the muscle with the ruler, this would indicate an affliction of some sort or the

other. I did not tell him that I had noticed this test made on several people, who, when struck properly, always flinched. The doctor also looked into my eyes, but took no pulse or tempera-

\$1, and upon asking him what his excuse was for the excess charge, he sated, "that it was for an electrical treatment he was about to give me." As I could not reconcile the electrical

COUNTY OF NEW YORK, ss:

Charles H GRAHAM, being duly sworn, deposes and says that the annexed statement headed "Physicians Investigation", dated New York October 11, 1907, contained on seven pages each of which pages has been initialed by deponent, is a true and exact statement of the matters therein set forth. That your deponent visited each of the physicians therein named and that all the circumstances, conversations, etc., set forth in said statement are true statements of occurrences, conversations, etc., and that the annexed memorandum, prescriptions and receipts upon the prescription blanks or letter heads of the following named Doctors were received by deponent at the times mentioned in the annexed statement: Dr. Edward F. Quinlan, 308 West 20th Street; Dr. M. J. Marxuach, 233 West 22d St., (2); Dr. James A. Maher, 221 West 23d St; Dr. Ernest F. Ruppe, 427 West 47th St. (2); Dr. J. F. Fraser, 245 West 34th St. (2), all of which said prescription blanks, receipts or statements have been initialed by deponent.

Sworn to before me this

8th day of November, 1907

Charles H. Graham
Charles P. Rogers
 Notary Public
 N.Y.C.

ture. Then he concluded that I was bilious, and remarked that in a short time he could cure me. His fee, so he said, was \$3. This I objected to, on the score that the regular office fee was

treatment with simple biliousness, I still protested on the score of the three dollar fee. He finally reduced the same to \$2, which I paid him and took his receipt, which is attached. He also

Feb. 1905

gave me a prescription which is likewise attached. As I have been a healthy person all my life, I leave the reader to infer that the doctor was very much mistaken in his alleged diagnosis of my case.

The next visit which I made was to Dr. E. F. Ruppe, 427 West 47th Street, where his office is. To him I gave the same symptoms, except that I left out the twitching of the leg. This doctor

pain which I did not have. He also gave me another prescription, which I was to take "if the pain came back," which I was supposed to have over the eyes. Furthermore, he intimated that if the prescriptions did not help me they would not harm me. It was at this juncture that he told me what he evidently considered to be an interesting anecdote relative to a patient who came to him to be treated and received in

DR. J. F. FRASER,
PHONE 10 A. M. 10 P. M.
802 W. 84TH STREET,
TOLSON'S BUILDING.

R

At Stone
My Cash 2.⁰⁰
10/10/09

Coffey

DR. J. F. FRASER,
PHONE 10 A. M. 10 P. M.
802 W. 84TH STREET,
TOLSON'S BUILDING.

R

Jabat Tapaianus (Bulu)
No XXX
Two after each meal
in water.

Coffey

10/10/09

EMBERT F. RUPPE, M. D.
427 W. 47TH STREET,
TOLSON'S BLDG. BRYANT.

ORDER BOOK

Oct 11 1909

R

Adult
Ext. Belladonna or 30
Ext. Nuc. Vomica 30
Alon 30
Mix in equal
No XV
Sigma at night
Rupe
C.H.F.

EMBERT F. RUPPE, M. D.
427 W. 47TH STREET,
TOLSON'S BLDG. BRYANT.

ORDER BOOK

Oct 11 1909

R

Adult
Nath. Picra 30
Succ. citr. 30
Antipyrin 30 XX
Caffein 30 F.
M. Div. in 111
publ. No 111
By me or made by
C.H.F.

EMBERT F. RUPPE, M. D.
427 W. 47TH STREET,
TOLSON'S BLDG. BRYANT.

ORDER BOOK

Oct 11 1909

R

Adult
Mist. Rhiz
Solan 30
Elm Lactop
ad 30
Mix in 30
Rupe
C.H.F.

also used the stethoscope, and subsequently asked some questions about my eyes, and so forth. On my replying he stated that there was something the matter with my sight. I may remark that I never have had trouble with my eyes of any nature. Still later, he stated that I had neuralgia and wrote two prescriptions which he declared should be filled during the day and taken immediately, whereupon I would lose the

turn a prescription which the doctor informed his visitor would result in his urine turning blue while using it. In a few days, the patient returned and with some heat, stated that there were no blue symptoms as were expected. Whereupon the doctor asked him where the prescription had been filled, and was informed that it was at a well-known down-town drug store. Inquiry at this drug store resulted in Dr. Ruppe's

learning that the people who kept the place, did not have the drug called for in the prescription and had substituted another. He added that as the drug stores on Broadway were not reliable, it was safer to have one's prescription filled at a smaller store. He did not suggest any particular shop, however, and so the matter stood.

On entering Dr. Ruppe's I asked him what the charges were, and he did con-

Dr. Marxuach did not come within three feet of me at any time. He first suggested that I see an oculist, giving the name and address of one. Relative to the pain in my head and neck, he stated plainly that I had an affliction of the spine. I may here say, that I never had any trouble with my spine whatever, and if there is one portion of my body in which I am strong it is in the vertebrae. The doctor further alleged that I had

<p>Dr. JAMES J. E. MAHER, 221 West 23rd St. Private Telephone 297 Chelsea</p> <p>Office Hours: 9:30 to 1:30 5 to 8</p> <p>R Nasal Boreals (Painful) Tabl. "Lilid" No XXV One in gill bath water as wash at night.</p>	<p>DR. M. J. MARXUACH, 233 WEST 22ND STREET, TELEPHONE 3155 CHelsea. Office Hours: 9 to 10:30 A. M., 1 to 2 and 7 to 8:30 P. M.</p> <p>DATE: 10-14-07 FOR M. Marxuach</p> <p>R Dr. J. J. E. Maher 10 W. 39 St. L. G. GIES & CO., Prescription Pharmacians, 500 Broadway Avenue, Corner 22nd St., New York.</p>
<p>R Tablet Salol No XXV One three times a day after meals 10:14 '07</p>	<p>DR. M. J. MARXUACH, 233 WEST 22ND STREET, TELEPHONE 3155 CHelsea. Office Hours: 9 to 10:30 A. M., 1 to 2 and 7 to 8:30 P. M.</p> <p>DATE: 10-14-07 FOR M. Marxuach</p> <p>R Nasal Boreals - 3 Amn. q - 3 By Dr. J. J. E. Maher L. G. GIES & CO., Prescription Pharmacians, 500 Broadway Avenue, Corner 22nd St., New York.</p>

siderable fencing with me in order to ascertain just how strong I was financially. After I had stated that I had been charged \$3.00 for a visit on a similar errand to another physician, he told me that his fee was but \$1.00 which I paid him on leaving his office.

The third physician whom I called upon was Dr. M. J. Marxuach, of 233 West 22nd Street. To him I stated my symptoms as in the first case named.

impaired circulation, or as he put it, a "sluggish circulation." He furthermore said that my blood needed thinning, and gave me a prescription to this end, which is attached to this article. On asking my occupation, I stated that I worked a typewriter a good deal, whereupon he responded that it was this fact that was responsible for the twitching of the legs, and advised me to run the machine for an hour or so at a

time only. He added that I was naturally nervous. Relative to the medicine prescribed by him, he averred that it would cause pains on both sides of the jaw, and when these appeared, I should stop taking the medicine, wait for a short time, again starting and repeat for a week or so, and then come to see him. He put a number of questions to me as to whether or not my people were alive. Among the the replies I stated that my father and mother were both living, the one seventy-four years of age and the other seventy-six. Whereupon he said that I really ought to be healthy. And I may here say, that I cannot understand how a physician could discover any trouble with me when using the same tactics as Dr. Marxuach, who never offered to make an examination, or place his hands on me, or in other words, tried to locate the trouble—if there was one. When leaving his office, I gave him to understand that I did not care to pay over \$1 for his so-called examination.

Dr. J. E. Maher, of 221 West 23d Street, who was the next physician visited, has a very finely equipped office. There were a number of operating instruments hanging in a wall case, while an electrical machine of large and intricate design catches the visitor's eye, and there were also other apparatus of a scientific and professional nature which made their due impression on the imagination of the patron.

I first of all, asked the doctor what his fee was and was given the usual answer, that it would all depend upon the examination, and so forth, but usually that \$2 was the minimum. I then gave him as my symptoms, those already outlined, and about his first question was relative to my ever having had syphilis. I stated that I had not. Whereupon, after a few more questions, he took me into an operating room, placed a mirror on my forehead, put an instrument in my mouth so as to facilitate looking down my throat, and said, after a brief examination, that everything seemed to be all right in those parts. He then proceeded to examine my nostrils, and seemed satisfied that he found the seat of trouble. Taking two small instruments, he wound cotton around them

and after saturating them with a solution, he inserted one in each nostril. Later, he claimed that he had cleaned out the passage, and I readily believed him, as the sensation was a most emphatic one while the tubes were in place. Next, I was put on an electrical machine, one battery was placed in my hand and the connecting instrument was run over the back of the neck in the region of where the alleged pain was. I remarked that I could not feel the electricity to any extent, and he retorted by saying that that was the result of the numbness of the parts affected. Still, Dr. Maher did not appear to be satisfied as he had not apparently done anything that yielded definite symptoms. He next tested my eyes and found them in perfect condition, notwithstanding the fact that the writer had contracted a bad cold in the period immediately preceding his visit. After the examination, I asked him point blank what my trouble was, reminding him of the symptoms I had given him and those he had discovered in addition. He then stated without hesitation, that I had a "stricture of the nose." I asked him, in the event of his diagnosis being correct, would it in his estimation, result in a man having a pain over the eyes, a twitching of the legs and an alternating pain in the back of the head. He averred that it would. I then said, "Is it not a fact that everyone has catarrh of the head more or less?" He admitted that this was true. I queried, "Do you attribute my trouble to catarrh?" After some hesitation he stated that he did.

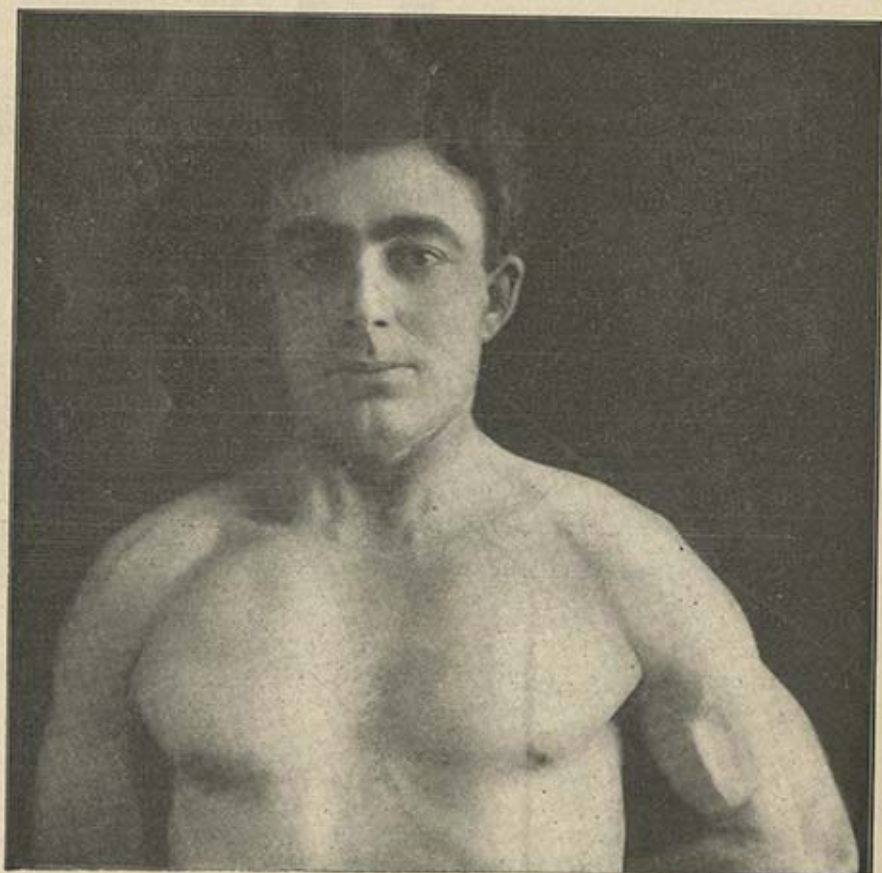
Relative to the prescription attached, he prescribed salol to be taken in a state of solution with a small douche and the nostril passages to be so treated. He also mentioned keeping the bowels open, which everyone with sense should know enough to do. Taking it for granted that the writer had a little catarrh, which is not admitted, it seemed almost incredible that the physician could connect the same with the symptoms described. I paid \$2 for this visit and was told to come back in a week or two and see the doctor again.

Upon calling upon Dr. E. F. Quinlan, of 308 West 20th Street, and giving him

my symptoms, he stated that the trouble with me was my stomach, and that it could not be called vertigo, as the symptoms of that malady were different. The doctor used the stethoscope on my heart, and after a lengthy examination, concluded that the organ was all right. He also stated that I was taking in too much acid in my stomach and told me to be careful not to eat anything containing that element as it was probably affecting the gastric nerve, and that was the cause of the symptoms which I *did not* have. He then prepared a bottle of liquid, a bottle containing a yellowish powder and a small box of tablets with directions for taking these. After he had done this, he instructed me to write on his letter-

head, which is attached, the directions as per his dictation for taking these medicines. He added that it would probably help me if I would call to see him when the preparations were all used up. I must say in regard to this doctor, that his charge was reasonable, being only \$1 for the examination and medicine. He seemed very anxious to ascertain the true cause of my trouble, and did not act like one who was anxious to secure his fee at all hazards.

In conclusion, I may say that in the case of all the five allopaths visited, not one of them reached the same belief regarding my alleged trouble. They also gave me prescriptions for medicines which, in my estimation, are enough to upset a perfectly healthy person.



Mr. Walter C. Cory, a Physical Culture Enthusiast of San Francisco, Cal.

Feb. 1905

The Need of Mineral "Food" in Our Daily Diet

By JAMES CRAIG

It must be again remarked that, because we publish an article, it does not necessarily follow that we advocate either the views or theories which it sets forth. But we believe that a diversity of views tends to shed light on a given subject. This remark applies to that which follows, which, by the way, is remarkable for its cogency of argument and lucidity of statement.—Bernarr Macfadden.

IT is a somewhat curious fact that in the many essays and articles on diet which find their way into print, so little stress is laid upon the necessity for the use of a due proportion of mineral substances, or rather mineral food. We are instructed as to the needful amount of heat-giving, flesh-making, fiber-forming and other nutritives, but rarely is it that we are warned against neglecting to supply our bodies with those mineral salts, without which, in an organized or unorganized form, we would surely perish.

Because the public is thus kept in ignorance of this dietetic fact, the ordinary individual, if asked as to what he requires in the way of mineral food, will either look at you askance or will answer "Oh, just a little salt." Now while it is true that ordinary salt is an essential to our meals, still there are minerals which are just as necessary and which, in at least one or two cases, occur in our bodies in much larger quantities than does chloride of sodium or common salt. So important are these other salts, that unless we use foods which contain them in proper proportion, we are liable to suffer from a variety of maladies, a great many of which are of a chronic and dangerous nature. It is with the part that these salts play in our daily existence that this article has to do. Let it be added, that the importance of the elements alluded to, is by no means a matter of theory only, but has been demonstrated time and again. Thus, recently one of the most famous German doctors fed a number of dogs with food in which the mineral elements varied from nothing to treble their normal proportions.

Where the salts were at zero, or in excess, the animals died. Where the salts were as they should have been, they flourished. In all cases, interference with the usual supply, resulted in some form of malady, and even death.

