Gospel of Strength

according

To

SANDOW

price

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THE

GOSPEL OF STRENGTH

ACCORDING TO

SANDOW.

A Series of Talks on the Sandow System of Physical Culture, by its Founder.

PRICE ONE SHILLING.

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Introduction.

At the outset, let me say to the reader that this little booklet is not a text-book on how to win strength. It does not aim, that is, to give in detail the instruction and exercises which form my system of Physical Culture, and which are elaborated in my larger book, entitled "Strength, and How to Obtain It."

The title, "The Gospel of Strength," suggests its purpose, which is that of a "message" to those who have given little or no thought to the scientific systematic development of their bodies. It is an astonishing fact that go per cent. of men and women die without taking up half the good gifts of life that lie within hand's reach. A well-developed body implies a well-developed brain, and for a full enjoyment of life both are absolutely necessary. There is, of course, no royal road to strength: but the high road is so plain, and the journey so pleasant, that, once pointed out, it can hardly be missed. That, in a word, is the object of this booklet. I trust it may be achieved.

THE GOSPEL OF STRENGTH

According to Sandow.

TATK I.

WHAT IS PHYSICAL CULTURE?

Perhaps I cannot do better than begin this series of talks with one which shall serve as a definition of Physical Culture. First of all, I should like to make it clearly understood that I do not propose by my system to produce a nation of athletes. To make a heavy-weight lifter, or a runner, or a wrestler, is to apply Physical Culture to weight-lifting, or running or wrestling, as the case may be. But Physical Culture pure and simple is the development along natural lines of that wonderful combination of muscles that the Creator has given to man and woman. Indeed, the reader will find that the keynote of this booklet is Nature, and that the word "Strength" in the title refers rather to perfect robustness of constitution than to mere muscular power that permits of a man performing Herculean tasks.

It is possible, for I have demonstrated it in my own person, for men to become naturally capable of achieving extraordinary feats of strength; but every man does not wish to devote his life to performing unusual feats. The deliverance of the Gospel of Strength—in other words, the teaching of Physical Culture—I regard as my life-work, and my aim is to teach men how they may arrive at that condition in which they will be best able to carry out their life's work, whatever it may be.

I say whatever it may be, for there is no department in life in which Physical Culture does not bear a part, and in which the physically cultured man does not stand the best chance of ultimate success. And the secret lies in the fact that Physical Culture is allround development. Nature abhors lopsidedness next to a vacuum. The lopsided article topples over, and the man who is partially developed is lopsided. One has but to glance round to find a dozen illustrations. Take the field of manual labour. One man is strong and handy with the spade; another is quick and sure-footed with the hod; a third has a true eye for building a wall. But it is the all-round man who rises to be foreman. The same rule applies in the commercial, the social, and the scholastic worlds. And, lastly, Physical Culture plays no insignificant part in the moral realm.

Health is a divine gift, and the care of the body is a sacred duty, to neglect which is to sin. But whilst this may be termed a sin of omission, it is also true that a great deal of the sins of commission are due to an unhealthy state of body and mind. For instance, a man who keeps his body in good condition, and his system in good tone, will feel less desire for intoxicating liquor, and less effect from what he does take, than the man who is careless about the state of his body. There can be no doubt, either, that one of the greatest elements in making for a pure mind and a lofty imagination is a pure, healthy body.

I should just like to quote here the remarks of the Rev. Henry Howard, one of the ablest ministers in Australia. In a sermon preached while I was in Adelaide, Mr. Howard said: "Those of you who have seen Mr. Sandow perform know what a wonderful power he has of controlling his muscles. Now, there is a twofold advantage in that faculty. Firstly, there is the strengthening of the will-power. Though I do not take much notice of phrenology, I believe the phrenologists when they say that colonials lack power of

concentration; that they like change, and do not care to be fettered down to a thing; that they are desultory in their studies, and soon grow weary. If Sandow's method can help them, by concentrating the mind on the particular sets of muscles they wish to exercise, it will eliminate this weakness in the next generation or two, and have a lasting effect on the Australian race. The second advantage of the faculty of concentration is the development of muscle. The care of the body is a moral duty. All those wonderful powers stored up in our muscles are a sacred trust, which we are bound not only to guard from disgrace, but to definitely direct to the highest ends. It is more than a personal matter, it is a sacred duty owed to society for us to bring ourselves to the highest degree of physical and mental efficiency."