The moral of all this is of an evident nature and is of especial importance to those of us who live on foods which are almost always cooked. This, for the reason that the act of cooking tends to deprive one's foods of no small proportion of their mineral matters. Still the writer is no advocate of a raw food diet, but on the contrary, and by force of custom, perhaps, prefers to have his eatables—a good many of them at least—subjected to the action of fire before being introduced into the mouth. This fact, however, does not weaken his belief that cooking, unless intelligently conducted, can easily become an insidious enemy to health. The trouble is, that we do not know how to use what may be termed the by-products of the pot or the stove. There is no doubt that if we made it a point to utilize, in the form of soup, the liquids in which our foods are boiled, or if we made into gravies or sauces, the exudations which arise from roasting or boiling, the dietetic balance, as far as the mineral salts are concerned, would be maintained and we should remain healthy and strong in consequence.

In proof of the statement already made, that minerals form an important part in the physical makeup of man, I submit the following figures which relate to a human being weighing 154 pounds. Among the constituents of such an one are:

	LBS.	OZ.	GRS.
Phosphate of lime, which forms the principal portion of the earthy matters of the bones.....	5	13	0
Carbonate of lime, which also enters into the composition of the bones....	1
Fluoride of calcium, another osseous element	..	3	..
Chloride of sodium, or common salt.....	..	3	376
Sulphate of soda.....	..	1	170
Carbonate of soda.....	..	1	72
Phosphate of soda.....	460
Sulphate of potash.....	400
Peroxide of iron.....	150
Chloride of potassium.....	120
Phosphate of potash.....	100
Phosphate of magnesia...	75
Silica.....	3

In regard to the above, it will be seen that, contrary to the general idea perhaps, the quantity of salt contained in the body is not so very much. Nevertheless, it is more than any other mineral with the exception of the two first named in the list. What is more, it is not all exactly assimilated even when it comes into our bodies, but for all that, it has a most specific and useful purpose in the economy of our beings. Also, it is the only substance which we take into our bodies direct from the mineral kingdom. All the other salts named we obtain through the medium of the palate, or presuming that we are not vegetarians, the animals which we use as food. With the statement that the desire for salt is instinctive with nearly all animals, and that those persons who profess to believe that it is harmful and so do not use it, are saved from the consequences of their folly by cooks and bakers, I think I may dismiss this part of the subject. But I may add that there is a certain district in Kentucky, which is called the Big Bone Lick, which contains uncounted thousands of the bones of gigantic and prehistoric animals who died in the region. But why this accumulation? The reply is simple. The district abounds in salt lakes and salt bogs, and the animals in question, even as the animals of to-day, sought these "licks" for the purpose of obtaining salt. The same kind of thing can

be observed in nearly all parts of the world in which wild animals exist.

But to repeat. What is the good of salt? Physiologists will tell you that it has several uses, and the chief of these is, that with its assistance, the blood is kept at a constant degree of fluidity. If we take a glass vessel and divide it into two parts by means of an animal membrane, such as exists in our own or in animal bodies, and put into one of the compartments so made, fresh water, and into the other, a solution of salt and water, the latter will gradually rise up and finally overflow the edge of the vessel, while the former will be coincidentally lowered. The reason of this is, that while pure water will pass through the membrane, salt water will not. Now when we swallow salt with our food, a large portion of it is taken into the blood, and during its passage through the digestive tract, another part is appropriated by the liver and other organs for their special use. The surplus is eliminated through the usual channels. But that which is in the blood, what does it do? Why, with its help, the vital fluid absorbs pure water from the stomach through the membranes of the venous system, precisely in the manner just related. In other words, it facilitates the absorption of water into the blood and therefore into the system in the manner described. Its so doing, accounts for the thirst which we experience after having eaten an excessive quantity of salt or salted food of any kind, because, as stated, it absorbs the water in the stomach and other portions of the digestive tract, and hence causes thirst.

Another important function of salt is, that it supplies the system with a certain quantity of chloride that is necessary for the perfection of some of the vital processes. I need hardly remind the reader that salt is a mixture of chlorine and sodium; the first, a heavy, yellow gas and the second, a white silvery metal which oxidizes rapidly when exposed to the air. Now the gastric juices, which are thrown out from the ducts of the stomach during the process of digestion, contain free hydrochloric acid and the chlorine of this fluid is furnished by the salt used in our food.

Let it be said once more that salt, as salt, is not found in any part of the body but the blood. There are no traces of it in the muscles, the nerves, the bones or other tissues. If you desire to prove the truth of this, prick your finger and apply the tip of your tongue to the speck of blood which will result. Or put a drop of blood on a bit of glass and hold it over the flame of a spirit lamp so as to evaporate the watery part of the fluid. A number of crystalline bodies can be detected with a common magnifying glass, and among these will be seen the crystals of salt.

More than this, there is no reasonable doubt but that salt aids in the act of digestion quite apart from being found in the gastric juices as told. If you take the white of an egg and mix it with a drop of hydrochloric acid, a pinch of salt and a teaspoonful of water, all at a temperature of ninety-eight degrees Fahrenheit, the egg will dissolve. You will see, then, that salt assists in the dissolution of food, which is practically the same thing as saying that it digests the latter. So, apart from all else, there is a very excellent reason for using small quantities of salt with our meals. It should also be said that the quantity of salt found in the blood is constant; that is to say, that if one indulges in too much of the mineral, the blood is not clogged with the surplus, but the system throws it off. On the other hand, a long continued abstinence from salt, leads to a diminution in the volume and quality of blood and a consequent tendency to disease.

The phosphate of lime which forms the principal portion of the bones, as far as bulk is concerned, is a crystalline body, that, like all other of the minerals found in our system, is obtained from our food. It is so named from the fact that it is composed of phosphoric acid and calcium, the latter being the metal which, when combined with oxygen, forms the base of lime. As for phosphorus, it is remarkable on account of its highly inflammable nature. If we light a bit of phosphorus, it unites with the oxygen of the air and forms beautiful white fumes which fall like snowflakes. This is phosphoric acid, that, when combined with calcium, makes the phos-

phate of lime which figures so extensively in the bony portion of our physical structures. But not only is phosphoric acid found in the bones—and it is so rich in these that we get our supply of phosphorus chiefly from them—but the acid is also found in the blood and that too in a "free" condition, by which I mean that it is not mixed with any other substance. More than that, whenever there are changes of a natural sort going on in the system, phosphoric acid is found there also. In view of all this, then, it is evident that any diet that does not have its full proportion of phosphates, is bound to work mischief in the body.

Quite apart from phosphate of lime, there are also found in the body, phosphate of soda, phosphate of potash and phosphate of magnesia, each of which plays its part in the well-being of the human system. Now the great source of these phosphates—which I would again remind you consists of phosphoric acid united with some other material—is cereal plants, by which I mean those plants which belong to the family of grasses whose seeds are eaten by man. Thus barley, oats, rice, rye, maize, etc., all contain phosphates. The user of the mixed diet, also obtains some portion of these phosphates from the tissues of the animal food which he swallows. Such animals in turn have gotten their phosphates from the plants, so that the meat eater gets a large share of his phosphates at second hand. It is, however, from wheat bread, the brown sort, that we get the largest quantity of phosphates. When white flour is used, we are practically swallowing phosphate-less food, and hence the anæmic and poorly nourished condition of those who make constant use of this emasculated form of flour.

It is a curious fact that whenever humanity exhibits a taste or desire for a given food or drink, there is usually to be found behind this desire a sufficient psychological reason. Now, the majority of civilized people of to-day are fond of sparkling drinks that are charged with carbonic acid gas. During the process of digestion, some amount of this gas is formed in our stomachs, which assists in our assimilation of the phos-

phates and in the beneficent work of the phosphoric acid. But when we swallow sparkling beverages, we supply the phosphates with a large amount of carbonic gas which enables them to do their work more readily than under ordinary circumstances. Of course, I am not saying that if there were no drinks of this character, we would suffer, provided that our environments were of a natural sort. But the majority of people live a more or less artificial life, and hence they have to make up for the deficiencies of such lives by as legitimate means as possible. And so it is, the sparkling drinks, provided that they do not contain alcohol or other harmful substances, are, under certain conditions, of a distinctly beneficial nature for the reasons given.

Now let us speak a little of the salts of potash, which, although small in quantity, appear to be highly important to the body. The basis of these salts is the metal potassium, which resembles sodium in a great many respects. It is so light that it floats on water and has so strong an affinity for oxygen that it combines with that constituent of water, giving out heat and light. This same metal is the chief constituent of what we call common potash. A great many plants contain large quantities of potash, from whence, indeed, the latter derives its name. It was noticed in earlier days that in the ashes of wood used for boiling pots, there was a large proportion of this mineral, hence pot-ash.

Plants rich in potash are most necessary articles of diet. Nature gives point to this fact by implanting within us an instinctive desire for plant food of the type in question. It is held by a good many writers of note that the frightful epidemics such as the Black Plague, which used to sweep over Europe, decimating the population, were due to a diet that did not contain a proper proportion of mineral foods, particularly potash. Some of these authorities, indeed, trace a direct connection between the cessation of these plagues and the use of the potato. If we take one hundred pounds of potatoes and burn them, the ashes will contain chiefly salts of potash. As I have already said, the relation between these salts and the

health of Europe, and for that matter America, is believed to be established. Asparagus, radishes, turnips, water-cresses, lettuce, chicory, endive, and so on, all contain salts of potash. It is advised that where these are not eaten raw, the water in which they have been boiled should be used as soup, inasmuch as it contains the necessary salts.

The beneficent action of potash is, that it assists in oxidizing the food substances with which it is brought into contact; in other words, it aids in the digestion of refractory foods. And more than that, it assists the oxygen which is taken into the lungs, in burning up waste substances in the blood. A century ago, scurvy was a disease which decimated the navies of the world and made a long voyage a hazardous undertaking. This was the time when the foods fed to the crews or passengers, were almost entirely of a salty sort. In other words, there were no fresh fruits or vegetables obtainable, which is the same thing as saying that the system was deprived of its salts of potash. Then Sir Gilbert Blane, of England, discovered that if lemon juice was given daily to the sailors, it would prevent scurvy. Lemon juice, in common with a good many other juices of acid fruits, is rich in potash. The thousands of lives which were saved by the discovery are beyond computation. As a further illustration of the qualities of potash as a food, it may be said that bread, if used alone, will produce scurvy. This for the reason that while bread is rich in phosphate of lime, it has none of the potash salts.

Let us now speak briefly of carbonate of lime. That it has its proper place in the system is shown by the table already given. We obtain most of it from the water which we drink, while a number of plants that we eat, are more or less rich in it. Beans and peas contain it, as do other leguminous plants. It is a constituent of the bones and also exists in the fluids of the body.

While there are not more than one hundred and fifty grains of oxide of iron in the body, this salt is most necessary to our health, nevertheless. When we see a person with pale cheeks, bloodless lips and whites to his or her eyes that suggest pieces of pearl, we know that

in most cases, these symptoms tell of a lack of iron in the system. And we prove our theory by administering food that is rich in the needed element. If we do this, it will not be long before the patient begins to recover the lost good looks and roses on the cheeks bloom again.

"A little knowledge is a dangerous thing" says the poet, and the truth of the axiom is made manifest in connection with this question of iron in the blood. The writer has known of old dames who thrust a red-hot poker into their drinks for the purpose of "making them strong." Others drank the water in which blacksmiths cooled their irons; yet others have been known to sprinkle their bread and butter with iron filings. This, of course, is all wrong. But it only goes to show that the need of iron in the system is recognized even by the ignorant. Let it be again said, outside of salt there is no mineral that can be taken into the body and assimilated if it be in an unorganized condition.

Silica, which exists in very small quantities in the body, is distributed in the hair and nails. It also constitutes the enamel of the teeth. The foods which furnish it, are chiefly of the vegetable kind, the silica itself being resident in the rinds of fruits and plants. In each instance, the element, as found in the system, assumes a crystalline shape, and when seen under the microscope the forms are of a very beautiful type.

Magnesia is a combination of the metal magnesium with an earthy base. Its exact function in the system is as yet undecided, but that it has its proper place and work, there is no doubt whatever. It is found in the majority of our edible plants, in the ashes of which it occurs in the proportion of from five per cent. to ten per cent. Yet, as you will observe from the table, there is only a very little of it in the body. In certain diseases, however, particularly those of the kidneys and liver, magnesia becomes very evident in the system, so much so indeed, that its existence in an abnormal quantity, has been accepted as a conclusive symptom of the maladies alluded to.

In addition to the foregoing, there are one or two other mineral substances known to exist in the body, but whether as standard substances or through accident, is still a matter of dispute. Certain it is that some localities are responsible for these questionable matters. Thus, manganese exists in the soil of Scotland, is taken up by the oat plant and is therefore conveyed into the blood of the Scotch. Traces of copper have often been found in the blood substance, and iodine has occasionally been noted in the system. It has recently been stated that iodine has been found in the systems of the majority of a number of Frenchmen who were examined by scientists, while the same element was absent in the case of *all* Swiss who came under the scrutiny of the savants. On this ground, it is claimed that the latter people are so commonly afflicted with goitre—the lack of iodine in their bodies accounting for the disease. However that may be, it is certain that goitre, or the abnormal swelling of the glands of the neck, is frequently relieved, if indeed, not cured by the application of iodine. Iodine is found in some vegetables, notably watercress. It is said to occur more frequently in vegetables which grow near the sea than in those which are found to flourish further inland.

To sum up, I would suggest that when vegetables or other foods of the plant order are cooked, the water used for cooking purposes should not be thrown away, but should be served in the form of bouillons, consommés, soups, and so forth. Of course, an uncooked diet is an ideal one from the viewpoint of the dietetical chemist. But such a diet is not always possible. The next best thing is to preserve the liquids which arise from the cooking and use them as I have suggested. More than that, there should be a daily consumption of a few ounces of raw food, and salads should be used liberally. If these precautions are observed, the body will be properly supplied with those mineral foods that are so essential to its health and also to its happiness.

Muscular motion (voluntary and involuntary) is the great mainspring of life.

The Theory and Practice of the Physical Examination

By LEONHARD FELIX-FULD, M.A., LL.M.

I.—WEIGHT

THE weight is considered one of the most important observations, and it is always taken in the physical examination, even if only three or four other measurements are taken. The weight is, of course, always taken on scales. The two scales which are most frequently used for the purpose of weighing men and women vary in accuracy and price. The supposed advantage of one of these scales is its great accuracy, since it is a three-beam scale. This advantage, however, is more apparent than real, since the normal variability in this observation is very great. A subject weighs two or four pounds more after dinner, according to his appetite and what he has eaten; he weighs a pound less in the morning than at night, and he may weigh five pounds less after he has engaged in vigorous exercise than before. Under these circumstances it becomes apparent that a difference of one-tenth of a pound in the reading of the weight is insignificant. Accordingly the other scale, which weighs accurately to a quarter of a pound, is as useful to the physical examiner as the scale which probably weighs accurately to the one hundredth of a pound. Moreover, it should be borne in mind that there is a great difference in the price of these two scales. The first scale cost twenty-five dollars and the latter only eighteen dollars. Where the physical examiner is unable, because of a small appropriation, to buy even the cheaper scale, it is usually possible for him to secure the loan of an automatic penny-in-the-slot weighing machine, which, though not to be recommended from a scientific standpoint, will generally prove fairly reliable.

As regards the technique of the measurement, the examiner should always record the weight according to the

metric system, in kilos and tenths of kilos. Because of the great variability in this observation, it is waste of time to record hundredths of a kilo. For all scientific purposes, the decimal system is much to be preferred, but if practicable, it is strongly to be recommended that the examiner furnish to the subject his weight in pounds. A statement to the subject that he weighs sixty kilos does not mean anything, but if translated into one hundred thirty-two pounds, it means something. The kilo is about 2.2 pounds, and the translation of the measurement from the metric to the English system is not a difficult problem in mathematics. The metric system should, however, be employed in recording the measurements, because of its greater accuracy and because of the necessity of using it if it is desired to employ the measurements for statistical purposes. In the case of men, the subject should be weighed stripped to the skin, and where the examiner can by authority or persuasion induce women to strip for the examination, this has many advantages. But as the weight is not a measurement which can be taken with great precision, it will be sufficient for most purposes if the weight of women and girls is taken in their gymnasium suits. This will eliminate the weight of the shoes and of the heavier part of their clothing. It is important that the scales be balanced every day before the first subject is weighed. Most scales have a wheel above the beam by which the latter may be adjusted and the scales balanced. Care should always be taken that nervous subjects do not playfully toy with this wheel, and so throw the scales a pound or more out of balance.

The weight of an infant at birth averages about seven pounds, and usu-

ally it doubles in the first five months. After this, there are periods of rapid growth and periods of slow growth in accordance with well-established physiological laws, whereby the child does not increase in height when it increases in weight, and does not increase in weight when it increases in height. As regards the weight of the two sexes it has been observed that at birth boys weigh about half a pound more than girls, and that from the end of the first year to the eleventh year the weight of boys and girls is about the same. After they have passed the eleventh year, girls grow much more in weight than boys, and at fourteen they are much heavier than boys of the same age. At about fourteen boys begin to increase in weight, pass the girls, and remain heavier than girls for the rest of their lives.

When full development is reached at twenty-one, the average weight of men exceeds the average weight of women by about twenty pounds. Many attempts have been made to determine what should be the normal weight of a given individual, but such attempts have been unsuccessful because of the large variety of human types. Everyone recognizes the short, stout type and the tall, slender type, and in addition to these, there are many other types. So that it is impracticable to fix any definite standard which a given individual should normally approach. Similarly, attempts have been made to establish a definite proportion between an individual's height and his weight—to determine how many pounds a man should normally gain for each gain of an inch in height. Examples of such attempts are seen in the scales found in railway depots, but they are exceedingly rough approximations. Our sense of proportion will guide us in determining whether a given individual is too heavy or too tall, but it is impracticable to set any hard and fast standard. A man who is six feet tall should normally weigh one hundred and eighty pounds; but it is not possible to establish any such ratio for each inch of height, because the weight is the most variable of all the observations that can be taken.

The weight varies in the same individual at different times of the day. It

increases after meals and decreases during the night or after physical exercise. Furthermore, this variability is different in different individuals. A very stout man or woman who takes vigorous exercise and perspires freely, may lose as much as five pounds. The thin, wiry man or woman will be much more constant in weight and lose only a single pound, partly because they perspire less. Then, too, the weight of an individual will depend a great deal upon his temperament. All of these observations naturally suggest the foolishness of the statement which we frequently hear. "I am feeling better; I have gained half a pound in the last two weeks." Any change of weight must be considerable in order that it may mean anything, particularly if the two measurements which are being compared were not taken under exactly the same conditions. Unless the weight is taken at the same hour of the day and the individual is naked, no increase of weight is of any importance, unless it is so large as to negative the probability that it may have been caused by a difference in the clothes worn, or a difference due to physiological changes caused by nutrition or sleep. To be of value, an increase of weight, where the observation is taken with the subject's clothes on, must be at least five or ten pounds.

The weight is very quickly reduced by vigorous exercise. There is a record of a Harvard football player who lost ten pounds in fifty-five minutes. This is a somewhat extreme case, but it is not uncommon for a man weighing over two hundred pounds to lose from four to eight pounds in a football game. Basketball and football bring about the largest loss of weight, and this is what we would expect to find, because these are the most vigorous games causing the greatest perspiration. During a period of exercise or of starvation, the tissues of the body are reduced in the following order: fat, muscles, bone, connective tissue, blood, nerve tissue, sense organs.

The weight is always considered one of the most valuable indices of health. The layman will generally answer an enquiry regarding the state of his health by saying that he has either

gained weight or lost weight. If he has gained weight, he considers it proof that he is in the best physical condition, and if he has lost weight, he considers it evidence of lowered vitality. Generally this is true, but it is not always so. The weight is one of the most important items that should be considered in making up the general estimate of an individual's physical condition; but of itself it is not always an absolute indication. A gain in weight may be due to physiological causes. Usually, however, the weight decreases in disease, and it decreases most when an individual has a fever such as typhoid, scarlet fever or tonsilitis. There are many cases on record in which a patient has lost twenty pounds in a week owing to an attack of tonsilitis. From ancient times a loss of weight has been considered one of the symptoms of consumption. A medical encyclopedia, published in 1878, which was considered an authority at the time of its publication, stated that loss of weight and an inability to hold the breath for more than five seconds, were reliable symptoms of consumption. Even at the present day, with our advanced ideas regarding the treatment of consumption by the fresh air method, the weight of the patient is taken at regular intervals and is considered a valuable guide to his actual condition.

The weight is largely a matter of temperament. The nervous individual who cannot sit still is never stout. Physiologically this phenomenon is explained by the large amount of energy used by such individuals in their useless movements. Stout individuals are usually of a slow, sluggish, take-it-easy type. They sleep long and when they enter a room, they look for the easy chair. The amount of nervous tissue in stout and in thin individuals is the same, but the function varies. It is interesting, in this connection, to note that the same prescriptions which will make a stout individual thin, will also make a thin individual stout, the object of all such prescriptions being to restore the nervous and bodily functions to a normal condition. During periods of athletic training, which are periods during which the individual, by the regu-

lation of his habits of living for six weeks or three months, tries to increase his physical efficiency to the maximum, the weight is considered the most valuable indication of the individual's health. Loss of weight is regarded as the first sign of "staleness," which is the technical term used to describe the condition of a man who has done too much training and whose functions are going to pieces. Too much exercise or too much feeding, results in a disturbance of the normal functions, and the first sign of such loss of function is loss of weight. Loss of sleep and digestive disturbance are later signs of the same condition.

Some individuals normally lose weight when they get into good physical condition. These are the men who are too stout and have much superfluous tissue to lose. Those who have no superfluous tissue regularly increase their weight, during athletic training. Football players who do not overtrain always gain weight, and sometimes they gain as much as fifteen pounds in a single season. Such a gain in weight, may, however, be preceded by a loss in weight, due to the possession of a large amount of superfluous adipose tissue which must first be reduced. There is also an important change in weight due to old age. After the age of forty-five the weight of almost every individual changes. It either increases or it decreases, but it seldom remains the same. This is due to the loss of adjustment and harmonious working of the various functions of the body. The food is no longer perfectly digested and assimilated. Some of it remains in the body in the form of fat, and on this account most individuals increase in weight after they pass this period of life. In most cases this increase in weight is not attended with serious consequences to the subjects, although where the weight increases rapidly to three hundred and fifty pounds or more it is pathological, and generally results in death. It is on account of the reduced activity of the functions above explained, and especially of the functions of the heart and kidneys that all physical activity must be reduced after the age of fifty years is passed.

(To be continued.)

Feb. 1902

The Vindication of Vegetarianism

By HERWARD CARRINGTON,

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ONE of the most important problems before the scientific world to-day is that of the proper nutrition of the individual and of the race. It would be impossible to over-estimate its importance, for the reason that many other social, no less than physical, ills besetting the race can be traced back to this question of the right or wrong feeding of the community; alcoholism, licentiousness, poison habits, vices and excesses of all kinds, as well as physical diseases can be traced back, in part at least, to the character, quality and quantity, of the food eaten. And the more the question is enquired into, the more certain do these (at first sight extreme) remarks appear. When, therefore, a doctor or a scientist comes before the public, as a public teacher, writing in a public journal, it is extremely important that the doctrines they promulgate should be strictly in accord with fact—or at least that nothing they teach should be harmful and detrimental to the average reader, or liable to do harm to the race. Should such be the case, it is high time that such teachings should be checked, or at least that the opposite side of the controversy should be placed before the reader, who may then form his own opinion of the value of the evidence presented by the writer in question. In the hope that some of my readers may be induced to look at this food problem through other eyes than those wrongfully provided by certain alleged scientists, I therefore undertake to criticize, briefly, in the following summary, the main position and statements of these latter.

The position assumed by the persons in question is, in the main, this: That certain foods possess a large amount of food-poison, others less poison, proportionately; while others possess the peculiar characteristic of being poisonous to certain individuals only. Let us first consider the first two classes of

foods specified. The critics strongly condemn beans, cheese, nuts—in fact, almost every substitute for meat—these being foods that contain high percentages of proteid. The fact that they are poisonous, when eaten in excess, is strongly insisted upon, and the dangers of using them pointed out. But how about meat-eating in excess? Not a word is said of the danger of that course—a course that is universally followed by nine-tenths of the American population! *Any food taken in excess* is harmful; and all foods contain more or less poisons, these are truths and even platitudes. But when the dangers resident in beans, cheese, and nuts are so strongly insisted upon, why is there no word said of the poisons residing in meats of all kinds, and all animal products? Perhaps it would be contended that such poisons do not exist—at least to any such extent as I have indicated, and that animal food and animal products are not directly poisonous in the way that the foods specified are poisonous. But that is a fatal error; so far from being *less* poisonous, they are far *more* so, and so much stronger are their poisons, that there is no comparison whatever between the two foods. Let us consider this question a little more closely. I think I can show the reader that animal food is distinctly poisonous, and that within a very few minutes, and with no strain upon his intellect or credulity.

All animals are constantly making poisons within their bodies, the creation of such being inseparable from bodily functioning, and are the very products of living. These poisons are being constantly thrown off, however, through the various eliminating organs—the lungs, bowels, skin, etc.—and the animal preserves his health and life, and continues living, simply because of the unceasing action of his various depurating organs. How powerful these poisons are, and how quickly they

would poison an individual, were they allowed to accumulate within the organism, is seen in those cases where the action of some eliminating organ is clogged or interfered with for a time—the skin, for example, or the action of the lungs. What happens? The animal promptly dies—within a period, too, not of days and weeks, but of minutes and seconds! The man who is strangled to death does not die from lack of air, *per se*, as most persons suppose; he is poisoned by his own excretions. His blood is almost black—due to the fact that it has had a chance to pass through the lungs several times without being oxygenated; the venous blood continues venous, instead of becoming arterial, and the patient is soon so *poisoned* that death results, due to the presence, within the organism, of uneliminated poisonous material.

It is solely owing to the unremitting action of the various eliminating organs, therefore, that any animal is allowed to remain alive; and if the action of these various eliminating organs is in any way interfered with, the results soon become apparent. Now, suppose any animal is suddenly killed; what would happen? The action of these various excretory organs would instantly cease, and any poisons or excreta that were in the body and tissues of the animal would necessarily remain there. The morbid material—the poisonous excreta—that would have been eliminated an hour or so later, had the animal lived, in urine, feces, carbon-dioxide, etc., is now retained within the tissues and muscular fiber of the animal, and no processes whatever can ever rid the tissues of those poisons. Now, when we eat meat, *we eat those poisons along with the nutriment which the meat doubtless supplies!* The animals' excreta, in short, is eaten by us, and passed through our bodies a second time, after having been filtered through the animal's body, thereby uselessly adding to the stock of poisons already within our organism. It is a disgusting thought, and one that should appeal to even the most matter-of-fact persons. We are called upon to filter through our bodies, and finally eliminate, not only the poisons formed within our own

bodies, but also those formed within the body of the animal! And yet it is claimed that "animal products are scarcely ever harmful;" and that meat is a more wholesome food than those containing none of these organic poisons! Such is medical logic.

It is very true that meats contain a certain amount of nutriment; and I do not pretend to say that they do not. But I would also point out that the useful part of meat, the proteid which it supplies, is also obtainable from nuts, cheese, peas, beans, wheat, etc., in greater proportionate abundance, and without any of the objectionable toxic poisons residing in flesh food and inseparable from it. And if it be contended that such proteid is *not* supplied, then I may say that any person who affirms this, is contradicted by the evidences of chemistry, and by the practical experience of many hundred of persons living throughout the United States or other countries, who subsist entirely upon a vegetarian or fruitarian diet. All finer arguments and distinctions aside, how would the advocates of the carnivorous diet account for the actual *fact* that so many hundreds of sound, strong, athletic men and women are living upon a diet devoid of meat and all meat products; and not only so, but have had their health and strength regained, in most cases, by adopting just this diet? That at least, is a problem calling for solution.

It is a fact that all the work of the world is done by vegetarian animals. The horse, the ox, the elephant, the camel, are all vegetarian animals, most of them never touching meat. The popular delusion that meat "gives strength for work" is rather overthrown by these facts, going to prove the very contrary. Harness up a pair of lions and set them to ploughing a field (if such a thing were possible), and see how long they would last! It is true they have tremendous strength, but strength of a kind that is soon exhausted. It is the same with man. The truth of the matter is, that meat supplies no strength at all to the living organism, any more than any other food does, that it apparently does so is due solely to the fact that it is more

stimulating than other food—and hence, for all practical purposes, more objectionable!

Having lived upon raw foods for several years myself, I am in a position to state that criticism of such a diet is erroneous. Raw foods, fruits and nuts, no matter what arguments are advanced to the contrary, supply all the nutriment the body needs, in the very purest and best form. Also those who adopt this diet, find themselves healthier, happier and stronger, mentally and physically, than they were before, when living upon the prevailing, mixed diet. There are whole colonies of people in California living upon fruits and nuts only, and sickness is practically unknown among them.

Professor Jaffa has reported the results of his investigations among fruitarians to the United States Agricultural Department, Washington, D. C., and he concludes that fruits and nuts are adequate foods; that they supply the body with every element it needed, and that, so far from such persons eating more than the average person to make up for their supposedly "low" and "innutritious" diet, they ate far less than does the average person, most of them eating but once or twice *per diem*, the habit of the author.

Again, the actual facts in the case go to prove that fruits are good and sufficient food for any normal human being, the dread of "bacteriological infection" being confined solely to those who live upon cooked or unwholesome foods. Provided that the organism is maintained in a high state of health, bacteria are as harmless as sunlight; and I may state, in this connection, that, in spite of the "dangers" we are alleged to be constantly running, I have yet to meet with the first case of "bacteriological infection" or any other sickness whatever in those persons who are living upon the raw food diet. I let the facts speak for themselves.

In an article recently published by a "scientific meat eater," it was contended that "all signs indicate that man was meant to eat meat." I flatly deny the truth of this statement, and contend that there is not one single indication, or one fact—drawn from any branch of

scientific investigation, to show that man is in any way carnivorous. He has no carnivorous teeth, what are called his carnivorous teeth being practically no different from the others, in structure and formation, found in the larger monkeys, whose diet is practically entirely confined to fruits and vegetables. Man's stomach in no wise resembles that of the carnivora, while the length of his alimentary canal clearly indicates that man is not naturally carnivorous. But one of the critics alluded to denies this. Thus: "His (man's) intestinal canal is only about five times his body length, instead of from ten to twenty times, as in the herbivora. If man is to become a pure and blameless vegetarian in the future, his stomach and alimentary canal will have to be reconstructed."

Now, such is not the case. The reason for such a misstatement is this: In all other animals (carnivora included) the length of the animal's body is said to be the distance from his nose to the end of his spine; while with man, it is said to be that from the crown of his head to the sole of his foot! If the two animals are to be compared, therefore, as regards their body length, it will be necessary for this fact to be taken into consideration, and man's body also measured in the same manner as are all the other animals. When this is done, it will be found that the length of his intestinal canal is not only five times the length of his body, but ten times that length—thus placing man outside of the class of carnivora, and into that of other vegetarian animals.