I might add that I fully concur with Mr. Howard's remarks. I believe that it is the Divine will that we should make the most of our bodies, and that it is by the aid of that Power that we are enabled to attain a pitch of perfection.

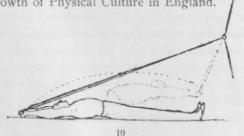
A word as to the history of Physical Culture, The first nation known to have pursued Physical Culture systematically and individually was the Greek. With the Spartans, men, women, and children exercised in the public parade ground, the children beginning their daily exercise as soon as they had gained the age of five. Every town in Greece had its gymnasium, and this was remarked as an infallible sign by which a Greek town might be recognised.

When Rome was at its highest and greatest, each Roman citizen exercised in the Field of Mars. The Emperors themselves joined in these sports, and Marius declared that he never missed a day at the Field of Mars. In the days of Rome's decline, the cult of the body degenerated with other studies, and these exercises became to the majority spectacular contests only. From that date Physical Culture almost died out in Europe, in spite of the attempts of Luther and Zwingli to restore it.

The next great name on the roll of Physical Culture is that of Ludwig Jahn. This great teacher introduced the German system, and established his turn anstalt, or gymnasia, first in Berlin, and then throughout the whole of Germany, in the days when Napoleon was overrunning Europe. So manifest were the advantages which this national interest in the development of the body produced in Germany that Louis Philippe introduced a French gymnastic system into the French army in 1844.

But the French system was not in any way as thorough or scientific as the German.

Although the custom in England of engaging in outdoor sports has made the English remarkable as a nation for their physique, yet, strangely enough, no attempt was made to introduce, and indeed no thoughts had been entertained of introducing, any such system of training until 1825. At this date, Clias was appointed teacher in the Royal Academy at Woolwich, working on the German system. Clias' teaching, however, did not go very far, and after the Crimean War a Royal Commission was appointed to inquire into the matter. The result of this was that Archibald Mac-Laren was appointed teacher, and in 1861 took charge of the Military School at Aldershot. Shortly after this, gymnasia were established in all military barracks. The movement rapidly spread from the army to civilians, and latterly was introduced to the public schools. In a later chapter will be found some details of the growth of Physical Culture in England.



TALK II.

HOW I BECAME A STRONG MAN.

When the life-story of, say, a poet is being written, the author usually tells how at a very early age he developed signs of genius, and wrote rhymes almost as soon as he could talk. It would add to the picturesqueness of my story if I could recount wonderful tales of childish feats of strength; but, alas for picturesqueness! I must say that as a youngster I was anything but an infant Hercules.

I was born at Konigsberg, Prussia, in 1867, and, though extremely fond of sports and athletics at school, was not by any means robust. As a matter of fact, I was so delicate that iv 1877 I was taken down to Italy by my father. in the hope that the change would build up my constitution. The desired result of the trip was achieved, but hardly in the expected manner. It was not by strolling under the blue Italian skies in the ozone-laden breezes from off the Mediterranean Sea, but by spending every available moment in the art galleries and museums of the great cities, that I learned the secret of health and strength. The works of the old masters in sculpture and painting roused a thrill of half-envious admiration in

me, and the more I studied them the more they fascinated me. Eventually I came home from Italy with the fixed determination that, if training could do it, I would become a strong man. Years passed, however, before I was able to accomplish my ambition. Then the idea struck me that there was something more than mere mechanical working of the muscles behind the perfectly developed bodies I had seen. Such perfect development could not be reached by any amount of running or lifting or fighting! These old Greeks and Romans must have possessed some secret of which we moderns knew nothing. Then I set to work to study anatomy and medicine. I got a thorough knowledge of the muscles and organs of the body, and, by dint of a great deal of time and thought and hard work, I devised a set of exercises which would treat all the 400 muscles in turn, and so produce a harmonious result.