The great contention of the "mixed diet" defenders is that "man can live on either animal or vegetable food, and therefore he is an omnivorous animal." In point of fact, it proves nothing of the kind. That man *can live* on meat and foods of all kinds cannot be doubted; the question is whether man lives and thrives *best* upon such foods. In other words, would he not be far healthier on other, more normal, foods? Logic and experience both go to show that such would be the case, and we should choose our foods, bearing in mind not so much what we "can live" upon, as what will preserve the soundest and healthiest

body. One of the false teachers alluded to contends that man is superior to other animals for the reason that he can live upon a wider range of foods. The greater the range in foods, the higher the scale in the animal world. Well, the sow has about as wide a range of food as of any animal, I fancy, and yet it is not known that this animal has yet earned for itself the title of the "king of beasts"—nor have the crab or the lobster earned for themselves that enviable position among the inhabitants of the sea! But perhaps that is Nature's fault; she so seldom knows her business—were we to judge from the current physiological and medical teachings.

I repeat, there is not one single argument that can be advanced that will go to prove that meat-eating has any rational basis to rest upon, or is in any way necessary to the welfare of the com-

munity; but, on the contrary, every argument drawn from anatomy, physiology, chemistry, hygiene, therapeutics, as well as economic, social, ethical and humane, reasons backed up by common sense, and supported by vast experience, prove conclusively that the vegetarian diet is not only a possible and wholesome one, but the most rational, sane and healthful one. It is the *only* diet that can be persisted in for any considerable length of time without detrimentally affecting the bodily and mental powers. This being so—and it can be proved to be so—we vegetarians and fruitarians naturally desire to check and offset such erroneous statements as those made by the men in question. It is to be hoped that the few (out of many) reasons and arguments thus advanced by the writer, will at least have the effect of making inquirers of some of the readers of this article.

THE WOMAN AND THE TEDDY BEAR

Two or three days since, the writer, passing through 23rd Street, was attracted by a smart automobile drawn up in front of a dry goods store. Outside of the chauffeur, the only other occupant was a well dressed woman, apparently married though childless. She carried with her a huge Teddy bear, and on the "hood" of the machine in which she rode, was another specimen of this alleged species of the bear. This last one was evidently wired on, or else would have fallen off. The woman alighted and went into the dry goods store. The chauffeur remained behind. The curious halted by twos and threes to examine the bear sitting on the hood and several of these snickered audibly, as well they might.

The woman how had thus diverted to a sort of four legged doll the affection that she should have given to a child, was in a way more to be pitied than blamed. She had all the needed affection in her nature, but it was misused either by reason of her environments or the conditions of artificial society which surrounded her. Of course there was no excuse for her making a literal exhibition of herself in the way that she

did. But when, with such women, one of the highest instincts of race has been diverted while remaining powerful, it is likely to take the form of queer manifestations.

A writer in the magazine, *The Nauticus*, who 's, by the way, an Oriental, says: "When an Oriental first sees an American woman carrying a puppy or hugging a 'Teddy bear,' leading a cat by a string, or lavishing love on canaries, 'dearing' flats, pickles and sausages, he is apt to laugh at her in derision. Later, when he comes to understand why some of the women on this continent are 'dog'-gy and 'bear'-ish, and when the conviction goes home into his consciousness that no amount of pets and amusements are capable of filling the void which motherhood and wifehood alone can satisfy, he feels a pity for them. Then his heart goes out to them. Their love for happiness, their concern for future heaven, their craving for happiness in the life to come, all appeal to his sympathy.

"Thus an Oriental is enabled to forgive and forget that these very women are responsible for the presence of Oriental shocks in America."

Feb. 1925

Comment, Counsel and Criticism by Our Readers

If, at any time, there are any statements in **PHYSICAL CULTURE** that you believe to be erroneous or misleading, or any subject discussed regarding which you take issue or upon which you can throw additional light, write to us, addressing letters to this department. We intend to make this a parliament for free discussion. Problems that you would like to see debated, interesting personal experiences, criticisms, reminiscences, odd happenings, etc., are invited. We shall not be able to publish all letters, but will use those of greater interest to the majority of readers. For every letter published we will present the writer, as a mark of our appreciation, with a subscription to **PHYSICAL CULTURE**, to be sent to the writer or to any friend the writer may designate. For the convenience of our office kindly write us after the publication of your communication, giving name and full address of the person to whom you wish subscription to be sent.—Bernarr Macfadden.

Frequent and Light Meals

TO THE EDITOR:

I have been much interested in the articles in **PHYSICAL CULTURE** on Diet, Physical Exercises, etc. For many years I have also been studying the care of farm (domestic) animals and poultry, and have had the personal care of very many of such creatures under very different circumstances. Experience and observation as well, have taught me that the best results can be obtained by feeding at regular intervals, and at least as often as three times a day, and that it is better to feed five times a day, always feeding sparingly, so it will be eaten up clean.

A neighbor of mine wintered a flock of sheep at a back barn several years. It was at quite a distance. They were supplied with plenty of running water, a good sunny yard, with warm sheds and fed judiciously twice a day. The flock never did nearly as well as others fed the same rations three times a day and not having as good a location.

I have several times known stock in an emaciated condition, rapidly built up by regular, frequent and careful treatment. Had they been fed on the one-meal plan, or obliged to undergo a fast, I have no doubt they would have died. In my own experience with a weak stomach, foods relish better and are assimilated better if taken in small quantities, and at regular intervals. Digestion stops if I take in one or two meals the same amount of food I can take in five. Unless a different rule applies to mankind than to dumb animals, it is evident that the ideal way is to eat in small quantities, and at frequent intervals. Hope to hear from others along this line.

CHARLES O. TARBELL,

South Royalton, Vt.

Living on Seventy-five Cents a Week

TO THE EDITOR:

In the October number of **PHYSICAL CULTURE**, I read the article entitled, "Living on Two Cents a Day," and from that I received the idea of reducing my board bill, as every little bit counts when one is working his way through school.

My room-mate and I therefore started to work out for ourselves a satisfactory diet, one which would furnish the body with nourishment, be agreeable to the taste, and still be inexpensive. We first tried the wheat, but not with much success, as it didn't prove very agreeable to the taste. So we finally adopted the following diet which we have used successfully and which has proved of more value to us than all the meats and other truck with which we had been previously loading our stomachs.

In the morning we have a dish of oatmeal or Grape-Nuts, half a loaf of whole-wheat bread and one-half pint of milk. This meal is prepared in a very short time in our room. We find this sufficient to sustain us till evening.

During the day we attend a business college and study hard. At noon we go for one hour's walk about the city and our only nourishment is two or three glasses of water. I thought at first that I would be hungry at noon as I never before went without my noonday meal, but I found to my satisfaction that after the first day or so I experienced no desire for food. The food we ate in the morning was amply sufficient to carry us through till the evening meal, which consisted of practically the same material as we had had in the morning, sometimes being varied with Graham crackers. The total average of our food bill came to seventy-five cents a week.

Formerly I had paid four dollars a week for board, and it wasn't nearly as good as what I get now for seventy-five cents. Besides I feel much better mentally and physically. I take your exercises night and morning and take much delight in a good friction bath each morning with a good stiff horse-brush. At first I commenced with a soft bristle brush, which I used until my skin became accustomed to a harder one.

But to conclude, I would say that I see no reason why any person who desires to be economical and have a good digestion could not adopt a diet of this kind or one somewhat similar. It will not only reduce expenses but is conducive to better health, which in

my opinion is better than all the wealth in God's creation.
Albany, N. Y.

E. J. T.

Remarks on Education

TO THE EDITOR:

Physical culture includes all kinds of culture. Whatever effects the body, effects the mind.

Education is positive force, verified by experience and observation. Truthful education leads people to cultivate the good and expose the bad in nature; but it does not "overcome Nature," though doubtless, false culture has done much to produce the extremes in society, titles, privileges and paupers.

As the child is directed the man is inclined. Education forms habits. Most people act more from habit than from thought. Mind governs man and education governs the minds of most people. Kingsmen, democrats, theocrats, monotheists, polytheists, anarchists, socialists or others; whoever control the education of the people, control their destinies and the forms of their government to some extent, but do not "overcome Nature." Ages of anti-naturalism have not "overcome Nature."

Knowledge is a reservoir, passion is a rushing torrent, language is machinery, and eloquence is their concentrated power; their effect on mankind exceeds computation.

Everyone has more or less positive force, but no one wholly creates his own environment; others have much to do with it; many tug at it in varied ways.

Improvement begins with the individual, pervades the home, society and the nation. Every locality cannot be reformed at once. When a man says "The world is my country," he proclaims a large opinion of himself. The men who have done the most for mankind, did not claim to be larger than their country. Many a man has given his life to save his country, and did not think the price too much. We honor people who face danger when duty requires it, but we do not honor vanity, rashness or royalty.

"My country, may she ever be right; but my country, right or wrong." It shows the aim of Decatur was as grand as his deeds, and worthy of emulation.

The patriot does not desert, though the country happens to be wrong; he protects her and helps reform her.

Patriotism is a virtue and will be so long as the individual cannot at all times protect himself sufficiently. Co-operation is desirable only when it is necessary. Where there is co-operation there must be government.

JOHN R. MACKINTOSH.

Clarksville, Arkansas.

Sentiment Regarding the President

TO THE EDITOR:

I have read much from the pages of your estimable magazine, regarding Theodore Roosevelt's physical development, and although I do not deny any of the statements made by the different writers, I am inclined to criticize them in general.

First, there are other great persons taking equally as much interest in "preaching the gospel of physical culture," such as Thomas Edison, Jack London, Edwin Markham, Ella Wheeler Wilcox, Elizabeth Towne, and many others with equal note, whose names are seldom if ever mentioned.

But the question arises "Are these people's opinions of as great an importance as the is the opinion of the President?"

I feel safe in answering Yes, for the reason that they will hold a greater place in history, and their habits and practices will be longer remembered, because there are and will be other great presidents.

And second, although his ideas in regard to women bearing large families of children may be pleasing to the masculine gender, it is far from being so to the feminine sentiment in general. Why? Because after a woman has borne ten or twelve children, she is not capable of taking as great an activity in life as those who have been sensible and raised from one to two healthy children.

Even though they are healthy in a large family, their parents are not capable of taking as great an interest in each individual's welfare, thus unpreparing them for the battle which awaits them out in the busy world. I know from experience, being one of a family of eleven.

Though this criticism may seem harsh to some, I am sure others, and especially those who have been unfortunate enough to be one of a large family, will partly if not fully, be able to comprehend its meaning.

O. W. VAWTER-LEWIS.

Oregon City, Oregon.

Out of nutrition comes all strength of body and mind, all capacity for labor. It is everything to every man. The child grows to manhood through processes of nutrition, dependent on circulation. The man is active and vigorous and successful in life just to the degree that he has good circulation, and consequently good nutrition. The lawyer who wins his case through force of intellect is the man who has abundance of good blood circulating equally and freely through his organism. The minister who sets forth the noblest ideas, entrances his audiences, it may be, or interests even the wild, the reckless, or thoughtless, is the man whose brain is well sustained through good nutrition as the result of good circulation. In fact in all departments of life, what a man is, and what he can do, depends upon the quality of his circulation and nutrition.—Dr. Robert Walter.



THE VIRTUES OF OUR METHODS PROVEN

A Notable Walk

The following narrative has been condensed from the diary of Mr. Arvid Sepola, who last fall walked from New York City to Duluth, Minn., his birthplace. As a preliminary, it may be stated that he is an ardent physical culturist, and that his long tramp has left him in an excellent condition, both in a physical and mental sense.

He left the PHYSICAL CULTURE offices in the Flatiron Building, New York City, one fine afternoon, and on reaching his destination, went direct to the local *Herald* office, had his picture taken, and then mailed a postal card back to the offices of this magazine relative to his safe arrival.

It may be said here, that Sepola did not undertake his long tramp through any desire to advertise himself or any article. He liked a walk and a long one and that was all there was to it. The spice of adventure that seasoned his "promenade," as he chose to call it, to Duluth, made the trip more enjoyable. Besides that, as he declares, he had opportunities for seeing the country and enjoying the scenery, which a railroad train, or any other means of conveyance would not yield him. During all the time that he was on the road, Sepola ate nothing but fruits, vegetables and nuts, and drank milk and water. Both his dietetic views and his love of walking, were in the main, the outcome of a long vacation spent by him last summer at Physical Culture City. There it was that he practically slept in the open, realized the advantages of a natural and simple life, learned to live and flourish on a vegetarian diet, and, as before stated, contracted that regard for "Shanks' Mare" which stood him in such good stead during his progress toward Duluth.

It may be added that he is about twenty-two years of age, during his long walk lost some pounds in weight, says he feels better than he ever did in his life, and intends in the future to stick to his present diet and swears by physical culture, its principles and methods.

When he left New York, he wore a khaki suit consisting of trousers and shirt, a pair of stockings, shoes that were heel-less and that had been made to order, and a khaki hat. Everything survived the trip with the exception of his shoes which were soled twice between the time of his leaving Broadway and his arrival at Duluth. He also carried a pack weighing about twenty pounds, containing an extra suit of clothes, toilet articles,

an automobile guide to roads and a few packages of raisins, nuts, and so forth.

It took forty-two days for Mr. Sepola to cover the distance between New York City and Duluth. Usually he slept at a farm house or a hotel. Some Sundays he rested. Other days he could not progress on account of the bad weather. Twice he lost a good



Arvid Sepola, As He Appeared During His Walk from New York to Duluth, Minn.

many hours while having his shoes repaired. On the road, he averaged thirty-six and a half miles a day when the weather was good and the going of an average. The longest distance he ever covered was fifty-two miles, which he did in sixteen hours, the scene of his exploit being New York State. His route



Messrs. Kramer and Bellelaire

took him from the Flatiron Building to Albany, Utica, Syracuse, Rochester, Buffalo, Erie, Cleveland, Toledo, Chicago, Elroy, Eau Claire, and finally Duluth. As far as Elroy, Wis., Sepola traveled over wagon roads; but from Elroy to the Head of the Lakes, he walked the tracks of the Omaha road which, he so declares, was the least pleasant portion of his trip.

In speaking of his walk he said that he found that he could go further upon sour milk and dates than any other dish.

"I always walked at least fifteen miles in the morning before eating anything," he said. "Then my breakfast would consist of two or three bananas, seeded raisins and nuts, eaten at the side of the road mostly near some stream of water where I could get a drink. I may add, that I drank nothing but spring

water and occasionally milk, used no stimulants of any kind, and neither chewed or smoked tobacco.

"I usually started out about 4 or 4.30 to 7 A. M. and ate my breakfast about ten o'clock. Usually I managed to go to a town where there was at least one hotel by nightfall, at which I put up. Sometimes there was difficulty in obtaining the vegetables and fruit I desired, but in such cases a little persistence did the trick. After dinner at night, I would rest for a couple of hours before going to bed.

"I did not attempt to walk in rainy weather. It is true that I got caught in several showers, but they did not hurt me in the least. It was only during rainy weather I accepted a lift from passing rigs and only a few of these.

"I met a few hoboes, but I had no trouble with any of them with one exception, and then a show of my gun set him going the other way. Most of the policemen and constables whom I met were very kind and often walked blocks with me, asking all sorts of questions.



Mr. Edward Conley

"In every town which I visited, I bought bunches of souvenir postal cards and these will be mighty interesting to look at in future years. On the whole, I made better time on the road than I thought I would, when I left New York. I shall probably never take another long walk like this one, although I never felt better in all my life. I have just made the tramp to find out for myself whether physical culture would last, so to speak; whether it was better to eat only two meals of nuts, fruit and vegetables, or three meals of a mixed diet. I am satisfied on all points and my total belief is, that physical culture has solved the proper manner of living."

Sepola is a machinist by trade and worked in the West after he left Duluth two and a half years ago. He went East early in 1907, heard of physical culture and its methods and determined to adopt them and test them in the way related. He is a member of the Young Men's Christian Association and the Presbyterian Church at Washington. He is also a member of the Fraternal Order of

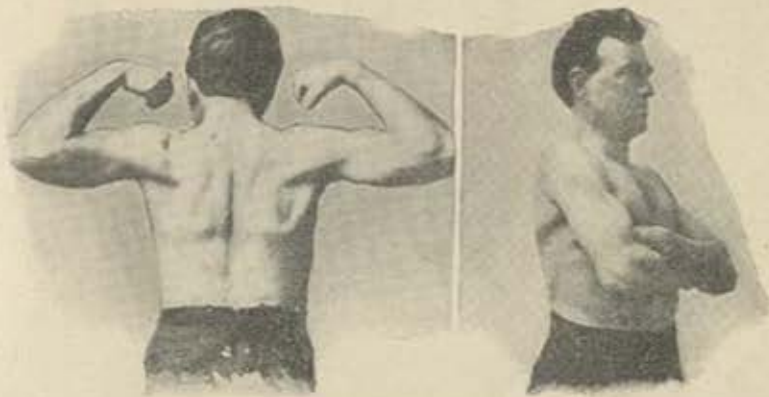
sense and good judgment are requisites essential to perfect health as well as exercise. Six to eight hours sleep, a half hour exercise morning and evening with two-pound dumbbells, together with a cold plunge and alcohol rub, not forgetting a daily constitutional of from five to ten miles are the means he has used to develop himself. He says that anyone of normal health can be like him if they will only follow these rules. He considers the use of liquor and tobacco injurious, because they impair the digestion and create a disturbance throughout the nervous system. He believes that physical development should be accompanied by a mind equally well developed—that one should harmonize with the other.

Mr. Kramer is twenty-three years old and with his partner, bids fair to show still greater results in strength and endurance.

A Sturdy Young Wrestler

TO THE EDITOR:

Herewith I send you a photograph of my-



Two Views of Mr. J. D. Buckalew

Eagles, has many friends both in New York and in his home city, and is altogether an excellent specimen of wholesome and happy physical culture.

An Acrobatic Physical Culturist

An interesting demonstration of the powers of physical culture is to be found in Sam Kramer, a member of an athletic combination that is now appearing in vaudeville. To look at Mr. Kramer one at once calls to mind the legends of ancient Greece. He stands 5 feet 7½ inches, with a normal chest measurement of 46 inches, his waist measuring 30 inches; he weighs 170 pounds, and he is magnificently built.

One of his most convincing tests of strength is lifting single handed, his partner, Mr. Bellelaire, who weighs 160 pounds, in midair with ease.

When asked to what he attributes his physical development Mr. Kramer stated he believes in moderate living, and that common

self taken about four months ago, which you may publish if you see fit. I have not only been a constant reader of your magazine ever since it has been published, but I have put into active practice the principles which it advocates, especially those which tend to the making of health and strength. As a result, I have turned out to be one of the best wrestlers in this section of the country, this I may say without egotism for my record speaks for itself. One time I was the champion welter-weight wrestler of Ohio, but have outgrown that class since I have turned the scales at 153 pounds. Just now I am an all-round athlete, with wrestling as a specialty. I may add that I do not use alcohol or tobacco in any form, am practically a vegetarian and a sincere exponent of physical culture which has done so much for me. Let me add that it is stated by my rivals, as well as my friends, that I have the strongest neck of any man in the wrestling business.

Cleveland, Ohio.

EDWARD CONLEY.

A Traveler's Experience

TO THE EDITOR:

I have been a traveling man for a number of years and have never stayed more than one week in any one place. Consequently, and before I knew aught of physical culture, I experienced all the tortures of hotel life, including badly ventilated rooms, wretched diet, etc. I also discovered that I had indigestion, stomach and liver troubles, with complications of the heart and lungs. Knowing no better, I tried the drug route until I was nearly down and out. In the meantime I had been reading your magazine, *PHYSICAL CULTURE*, for some years, but only out of curiosity and never with the intention of putting its valuable teachings into active

pockets. I took him and threw him over a seven foot fence. Later, I learned that the fellow weighed about 165 pounds. I shall soon be forty years old, but I feel as if I was not more than twenty. I am sending you two pictures, the back view was taken about nine months ago and the front lately; they tell my story better than pen and ink can do.

J. D. BUCKALEW.

Third Vice-Prest. International Association of Machinists, Birmingham, Ala.

A Hardy Athlete

This picture, taken at Seagate, N. Y., shows Mr. John W. Woodward about to take a mid-winter swim in the ocean. Mr. Woodward,



Mr. J. W. Woodward, Between Plunges in the Icy Waters of the Ocean

use. However, when I nearly reached the limit of my health, I picked out some exercises that I could execute without apparatus, except a bed and chair that could be found in almost any hotel. I improved. Next I began to reform my diet and cut out drinking, chewing and smoking. Furthermore, I kept clean on the inside as well as the outside, for my habits began to improve with my diet. To make a long story short, I am now all that a man should be. For over a year I have been without any kind of pain or trouble whatever. I take ten minutes exercise in the morning, then a sponge bath, get all the fresh air possible and in other ways live up to the beliefs of physical culture.

Not long ago a man tried to go through my

who is a ruddy specimen of vigorous humanity, is an enthusiastic devotee of the strenuous outdoor life, and swims in the ocean as often as he can the year round, no matter what the weather—rain, snow, or ice. He is a resident of New York City, and walks the entire distance to Seagate, takes a quarter of a mile swim, has a rub down, then walks home, making a round-trip of a good many miles. He says he knows of nothing else that yields the delightful reaction and exhilarating glow, that he experiences after taking a mid-winter swim in the icy waters of the ocean.

Mr. Woodward is a member of the New York Camera Club, an all-round good fellow, and a staunch adherent of physical culture principles in general.

General Question Department

By BERNARR MACFADDEN

In connection with the subscription department, there has been organized a competent staff, including the editor, for the special treatment of ailments in accordance with the theories we advocate, and each applicant will secure the same individual attention as he would if he applied to a competent physician for treatment. Write for full particulars and refer to "Offer Q." If you are willing to solicit subscriptions you can secure our treatment free in return for your services.

The Cure of Rupture

Q. Can a man who has been ruptured by heavy weight lifting, develop as much strength in the affected parts after having been ruptured, as would have been possible had he never suffered this experience? Will there always be a weakness at this point, making him liable to another rupture if subjected to some strain, such as might be the case in wrestling or heavy weight lifting?

A. It is to be assumed that a rupture of the kind in question was made possible by a lack of strength and development in the affected part. As most of my readers know, a rupture can invariably be cured by natural means, depending chiefly upon the development of the muscles and other tissues in the affected part, in such a way that the opening will be completely closed, and a permanent cure accomplished. If, after this, the person continues to take a proper amount of exercise, and maintains a desirable strength in the affected region of the body, he will not only be as strong as he was formerly, but a great deal stronger. And he would be able to subject himself to the same strain either in wrestling or weight lifting, without being equally liable to another rupture. It is possible that a much greater strain than the first, might bring about a rupture, but the same amount of strain assuredly would not. He might consider himself as practically immune against such an accident.

Chest Expansion

Q. Do you consider a lung expansion of five and a half inches good? I have increased my expansion from four inches to five and a half, by following the exercises illustrated in your magazines.

A. When you speak of lung expansion, you probably mean chest expansion. I would say that five and a half inches is an exceedingly good chest expansion. As a matter of fact, the average chest expansion is between two and three inches. I would call your attention to the fact, however, that the word "average," does not signify that I refer to a

normal chest expansion. The average chest expansion is naturally the expansion of an average individual, and the average individual is neither healthy nor normal as a general thing. An expansion of from four to five inches would be more nearly normal. I would say that chest expansion does not necessarily mean lung expansion, for chest expansion depends greatly upon the elasticity of the chest walls, and upon the development and contractive power of the muscles about the chest. Some of those who can, by a sort of muscular contortionism, show a considerable expansion of the chest, may have a very limited capacity of the lungs, measured in cubic inches of air. So that nothing authentic or important can be indicated by these various measurements. If you simply practice deep breathing, and find that your lung tissue is of a healthy nature, affording you good endurance, then you may rest assured that your lungs are O. K.

The Use of Oil

Q. Would you kindly give your opinion in regard to the use of "Lizard Oil," used by many ground tumblers for softening the bones and enabling them to turn hand-springs, snap-ups, etc. Is it harmful in its after effects?

A. Your question reminds me of the superstition which prevails in some circles, to the effect that snake oil is valuable to contortionists, the supposition being that one who uses much snake oil, will make himself as pliable as a snake. It is true undoubtedly that there are occasions when the use of oil rubbed on the skin is more or less beneficial, though in this respect, lizard oil has no special magic or mysterious charm attached to it. In fact, for such a purpose, you can scarcely secure anything better than plain olive oil or coconut butter. But under such circumstances, the real advantage for athletes or ground tumblers would result from the rubbing and kneading, as well as the massaging of the parts, rather than from the mere use of oil. In fact, rubbing with alcohol, water or with nothing, would accomplish very much the same results in bringing about the pliability of the muscles concerned.

As regards the softening of the bones, such a notion is an absurdity. Not only can the

bones not be softened, but it is not desirable that they should be. If the bones of your legs for instance, were softened in the manner which apparently you desire, you would not be able to stand up. Remember, that the only advantage of such rubbing with oil, or without it, consists in increasing the circulation of the muscles, and removing any stiffness that might be in evidence. Remember also that the interior of the body cannot be oiled, except through such forms of fat and oil as may be assimilated through the digestive organs, and brought to the various parts of the body through circulation.

Exercise in the Tropics

Q. Is it necessary for one living in the tropics to take the same exercise in order to keep in good condition as it is for one living in the United States?

A. It would be difficult to give an exact answer to this question that would fit all cases. There are some who require more exercise than others. In a general way, however, I would say that there is really very little difference in the case of each individual, as regards the amount of exercise required, either in the tropics or in the temperate zones. A certain amount of exercise is absolutely essential in order to maintain a satisfactory circulation, to keep up the strength of all parts of the body, and to maintain the tone of the functional system. There is what might be called the maximum and the minimum amount of exercise consistent with satisfactory health, and it is desirable that an individual should not step beyond these limits, no matter what the climate may be. I have known of physical culturists who have spent long periods of time in tropical climates in localities where malaria and fever predominated, and who enjoyed the very best of health, simply by reason of their rational mode of living, while others about them were continually on the sick list.

Exercise for Farmers

Q. Does the ordinary farmer need any system of gymnastics? Are not good food and sleep and mental development, his chief needs?

A. As a general thing, the average farmer is in need of improvement in his food, and in many instances, opportunities for mental development. It is true that the nature of his work affords him considerable beneficial physical activity. But it is nevertheless true, that it is seldom that his labor supplies all of his requirements in this respect that he does not also need some gymnastics, or exercise to keep him in good condition. Pitching hay must be admitted to be a superb exercise tending to strengthen pretty well nearly all parts of the body. During the season in which the farmer is engaged in haying, he perhaps requires no activity. But ploughing is a very different thing. It

is a very tedious and monotonous form of work which is inclined to exhaust, but not invigorate. It is one-sided, pulls down the shoulders, cramps the chest and gives a man that heavy, dragging gait which is peculiar to so many farmers. The same may be said of many other of the activities of farm life. It is true that these various forms of work are far better than the stagnant, sedentary habits of life common to professional people in the cities. Yet they are not sufficient to bring about the best development, or promote the best degree of health. Some special movements to involve the entire muscular system, stretching each part and arousing a more perfect and active circulation of the blood will do the farmer just as much good as any other class of men. It would be particularly to his advantage to use movements which bring into active use those muscles that are not employed in his day's work. Also such corrective exercises, as will be inclined to bring his shoulders back and expand his chest. In other words, to improve his carriage generally. In case one is tired after a day of laborious effort, it is far more likely that a few active exercises would refresh and rest you, instead of making you additionally tired.

Pure Blood and Blood Poisoning

Q. We hear much in these days of people dying from blood poisoning. In case of accidents necessitating amputation, or of any serious wound, would such a death from blood poisoning be possible if one had lived the natural life you advocate, and his blood was perfectly pure?

A. The question of blood poisoning, as the result of a serious wound, would depend upon the entrance of germs into the wound. In case the tissues were infected in this manner, the individual would undoubtedly experience a case of blood poisoning no matter how pure his blood might be. However, the question as to whether or not this infection would have serious or vital results, would then be determined by the condition of the blood of the patient. If his blood were pure and rich as a result of the vital and healthy habits of the individual, then, even though he might experience an attack of blood poisoning, he would be able to withstand it and overcome the infection.

On the other hand, if the individual were one of average health, or perhaps we might say average ill health, with lowered vitality, and the condition of the blood was already more or less impure and anaemic, then the chances of serious results would be intensified. Poison is always an enemy to life, being just as much so to one whose blood is pure, as to one whose blood is impure. But the individual with pure blood will surely be able to combat the poison, whereas another with impure blood and a devitalized state of health, might not combat it.

Strength-Testing Contests for Boys and Girls

By HARRY WELLINGTON

THE photographs published herewith represent some exceedingly valuable exercises, inasmuch as they serve not only to test the comparative strength of the participants, but are also of a nature to build strength. They have one advantage over a great many other exercises, which is to be found in the fact that the spirit of competition will tend to make them

far more interesting than exercises in which there is nothing of the nature of a contest.

The first photograph illustrates an exercise which chiefly involves the strength of the arms. Two participants take positions at opposite sides of a table. Placing their elbows together, and grasping each other's hands in the manner illustrated, each one attempts



Photo No. 1.—Taking positions on opposite sides of a small table, place elbows against each other on the table in the manner shown, and grasping hands. Now let each one try to force the other's arm back so that the back of the hand will touch the table.

at a given signal to force back the hand and forearm of his or her opponent. For instance, if in this case the little girl should be able to force back the hand of her opponent until the back of his hand touched the table, she would be the winner.

It is important in this contest of



Photo No. 2.—Let both take hold of a broomstick from above the heads in the manner illustrated. Now each should take as tight a grip as possible, and slowly bring the broomstick down until it slips and turns in the hands of either one or the other. It will naturally turn in the hands of the one possessing the weakest grip.

strength that both the right and the left arm should be given an opportunity. First let the competing persons use the right arm, and after the supremacy has been decided, let each one use the left arm. It will sometimes happen that

the one who is defeated when using the right arm may be able to win when using the left arm. It is important also that neither one have the advantage in the beginning. When the signal to commence is given, the forearms of both individuals should be straight up and down, so that the test will be a fair one.

Remember it is necessary to keep the elbow on the table. If possible both should sit on chairs, though this is not necessary.

The second exercise is a contest of the strength of the grip, although it will also furnish exceedingly good exercise for nearly all of the body. Secure a broomstick and let the two contestants take hold of it at arm's length overhead in the manner illustrated in the photograph. Now each one should grip the broomstick very tightly with the hands, and gradually bring it downwards. You can easily see that as the two children bring the broomstick down between them, it will be necessary for it to turn in the hands of either one or the other. The boy or girl who has the strongest gripping power, will probably hold the stick very tightly, whereas the weaker one will be unable to prevent it from slipping and turning in his hands. It is a splendid exercise for developing concentration of mind, for it calls for all the determination that one can command.

It is a good thing to have these contests occasionally with those you know, as a means of determining your improvement. For instance, you will find great pleasure if you have been exercising for some time and building increased strength, to find that you can defeat

some of your playmates in the performance of the play contests, who formerly were strong enough to defeat you. You will find great encouragement if you perform the exercises in this way.

The Organs and Their Purposes

This is one of a series of articles having to do with the various organs of the body, the part that they play in the total scheme of the system, and the manner in which they perform their work. In these articles will be told tersely but intelligently, the story of the organs.—Bernarr Macfadden.

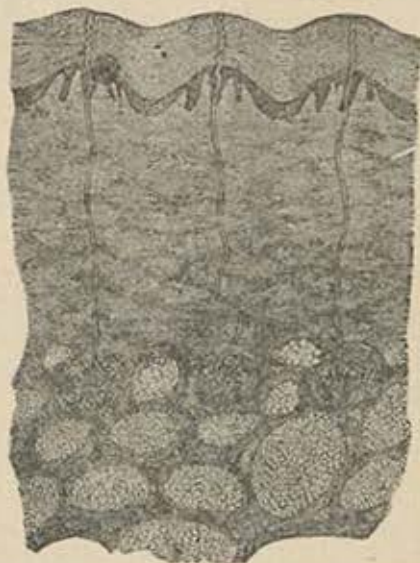
No. 12.—THE SKIN

THE human skin, with its appendages, covering and protecting, as it does, the exterior of the whole body, is a most marvelously and ingeniously constructed tissue. Not only is it arranged and built in a general way to fulfill all the claims which may be made upon it, but it is also modified in various special localities so as to perfectly serve special functions.

For purposes of description the skin may be divided into three layers: First, the outermost one, called the epidermis or cuticle; second, the middle one, the derma or true skin; and third, the subcutaneous layer.

The epidermis, or cuticle, being the most exterior, is in continual contact with all the constant rubbing and pressure to which the body is subjected. It is, therefore, from a purely mechanical point of view, the protector of the body. Owing to the constant rubbing and pressure of this layer, there is a steady loss from its surface by destruction and scaling of the living cells of which it is composed. In order, therefore, that under normal conditions this covering be not totally lost, there is a steady growth from the bottom upward of these cells. The structure of this layer consists of one class of cells, called *epithelial*, but whose shape varies very markedly from within outward. At the inner surface of this layer, the cells are cylindrical in shape and soft in texture, growing more spherical and less soft as we reach the middle, while at the surface the cells become flat, dryer, and in some cases almost horny in consistency. The outer surface of this layer is virtually smooth, while its under or inner surface is undulating, dipping in between and rising

over the prominences of the derma or true skin. In the innermost layer of this epidermis, we find the coloring matter which gives the lightness or darkness of shade to the human skin. This coloring matter is the same for all races, black, yellow or white, the difference of shade being produced by the amount of it present. Sunlight has the effect of causing more color to be deposited in the skin upon which it shines.



Vertical Section of Skin, Greatly Magnified

The nails on one's fingers and toes are but modifications of this epidermal layer of the skin. They consist of the same epithelial cells, but are more flattened, more closely packed together and more horny in structure. At the base of each nail, there is a so-called root, embedded in a fold of the skin, from whence comes the growth in

length of the nail, and underneath its concave surface is the *matrix* or "quick" of the nail, which is very full of blood vessels, and by means of which the nail grows in thickness. These nails on the human body, which at the present time merely protect the ends of the fingers and toes, were, in the early ages of human existence, intended also to serve, not only as tools, crude though they were, but as weapons of offense and defense.

The second layer of the skin, the derma or true skin, is a tough, flexible and highly elastic tissue, protecting the underlying parts, acting as the chief organ of the sense of touch and effecting by its various glands, not only the excretion of sweat, but of an oily material whose purpose is to prevent the too-rapid drying of the epidermis.

This true skin consists of two layers. First, the *papillary layer*, situated upon its free surface, presents innumerable, minute, conical eminences, which are very full of tiny blood vessels and whose average size is 1-100 of an inch in length, by 1-200 of an inch in diameter at the base. These little mounds are very thickly arranged in paralleled curved lines, forming ridges, in the more highly sensitive regions, while in the less sensitive parts they are more thinly and irregularly distributed. In each of these minute mounds are found the terminations of the sensitive nerves or nerves of touch. Second, the *reticular layer*, contains interlacing bands of firm white fibrous tissue, with yellow elastic fibers wherever hair exists, also lymph spaces and blood vessels.

Beneath this true skin is the *subcutaneous layer*. This consists of an open network of fibrous tissue, connecting the true skin with the tissues underneath and holding in its meshes a greater or smaller number of fat-cells.

In the true skin, or the subcutaneous layer, we find multitudes of sweat glands. Each of these has a single excretory duct and a little coil. The duct passes up between the little eminences and opens on the free surface of the epidermis. These glands, although found in all portions of the skin, are infinitely more numerous in some places than in others. The hairs, which, like

the nails, are modified portions of the epidermis, are found everywhere in the skin, except the palms of the hands and the soles of the feet, but vary greatly in size. Each hair consists of a root and a shaft, all situated in a deep, narrow cavity, known as a hair follicle. This follicle traverses the whole thickness of the skin, beginning generally in a subcutaneous layer and opening on the free surface of the epidermis. Into the deeper part of this follicle, there generally open from two to five glands, known as sebaceous glands, which secrete the oily substance previously mentioned. Each hair has attached to its base a minute muscular fiber by which it may be raised to an erect position. The sebaceous glands are found wherever there is hair, and are most abundant in the scalp, face, armpits, and around the various openings of the body. Although generally opening into the hair follicles, they frequently open on the free surface of the skin. These openings become very noticeable when plugged with dried secretion and discolored black by dirt, when they are known as "blackheads."

The skin of the human body has quite a number of various duties to perform. The most manifest of these functions is that of protecting from harm the more delicate structures that lie beneath it. This protection is accomplished in two ways: First, mechanically, by means of the cuticle or epidermis. This takes up the persistent constant rubbing and pressure which is applied to it every moment of the being's life, the outer cells being constantly destroyed or rubbed off, while new ones steadily take their places. Second, the end-organs of the sensitive nerve-fibers in the papillary layer being of three kinds, namely, nerves of sensation; nerves of heat, and nerves of cold, these receive corresponding sensations of pressure or pain, heat or coldness, and by transmitting these sensations to the central nervous organism, serve as a warning to the individual economy that danger from injury, or extremes of heat or cold, is present. This warning, being followed by activities of various sorts, guards the human body from destruction.

Physical Culture Readers and the Verdict of the Trenton (New Jersey) Court

By BERNARR MACFADDEN

The following letters are but a tithe of those received by me at this juncture. Of course, I was aware of the fact that I had many sincere acquaintances and warm friends, who were such because of the nature of the work in which I have been engaged for several years past. This is one of the advantages of physical culture, by the way, its bonds are those of brotherhood and there is a species of freemasonry which exists among members of the cult, that comes to the fore under stress of persecution or misfortune. But I must confess, that I did not know how profound was the sympathy and how real were the ties that bound thousands of my readers to me, until the knowledge was spread broadcast over the country that I was suffering for conscience sake—for the right of free speech and for the privilege vested in every American citizen and in every honest man, of raising his voice against evils which are sapping the manhood and womanhood of the nation.

As I have just said, the letters which are now published form but a very small proportion of those received. But those given are characteristic of the whole, in the matter of loyalty to myself and the cause which I represent. They are furthermore significant as showing the social and personal calibre of the writers and the whole-heartedness with which these last put themselves on record against laws which strike at the very foundations of the freedom guaranteed by the Constitution to all citizens of the United States.

This is but the first installment of such letters. I propose in the future, and from time to time, to give others to our readers. Meantime, I ask that due attention and consideration be given those herewith published.

THE PHYSICAL CULTURE PUBLISHING CO.,
NEW YORK CITY.
GENTLEMEN:

I read with amazement of the decision in Mr. Macfadden's case. It certainly is my unalterable opinion that such a decision cannot stand, as the punishment is out of all proportion to the "offense," if such a term is to be applied. To me it savors very strongly of prejudice. While it has never been my pleasure to meet Mr. Macfadden, yet I feel an intimate acquaintance with him because of having kept in close touch with him, month after month, through PHYSICAL CULTURE and through his books. I have only the warmest admiration for, and entire confidence in, him. To those who know him—if only by his "works"—the thought of his even being compelled to comply with the court's decision is repellant. Surely no impartial person will question his purity of purpose in the publication of that serial, and while it is entirely possible that, from a legal viewpoint, a "technical offense" was committed, truly, there could be no evidence that would suggest "criminal intent," and if, in the judgment of the trial judge, it was necessary in the strict performance of duty, to impose some form of a penalty, surely considering all phases honestly and impartially, the punishment should not have included imprisonment.

For the many years that Mr. Macfadden has been before the American people and his mission in life made known through the public press and other avenues, and a knowledge of the immensity of the lasting good he has done to human kind, it is singular to me that a court of justice should label him a

menace to public morals, brand him a felon and order him placed behind penitentiary bars.

Is not such a proceeding suggestive of something more than simple desire that justice be done? Is it not a matter of animus? Are there not powerful influences back of this persecution that are not patent to the general public? For instance, the medical fraternity? And also, the patent medicine interests? They are both cunning, resourceful, relentless enemies when aroused. I know of my own knowledge that Mr. Macfadden is not beloved by the M. D.'s. The reason is plain; he has trod too heavily upon their mercenary-calloused toes and diverted the course of too many coins of the realm from them by fearlessly exposing them. I have had any number of "spirited" controversies with physicians because of my outspokenness for, and maintenance of his anti-drug methods. But, I have the advantage of them. I can shame them all—and have several—because of having cured myself of catarrh and hay fever by physical culture methods, while several years of medical treatment only added to the intensity of my ailments. It was through suggestions in your magazine that I started on an anti-drug crusade to wipe out these ailments, with the result that to-day I am absolutely free of them and enjoying that superb health that anyone can attain by intelligent application of your methods.

For comparative purposes I wish to submit a few figures and in them you can read the story of the "Macfadden ideas" as against "drug methods." Subject—myself:

Five years ago: Age, 36; height, 5 feet 9½

inches; chest, 39 inches; expansion, 3 inches (scant); girth, 44 inches; weight, 212 pounds; muscles, flabby; ailments, indigestion, catarrh and hay fever.

Two years ago, and as I am to-day: Age, 41; height, 5 feet 9½ inches; chest, 42; expansion, 5½ inches; girth, 40 inches; weight, 194 pounds; muscles, rocklike; ailments, none.

Considering the above, you will understand why the "Macfadden methods" prevail with me and why I am fearlessly outspoken in advocacy of him and them.

"O physician! O medicines! thy crimes are multitudinous.

O Macfadden! O physical culture! Thy benefits are everlasting."

At this particular time it seems to me that all lovers of justice and their fellowmen should "rally round the flag" of the man who, in the face of determined and malicious opposition and persecution, has irrevocably stood for the betterment of men and women. Let these last in a substantial and tangible way prove their sincerity. I will be glad to note indications from you of ways and means by which they can assist.

With best wishes and assuring you of my assistance, if I can be of any, I beg to be,

Sincerely yours,

La Porte, Ind. E. D. DERBY.

MR. BERNARR MACFADDEN,
EDITOR PHYSICAL CULTURE,
NEW YORK, N. Y.

I read in the papers last night of your being sentenced and fined. If ever anything was unjust, this is. It makes my blood boil. I wouldn't be a bit surprised, if the quack medical people and the patent medicine men had something to do with this. It don't look good to me at all. If an appeal can be taken in this case, do so, and I feel all who are in sympathy with your noble movement will contribute and see it out to the finish. What you have done for this race in England and the United States cannot be estimated. Thousands upon thousands have been pulled out of the dirty mire, and are now clean and noble. Knowledge has been spread that is

as the light of day into the murky, foggy atmosphere of ill living. Fight it out, Macfadden, and don't be disheartened. We are back of you. Heaven knows, if there is a judgment hereafter, many cannot share the bliss of righteousness because of their deeds here. I would be dead long ago, if it were not for your magazine, which I read from its start. I want to right here thank you.

Yours truly,

Chicago, Ill. ELIAS SALISBURY.

DEAR MR. MACFADDEN:

I, for one, don't believe that you are a criminal, as stated in a press dispatch a few days ago.

I want to assure you of my deep sympathy for your present situation. While I am not able to write you a flowery letter, I do want to express to you my friendship, and if there is anything I can do for you, I hope you will avail yourself of the privilege of calling on me.

Very sincerely,

BYRON TYLER.

Syndicate Building, Kansas City, Mo.

MR. BERNARR MACFADDEN:

In looking over the morning papers, I saw an account of your trial, and to say I was greatly surprised is putting it lightly. I must say that the court is greatly in need of a "Fish Diet." Obscene literature is not the cause of your arrest. But some fakirs' businesses and vaccine factories have been ruined by your manly and fearless attacks upon them. Consider yourself lucky that the sentence imposed was not two thousand years. I have been a constant reader of your magazine from its first issue, and fail to see where obscene literature was ever inserted within its pages.

Prudes and rogues can alter meanings to suit their cases, and this is one of them.

Obscene literature—what is it, anyway? I will wager that the parties who had you arrested, look for alleged filth, and then imagine they find it.

It is useless to deny that there are many things very rotten, and they are not so far away as Denmark. But I believe our courts are showing signs of this decay.

Trusting that you will receive justice at your next trial, I remain your admirer and well-wisher.

Valley Falls, R. I. F. J. HORNING.

MY DEAR MR. MACFADDEN:

I was quite surprised to learn by enclosed cable, published in one of our papers, that you had been indicted and that a judgment had been found against you for sending "obscene matter" through the mails in your physical culture magazine.

I have been a reader of your magazine for more than two years, and I take pleasure to confess, that I owe little less than my life to it. I have never seen in any number of it, the slightest suggestion of obscenity and nothing but plain, common sense and healthy talk about plain, natural, God-given things, which has induced many of your readers to embrace a new and regenerated life, full of health and pleasure.

A sick brain and a filthy mind will always look for and certain is to find filth even in Christ's teachings.

If these sincere words of an honest man will be of any comfort to you in your trouble, it will be gratifying to your most sincere admirer.

Habana, Cuba. ENRIQUE HERSCH.

BERNARR MACFADDEN, Esq.:

I regret exceedingly to learn the decision of the court a few days ago, and trust there may be an opportunity for an appeal to be made. The broad-minded men on this side of the line are much concerned over what they term a very unjust decision. We boast of our "Land of the Free." Freedom must surely be in chains at the present day.

Hoping to learn of brighter prospects, I am, sincerely, one in sympathy with the work,

HARRIET J. HOLMES.

344 Davenport Road, Toronto, Canada.

MR. BERNARR MACFADDEN,
PHYSICAL CULTURE CITY,

DEAR SIR:

I read a short notice of your fine and sentence in one of our daily papers yesterday. I sincerely hope it is not correct. If it is, then it is a disgrace to the United States. Talk about the "Land of the Free!" It is more like a relic of the dark ages.

Can anything be done? Would a monster deputation to Washington to wait on the President have any effect? My deepest sympathies are with you in your hour of trial. Your books and magazines have been an inspiration to me the last two years or more, in fact, more so than all other agencies put together.

Yours truly,

Stratford, Ont.

E. H. EIDT.

MR. BERNARR MACFADDEN:

I see by a recent issue of the *Chicago Daily Socialist* that the "prudes" have "got in their hooks," and I want to express my sympathy and congratulation. I was aware that the "prudes" and the "plutes" have been making themselves rather obnoxious and annoying of late, but I didn't realize that they had such a strong hold on the nation to this extent. Remember, comrade, that a good cause thrives on persecution.

I am yours for the revolution,
CAIRO, ILL. FRED'K MORTON YALE.

MR. BERNARR MACFADDEN,

I have just read of the sentence imposed upon you for your serial story. Although I did not consider that it could do the good intended, I consider the sentence nothing short of an outrage and gross perversion of justice. If anyone undertakes any great and good work of reform in the interest of humanity in this present evil world they seem called upon to suffer for it, yet sometimes it is encouraging to know that such persecution often works out far greater results in advancing those very reforms than aught else could do. We hope for your complete vindication in the higher courts, and can in no wise understand how you could have been sentenced at all.

Some of us have no means to offer, but would like to suggest that it might be of benefit to circulate a petition or protest among your magazine subscribers. Our household would gladly sign such. We shall hope and pray for the success of your work in what your magazine stands for.

Very truly yours,

MRS. JULIA BENSON.

Greenfield, Mass.

MR. BERNARR MACFADDEN,
PHYSICAL CULTURE CITY, N. J.,

DEAR SIR:

I note by newspaper reports that you have been fined \$2000 and sentenced to two years imprisonment. While I know nothing of the particular facts alleged in the charge against you, I desire to say that from what I have known of your work and teachings in Battle Creek I have been very much interested and was favorably impressed, and I regret exceedingly, that the outcome of the litigation has been so disastrous to you, and I sincerely trust that you will be able to secure a new trial or to reverse the decision upon an appeal.

I am much surprised at the sentence of the court, so far as the term of imprisonment is concerned, and believe that the sentence imposed could scarcely be warranted had there been deliberate and carefully planned attempt to violate the law in spirit as well as in letter.

Wishing you success in the ultimate outcome of this matter and in your efforts along physical culture lines, I remain,

Yours truly,

LOUIS E. STEWART.

Stewart & Jacobs, Attorneys at Law,
Battle Creek, Mich.

DEAR FRIEND MACFADDEN:

I see a news item in to-day's paper stating you had been sentenced to two years hard labor in the State Penitentiary for sending obscene literature through the mail. It was sad news, and my heart throbs for you, brother, knowing so well the condition and what is considered the offense. It makes me rave to think of such justice and law in this free land of ours.

I'll assure you a sympathetic tear is in many an eye for your cause and with the same feeling and thought as I. What can I do for your speedy release? I trust every physical culturist from Maine to California will rise as a man to fight for your freedom. Have good cheer, my friend, it may look gloomy now, but be assured your army of adherents will not rest until you are a free man again.

Awaiting further details, I remain at your service,

Yours very truly,

N. O. WELANDER.

1530 E. Franklin Ave., Minneapolis, Minn.

BERNARR MACFADDEN, ESQ.:

I saw in our local paper that judgment had gone against you, with a sentence which would be an outrage.

Is it true? And if so will you inform me what course you intend to take, and in what way your subscribers may help to vindicate you, either through your columns or in some way.

I cannot rest in mind till I hear.

Very sincerely and with all good wishes for your triumph,

JOHN DAULBY PEAKE.

Organist and Music Director, Park Church,
Elmira, N. Y.

MR. BERNARR MACFADDEN,
PHYSICAL CULTURE CITY,
MY DEAR FRIEND:

It was with extreme regret that I saw the decision of the court in your case in to-night's paper. But there is a saying "every knock is a boost," and I trust it will be true in this case. It has ever been the same in all new movements, and this will probably be a means to arousing a greater interest in this great movement throughout the world wherever your magazine has been read. I could not refrain from expressing my sympathy in your present trouble, but feel sure that truth and right will ultimately win, and this be only the darkness before a brighter dawn.

Trusting the cloud will soon pass, I remain your sincere friend and fellow worker,

MRS. I. J. HAMMOND.

10 Hope St., London, Canada.

MR. BERNARR MACFADDEN,

I received your pamphlet explaining your trial and its results. Personally I am very, very sorry for you, being a reader of your magazines. From the first they have been a God-send to me. When I look back and think of the suffering I underwent years ago, and how sadly disappointed I was in the doctors, I used to pray the Lord to send a doctor that would understand my case. My prayer was answered through the publication of your magazine, and if I had found them in

time, they would have saved me from the surgeon's knife, which brought no relief.

Any intelligent reader of your magazines could take nothing but good out of them. I have often thanked God for a clean minded man like I take you to be, not afraid to express your opinion on immorality. I have often thought if people would follow your teachings more, what a different world this would be. But, Mr. Macfadden, do not despair. All great reformers have had their trials, from our Saviour down. I believe it will work together for some good to you. I feel sure you will have the prayers and support of the readers of your magazines.

I would advise you to trust in the Lord, and he is able to bring you out all right, for I cannot think he would let the good work cease, by taking away its leader, who has done so much for suffering humanity, myself included.

I will give my mite to help the good work along. Hoping I will be excused for this long letter, I am, Yours very respectfully,

MRS. E. MCCAUGHEY

2105 Susquehanna Ave., Philadelphia, Pa.

DEAR MR. MACFADDEN:

I have just received your pamphlet "Is it a Crime to Expose Crime?" I heartily sympathize with you and burn with indignation at the sentence pronounced on you by Judge Lanning, on account of the publication of your story.

Such treatment is monstrous and totally undeserved—nay, your whole career deserves the highest commendation.

Two years ago I commenced reading your literature and it saved me from suicide, besides showing me the way to a nobler and purer life, and I have been struggling to rise higher ever since, and I know of several others in England for whom your works did the same thing.

Therefore I would be glad if you would send me a blank petition that I may do my little share and send my humble subscription towards helping to pay my debt of gratitude, and hope that I shall be one to carry on a part of the noble work which you have inaugurated.

Yours very sincerely,

Danville, Va.

GEORGE SIMPSON.

PHYSICAL CULTURE SOCIETIES

Boston.—Miss Louise Klein, 5 Day St., N. Cambridge, Mass.
Brooklyn, N. Y.—Mr. John J. Costello, 117 Carlton Ave.
Philadelphia, Pa.—Mr. J. C. Edwards, Bryn Mawr, Pa.
Trinidad, Col.—Mr. Daniel Sandoval, P. O. Box 354.
Detroit, Mich.—Miss Josephine P. Scott, 57 Hancock Av.
Colorado Springs, Col.—Thomas Brazil, 1513 Grant Ave.
Minneapolis, Minn.—Mrs. Lora C. Little, 1114 12th St., N.
Buffalo, N. Y.—Mr. Frank L. DeBoy, Jr., 454 William St.
Toronto, Can.—Mr. A. M. Kennedy, 9 Adelaide St.
Newark, N. J.—Miss Anna A. Jackson, 120 Lombardy St.

Manhattan, N. Y.—R. R. Purdy, P. O. Address, Ossin mg, N. Y., Box 204.
Pittsburg, Pa.—Dr. S. M. Stauffer, Bell Phone, Court 1286, 524 Penn Avenue.
Montreal, Quebec, Can.—Miss B. Allen, 438 Dorchester St.
Cleveland, O.—Miss C. J. Lowrie, 229 Arcade.
Chicago, Ill.—Mr. A. G. Gobrecht, 10425 Walden Parkway.
Paterson, N. J.—Mr. Frank Berdan, 35 Clinton St.
St. Louis, Mo.—Mr. Brown Hamilton, Buckingham Hotel.

A New Organization for Moral Reform

The Sterling Purity League, Just Organized, Stands
for Purity in Thought, Word and Deed

IN an editorial on a preceding page, will be found an announcement of the organization of The Sterling Purity League. We cordially invite every reader who is interested in the improvement of the human race to enlist under its banner.

PRINCIPLES OF THE LEAGUE

(1) We believe in that purity of the human mind and the human body, indicated by the word **STERLING**. That is, we believe in purity, through and through. We deplore the idea of villainess that is so closely associated with the human body by the average mind.

(2) We believe in monogamy of the highest type. Or, the marriage of one man to one woman, which, we believe, under the right conditions, from the instinctive desire of each, perpetuates for a lifetime that intense love that makes of marriage "one grand, sweet song."

(3) We believe in a single standard of morals for men and women.

(4) We believe that a knowledge of the physiological laws of the sexes in all their details is absolutely essential to the perpetuation of marital happiness, and that the present policy of hiding and in most cases, making a vulgar mystery of the subject of sex, is the cause of physical deterioration that results in disease of all kinds and that such ignorance is, to a large extent, to blame for the sin and suffering that are so prevalent everywhere.

(5) We believe that the present general attitude towards these questions, is practically the cause of the marked and increasing degeneracy that is noted from one generation to the other, the children in nearly every case being weaker than the parents, if the former have absorbed any degree of so-called education or refinement.

(6) We believe that the least that can be expected of the human race is, that it approximates the moral standard of the lower monogamous animals, which precludes all relations of sex excepting at particular periods when conception is desired or can be expected; but after that conception and during pregnancy, relations of this character should be altogether avoided.

(7) We believe, furthermore, that the human race is superior to the lower monogamous animals referred to, and that we should strive, as nearly as possible, for what we term the continent life, meaning the observance of strict continence, excepting at those times when procreation is desired and has been prepared for.

(8) We believe that overeating and highly stimulating foods and drinks are one of the principal causes of immoralities, and we therefore advocate temperate eating and a non-meat diet of plain, though richly nourishing foods.

(9) We believe that the use of alcoholic beverages weakens the body and dopes the brain and is a prominent cause of misery and crime, and we therefore advocate total abstinence.

(10) We believe that the use of tobacco in any form slowly but surely dulls the delicate sensitiveness of the nervous organism, and finally weakens and benumbs the highest power of brain and body. We therefore condemn the use of this weed in any form.

(11) We believe that health and strength of the highest degree, are the inalienable right of every human being, and even if one starts in life inheriting a moderate degree of vitality, one can through the proper care of the body easily acquire a fine, strong physique.

(12) We believe that weakness is a crime, that each individual is either directly or through his parents and

teachers, largely if not entirely, to blame for his own weakness, though it must be admitted that the cause, in most cases, is ignorance of those laws which govern the development of a vigorous body.

(13) We believe that disease is a sin. That when one is suffering from disease, he or she is simply paying the penalty of violated laws, and that under such circumstances, it is not an enemy, but a friend. It is sent to cleanse the body of the impurities that have collected because of these violated laws. The realization of this astounding truth, points the way to the cure of all diseases by strengthening and regulating the functional organism.

OBJECTS OF THE LEAGUE

(1) To protect the future men and women from the vulgarity and vileness with which prudery has invested the human body.

(2) To advance the cause of STERLING purity, by spreading the principles it advocates at every opportunity.

(3) To glorify the home and to make marriage an ideal relation, by spreading broadcast a knowledge of the physiological laws of love.

(4) To see that every friend or acquaintance who may be suffering for the need of knowledge that we can supply, be warned of his errors, and shown the terrible results that would accrue from their continuance; and to point out the strength and purity that will come into his life through a recognition of the great truths that we are teaching.

(5) To spread the truth broadcast through lectures and private talks at every opportunity, inviting criticism and suggestions with a view of opening the minds of those who are now groping in darkness in regard to these most sacred objects.

(6) To attack the alcohol evil at its very foundation by showing its deteriorating effect on brain and body, and the actual cost of its use in years of human life.

(7) To show how stimulating food and drink affects the moral character by arousing the animal characteristics, and to show how a temperate diet of

plain, wholesome foods has an exactly opposite influence.

(8) To show how tobacco slowly but surely weakens the body, benumbs the brain and undermines the moral character of its victims.

(9) To influence every School Board to allow lectures to be given to their students, setting forth clearly, the wonderful beauty of a perfect human body, thus inspiring them to strengthen and beautify their own bodies; and where the vile idea of the nastiness of the human body has been inculcated by parents, to permit of the use of every possible means of dissipating this perversion. At a proper age, the wonderful mystery of sex should be unfolded to these growing minds, the subject being presented to them in such a way that thereafter, whenever they come in contact with the "dirty" stories of their companions, they will turn aside in disgust, or else try to make them understand the nobility and sacredness of a wholesome and beautifully developed body.

(10) To introduce into every legislative assembly, a law compelling the School Board to teach these exalted ideas as they refer to the human body, to proclaim and set forth the physiological laws of sex to children of the proper age, and to clearly impart the knowledge essential to the building of fine, strong bodies.

(11) To introduce into every legislative assembly, laws compelling every minister of the gospel, or public official, who is authorized to perform the marriage ceremony, to give to the man and wife after marriage, a brief printed or written synopsis setting forth the laws of sex which it is absolutely necessary for them to follow, in order to enjoy a high degree of marital happiness, and to insure for their progeny an ideal degree of physical health.

The committee, at this writing, have not finished their work of making clear the principles and objects that the League is to stand for, and there may be some minor changes. Those who are interested as individuals, or who are desirous of forming local organizations are invited to write to the League for further particulars.



Bernarr Macfadden Institute Football Team

A Natural Food Football Team

The Record of the Players of Bernarr Macfadden Institute, which Shows the Good Results of Avoiding Meats

PREVIOUS to the season of 1907, there had been no attempt to form a football team in the Bernarr Macfadden Institute, at Physical Culture City, N. J. Last fall, however, there seemed to be so much interest in the game that a team was formed. At first there was not a great deal of enthusiasm, and the members did not practice enough to develop any special ability. But the first game, which occurred November 2d, with the football players of the Pennsylvania Railroad Y. M. C. A., at South Amboy, aroused the interest of the organization, and it began to practice in earnest. Five members of the team had never played before, and the reader can well imagine the difficulty of training players of this character. Altogether, though, the Institute men made a very rugged team, each one being in fine condition.

Hence, in the past it was only when they came in contact with teams who had had long practice that they were defeated. The experience thus acquired showed very conclusively, the necessity of making football players as hardy as possible. They should be strong and rugged. And it was also proven that they were unquestionably in a better condition on a non-meat diet.

The game referred to above with the Pennsylvania Railroad Y. M. C. A. team was won by the score of 11 to 0.

The second game, played with a team from a nearby town, was also won by a score of 32 to 10; this same team was afterwards beaten by a score of 38 to 0.

The first game of importance was played with Rutgers College, of New Brunswick. The college boys started in to play our men with a "scrub" team. Knowing that the Institute players had

had but little experience in football, Rutgers' men thought that there would be but little difficulty in defeating them. During the first half, the B. M. I. boys ran up a score of 11 points against Rutgers' 5. Before the end of the game, the B. M. I. was practically playing the entire Varsity team, the score resulting therefrom being 11 to 25 in favor of Rutgers. Two days later, another game was played with the Rutgers Varsity team and the B. M. I. was defeated by a score of 20 to 0. When it is considered that Rutgers' best players have made a good showing with some of the best football teams, and were trained in new plays, which the B. M. I.'s had no experience in, the score was, to say the least of it, significant.

The next game was with the Trojan Athletic Club, of Elizabeth. The B. M. I.'s did not expect they would have much difficulty in beating these players, and they were somewhat surprised at the ability of their rivals when they began the game. But they learned, during the game, that they were up against only four of the Trojan's regular team, and that the other players were from Princeton, Rutgers and other colleges. The B. M. I.'s, however, played a very strong game, though, necessarily, they were no match for some of the best

players from the colleges mentioned. Hence the score did not show the true standing of the teams, as the B. M. I. boys maintained that the referee did not closely watch the fouls, and that instead of 23 to 0, the score should have been 11 to 0, in favor of the opposing team. The names of the players and their positions on the team were as follows:

Full Back	J. D. McCullough
Quarter Back	H. B. Weinburgh
Left Half Back	S. Kleger
Right Half Back	R. Johnson
Left End	J. T. Wagner
Right End	L. Thompson
Right Guard	R. Kirshstein
Left Guard	J. Kring
Left Tackle	W. D. Bunnell
Right Tackle	L. Rowe
Center	I. H. Goldthwaite

Next year the B. M. I. boys intend to have a team that will be prepared in advance and that will be in condition to meet any of the teams in their locality regardless of the amount of skill that the latter may have developed. The B. M. I. boys believe that they can make up in strength what they lack in skill. And they intend furthermore, that skill shall reinforce their strength and endurance.



Bernarr Macfadden Institute Football Team in "Armor," Ready for Business

Our Endurance Prizes

This is the Second Notice of those Tests and Various Exercises for which we Offer Prizes—Both are of a Novel Nature, and what is more, will Assist Would-Be Contestants in Obtaining Health and Strength



Test No. 1

As we stated in our last issue, we are instituting a series of contests in order to determine what is the best system of diet, and, to a certain extent, to secure some information in regard to the vital building value of various exercises that can be used as a criterion for future work. To insure interest in these exercises, we are offering a number of prizes, and one of each will be given to the individual who performs them the greatest number of times without a rest. It will be seen by this, then, that such exercises are of an endurance nature, and hence the name given them.

The test must, if necessary, be taken before witnesses who are prepared to make an affidavit as to the performance of the feats, including the number of times that the exercise has been done. Each movement or exercise is clearly described and illustrated herewith.

This competition will remain open until May 1st, 1908. We shall be glad, however, to have our readers send in the result of their attempts in one or more of the exercises to our publication forth-

with, to the end of encouraging others who may be endeavoring to see how many times they can perform the feats in question.

Please note the following when entering this competition. Three prizes will be given for each exercise. The first prize will consist of a gold medal; second, any one of Bernarr Macfadden's books and a year's subscription to this magazine; third, a year's subscription to this magazine. It is understood that no one person will be considered a competitor for more than three of the exercises, and each winner may be required to publicly repeat his performance in case the latter be questioned, or in the event of some other contestant very closely approximating it. You will also please observe that each exercise must be taken exactly as described, and no deviation therefrom will be allowed.

Test No. 1. Raise on the toes, as high as you possibly can, return heels to the floor.

Test No. 2. While standing, grasp the toe of either the right or left foot as shown in the illustration. Bend the other leg and touch the knee of the leg to the floor. Return to original straight standing position. In this test the exercise must be taken with both the right and left leg, continuing with each



Test No. 2



Test No. 3



Test No. 4



Test No. 5

leg to the limit of its endurance before beginning the exercise with other leg.

Test No. 3. Stand with the knees straight and legs far apart. Bend far over to the left, keeping the right knee straight and rigid, bending the left knee as much as possible. Straighten the body in the same exercise to the right, continue, alternating from one side to the other, standing with both legs straight as you rise after bending knee.

Test No. 4. Stand with the left leg far forward and the right leg far backward. Go forward, bending the left knee as much as possible, keeping the right leg as straight as possible. Take the same exercise with position of legs reversed, continue exercise in one position to limit of endurance before change.

Test No. 5. Lie flat on the back with the hands under the head; with the legs

rigid raise to a sitting position as shown in the illustration, return to first position. A weight can be placed on the feet as a brace if desired.

Test No. 6. With hands on the floor



Test No. 5



Test No. 3



Test No. 6

and feet in the position shown, throw the weight forward on the hands and shoot the legs out straight backwards, stiffening the body, then return.

Test No. 7. With knees rigid, touch toes with tips of fingers. Keep elbows rigid and swing arms upward as high as you can reach and as far backwards as you can bend the body. Return to position as illustrated.

Test No. 8. The body in position as illustrated, bend the left arm and touch the chin to the back of the left hand without touching the hips to the floor. Take same test with the right hand.

Test No. 9. Lie flat on the back with the hands behind the head. Raise the legs, with knees straight, to a vertical position, as shown in the illustration. Return to first position.

Test No. 10. The body in position as shown in the illustration, bend the arms and allow the chest to touch the floor. Please note that the hips must not touch the floor. Return to position as illustrated.



Test No. 7



Test No. 10

SOME PHOTOGRAPHIC NOTES

We beg to inform those who contributed to the photographic competition that publication of pictures and the assignment of prizes have been unavoidably delayed because of our "Perfect Men and Women," Prize Competition.

In a recent issue, with an article on the Flexion Walk, appeared some photographs for which copyrights are held by Underwood & Underwood, of New York

City. Credit should have been given this firm when the pictures were published. We much regret this omission, in view of the unique and interesting nature of the pictures.

The "Rope-Swinging" pictures which appeared in the December issue, were by Mr. I. P. Gillette, who is well-known in metropolitan circles for his excellent photographic work, especially that of a moving nature.

Editorial Comment and Items from Everywhere

Tramping in Winter

Comparatively few persons appreciate the delights of winter tramping. Think of it a moment. No dust, no perspiration, no honking from automobiles. No aesthetic pangs over a lovely dell bestrewn with tin cans and paper collars, or a choice bit of landscape dishonored by a citizen in suspenders. No encounters with gypsy moths, mosquitoes or those hateful little flies the Indians call "bitum-no-seums." Instead, a clean path before you; enough clothing to keep off the cold, and everywhere a sweet, refreshing calm, very grateful to soul and sense. And meanwhile the snow has veiled every blemish upon the woodland—so perfectly, indeed, as to convince you that you are the first human creature to have invaded its fastnesses.

What if summer resounds with the carols of feathered friends in bush and treetop; there are winter birds, too, and though relatively rare, they are much more easily observed, now the leaves are gone. Besides, the snow bears marks of countless tiny feet—here the track of a rabbit, yonder that of a fox, and constantly you are deducing the recent movements of birds.

Butterflies, to be sure, there are none, yet cocoons and chrysalide abound, and you can take them home with you, to be rewarded months later by the spectacle of resurrection which is the yearly Easter miracle of Nature. And if the flowers have died, are there not myriads of exquisite lichens and mosses, and don't you love to identify the dried vegetation, etched out so delicately against the white underfoot—with the radiant things of midsummer? Besides, whereas foliage hides the noble contour of crag and hollow and rutted hillside their winter aspect is self-confessed.

Forth, then, my friend, into the rapturous winter winds. There many a glad hour awaits you, and the only special equipment you need is a pair

of tall arctics. Thus armored, your roamings meet no check.

A Race of Breastless Women

A very significant feature of the modern race, is the very small amount of women who suckle their infants. Out of fifty-one mothers under consideration, thirty-five had made an attempt to suckle their infants, twenty-six of them failed, and only nine gave their infants the breast milk for the full period to weaning, says the *Vegetarian Messenger*. The great difference in the mortality of breast-fed infants and bottle-fed in most cases was quite notable, only five deaths per hundred occurring amongst exclusively breast-fed children. A very likely source of infection to breast-fed children is the dummy teat; it being rare at the present time to meet with a child under twelve months of age without either a bottle teat or a dummy teat in or near its mouth, the latter frequently falling on the ground to gather dirt, also being a favorite place for flies to alight on.

Many questions enter into this problem of a diminishing number of mothers being unable to suckle their offspring. There is, no doubt, a disinclination on the part of many to do so, but without a shadow of doubt the present generation is witnessing an occurrence in the evolution of man probably never experienced by the human race previously, and that is the evolution of a race of breastless women. Just as a breed of hornless cattle is raised, so has this breastless new woman come into existence. Whether she will be considered a progressive or a degenerate type when compared with her female ancestor, there is no doubt from the physiological point of view. The breastless woman is but a phase of physical degeneration showing itself in various ways in the national life, as in the increase in insanity, cancer, epilepsy, alcoholism, etc., all indicating a social organization

of a low order giving rise to such types of humanity, and analogous to wild plants as compared to cultivated ones. A bare subsistence is all that is possible for the great majority when left to unrestricted competition one with another in the struggle for existence. Along with other physical degenerates, it is probable this new type of woman will be exterminated in the future when the elimination of the unfit is taken up by the State and such undesirables prevented from perpetuating their species. Other points also enter into this question, such as the manner of dress preventing the full development of the female frame and the internal organs, also the disinclination of the sex for outdoor physical exercise, the depopulation of rural districts and the crowding into towns, etc.

Physical culture seems to be the only feasible and practical cure for this lamentable condition.

Doctor Who Eats One Meal Daily for Ten Months and Fasts the Other Two

Living on one meal a day for about ten months of the year, and maintaining an absolute fast during the remaining time, wearing no underclothing and only light outer garments even in the dead of winter, wallowing around in the snow with no clothing except short trunks, and taking daily walks barefooted through the snow and sleet, are the means employed by Dr. J. E. Rullison, of Toledo, Ohio, in a search for long life.

Dr. Rullison started on a sixty days' fast some time since. Just plain water in mighty small doses and at long intervals, is all that has been indulged in by him in order to appease Nature's demands for sustenance.

For years it has been known that Dr. Rullison was a dietetic genius, but the full extent of his possibilities were not realized until a few days ago, when the details of his long fast became public through friends. There has been no official guard placed over the doctor and he is not seeking notoriety. He is a non-believer in any sect and is doing as he is, simply because he believes that the best there is in him will become paramount, and that his life will be prolonged to the fullest age.

In substance, Dr. Rullison holds that the entire human race is "food-drunk." That food-drunkness is worse than alcoholic debauchery. By his system of eating, Dr. Rullison, who is past 60, has come to the point in life where he gets all the sleep he needs in an average of one hour out of twenty-four. He asks no man to follow his advice. He does not try to influence anybody, but he is firm in his belief that if the country were to live as he is living, within a few generations, man would be more powerful in every way and more long-lived.

The basic principle of his entire argument seems to be that the value of pure fresh air is not fully appreciated by anybody. To carry out his idea of the extreme Dr. Rullison has become most pronounced in regard to clothing.

"Let the air reach your body," he says. "It can't hurt you at all." And for this reason he wears no underclothing, but just thin outer garments. Even these he would discard were it not for public demands. Much criticism has fallen upon him because of his acts. Yet his children are pictures of health and he himself after his long fasts shows little results of it. He does not maintain that anybody can start and do as he is doing, but holds that with practice, such would be possible to everybody. Which is true in regard to the race as a whole.

The Kindly Fruits of the Earth

This is a little talk about fruit and vegetables. And, unlike some talks, it is founded on fact and experience.

If you are inclined to be, or are actually suffering, from rheumatic troubles, you should use celery, rhubarb, or tart fruits, especially lemons and sour oranges.

If, on the contrary, you suffer from nervous disorders, you will be greatly benefited by using onions, turnips and celery. Onions are said to be the best nerve known. Nothing will so quickly relieve nervous prostration and tone up a worn out system as onions for lunch and for dinner—plenty of them, boiled or fried.

If, however, kidney troubles worry you, use grapes, spinach and common dandelions, making tea of the roots of

the two latter and taking tablespoonful doses several times a day when the plants are not procurable for a relish. Buttermilk as a beverage is also beneficial.

For diseases of the liver use tomatoes, onions and lemons. Insomnia is often cured by the use of either lettuce or onions.

Use all kinds of ripe fresh fruits to purify the blood and tone up the system. Blackberries and raspberries are a tonic. Bananas are an excellent food for those suffering from digestive irregularities.

It seems strange, says *Appleton's Magazine*, to look back on the days when we imported fruits and vegetables, with the whole plant kingdom ready to be conquered by our farmers. We smile when we recall the days "before the war," when the tomato was a curio from Peru—a poison apple, used to frighten the slaves into obedience. Yet last year we grew it on 600,000 acres of land. The Franciscan fathers were early workers in this respect. The alfalfa they introduced in the fifties—which found its way here from Asia Minor, by way of Chile—has turned 2,000,000 acres into an immensely profitable farm area. Their sprigs of olive, too, now cover 1,000 orchards, and a few orange cuttings from the Brazilian coast, due to the foresight of an American woman, to-day represent \$9,000,000 a year for the California crop alone. These things go on in silence. No historian chronicled the arrival among us of the Lima bean in 1820, which is to-day such a plentiful and important crop that special freight rates are quoted for it between southern California and the Atlantic Coast. We save some of the names, even while we forget their source. Few are apt to recall that the explorers brought from Russia the stout-hearted Vladimir cherry and the Siberian crab apple, to provide hardy fruits for our northern regions. As one of the smaller things, take the horse radish of Malin, a little village near Vienna—the best of its kind in the world. Then, behold, it roots on the spot, and in due time, is handed over to New Jersey growers. The result was surprising. Not only did it yield a ton more per acre, but the cash result was

\$100 an acre over and above the ordinary yield. And in a small county of that state, the production of horse radish grew from a few hundred pounds a year to more than 1,000,000 pounds. It has been the same with the potato from the Highlands of Columbia and Peru; the rhubarb from Central Asia; the asparagus from England, and the celery from the south of Europe.

And it may be added, the earth is a certain mine of wealth to every one who will study its possibilities.

A New Theory as to Appendicitis

An English physician has contributed a new guess as to what causes "the spread of appendicitis." His theory is that it is due to the widespread use of American roller, patent flour, particles of iron or steel, as he alleges, being thus introduced into the intestines. A proper regard for patriotic duty perhaps requires that we should maintain a firm attitude of skepticism toward this discovery, notwithstanding so reputable a journal as the *London Lancet* is moved to say, "there may be good foundation" for it. But while we ought to be reluctant to believe that Yankee genius is responsible for the "spread of appendicitis," a burning desire to have some dependable knowledge concerning this mysterious malady will probably give us enough stoic spirit to accept even this reproachful theory if it can be made rational.

No one probably has kept count of all the explanations that have been offered. One of the first, we believe, was that it was caused by the improper lodgment of grape seed. That theory retreated before the first guffaw it excited; it was modified into the assertion that though this was not the universal cause of appendicitis, those who ate grapes and swallowed the seed thereby made themselves especially liable to its attack. That sounded better, though there have been many who, recalling that grapes have been eaten a long time and with the degree of recklessness that is customary now, refused steadfastly to be reconciled to the theory even in its amended form.

One explanation has followed another. Assertion has dissolved into suggestion

only to be evaporated by skeptical inquiry; and because pathogeny has been so resolute in the face of this problem, many men have inclined to the cynical conclusion that if appendicitis is not a social fad, it is merely a pretext of surgical science to employ a new style of cutting into the human body.

Appendicitis is a fact, whether it is a new or an old malady. We may even admit that it is a highly civilized malady, a twentieth-century development, and yet the question persists,

what has made it so common? There is perhaps no phenomenon so much in need of a plausible and durable explanation as is the increase of this malady known as appendicitis. The pathology of it is woefully unsatisfactory, and while we should regret if science should force us to believe that Yankee ingenuity has unwittingly made all of us liable to appendicitis, even that explanation, if it can be made stout and unshakable, will give appeasement to the curiosity which this mystery excites.

REMARKABLE RESULTS OF PHYSICAL CULTURE METHODS



These Photos Show the Marvelous Improvement Effected in Five Weeks of Natural Curative Treatment

The above is a picture of Mrs. E. L. Watson, of Don Palos, Cal., before and after her adoption of physical culture methods. The change in her expression, as well as in her physical personality, is so great, that we need hardly lay stress upon it, except to suggest that it indicates the possibilities of natural curative methods when properly and intelligently applied, as they are by us. When Mrs. Watson first adopted physical culture, she was weak and nervous, and in such a run-down condition that life, instead of yielding her that happiness which

Nature intends that it should, was a burden, or something not many degrees removed from it. Five weeks elapsed, during which she consistently followed our methods, and at the end of that period, the second picture was taken. As will be seen, her ills have disappeared and practically all the desired vigor and strength has been given to her by physical culture. She is now ready to take up life and its duties with that zeal and thoroughness, which is undeniably the privilege of every healthy man and woman.