Then the work began. Realising that the brain governed the muscles, I brought the whole force of my will-power into the work, and kept at it day after day. The result was magical. I grew strong rapidly and surely, became a leader in various forms of athletics, and finally came to the conclusion that my life's work was to teach men the benefits—nay, the necessity—of Physical Culture.

Of course, one does not become known in a day, and I had to win my way first to the front rank, then to the foremost position, and finally into public recognition. In a later talk, I propose to recount a few of the more exciting incidents of my career that, I venture to think, will not be uninteresting; but I might conclude this chapter with the account of how I first became known in Holland.

I had passed my twenty-first birthday, and had, in company with a friend, Professor Atilla, given some exhibitions of strength in Germany; but on parting with Mr. Atilla I went alone to Amsterdam, and applied at all the theatres for an engagement. All I asked was to guilders-less than £1-per night; but there was no opening anywhere. At last I was pretty low in funds, and had to sit down and think out a scheme for obtaining an engagement. As I sat wondering, I caught sight of a machine that registered the amount a person could lift, and a notion struck me. That evening I engaged a cabman, and went round to all the weight-lifting machines in the city to "see how much I could lift." Well, I found I could lift more than the makers bargained for, and so I lifted the handle out of them all. It was a case of the tester tested.

Next day there was a tremendous hubbub, and inquiries were set on foot to find out what

band of marauders had been wrecking the machines. My friend the cabman kept quiet, and nothing was discovered. The performance was repeated several nights later, and still there was no discovery of the supposed wreckers. However, the third time I succeeded in being discovered, but the porter who saw me at the machine was so amazed that he ran to the police station and brought a posse of constables to arrest me. Of course, I went along quietly. When I got to the station, I explained that I had paid the necessary coin into the machine, and was entitled to exercise my arms. Of course, they refused to believe that one man could be strong enough to break the machine, and sent for the chief officer. When he came along, he, too, was doubtful of my story; but when the strongest man at the station accepted my invitation to try his strength on me, the commissary was not only convinced, but became quite friendly, and I was released on my own recognisances.

The success of my advertising scheme was immediate and immense. A great crowd had gathered round the police station, and they accompanied me back to my hotel, and cheered me for a long time. News of the affair spread all over the town, and the "Paleis Vood Volksvlyt," which had refused me an engagement

at 10 guilders a night, made an engagement with me to perform at a salary of 1,200 guilders a week!

From Amsterdam I went to England, then returned to the Continent, and, after spending a couple of not uneventful years, the greater part of them in Italy, I once more (in 1889) went back across the Channel, and ever since then England has been my adopted country.

The incident which brought me before the English public, and practically settled my future, occurred in November, 1889, and as I have by me a newspaper cutting that relates it far better than I could, I will reproduce it here, devoting a special chapter to it.



TALK III.

"THE WAR OF THE TITANS."

In introducing this report from the London "Daily News," I should explain that I went to London to accept a challenge that had been thrown down by Samson, who was at that time supposed to be the strongest living man. In a preliminary contest I defeated his best pupil, Cyclops, and on the night of November 2, 1889, was to compete with Samson himself for £1,000, which he had offered to any man who could beat him at his performance. The "Daily News" says:—

"Athletics had an exciting, not to say uproarious, field-night on Saturday at the Westminster Aquarium. The rival athletes, Samson, the Alsatian, and Sandow, the German,
gave a public trial of strength, with the object
of proving which was 'the strongest man on
earth.' The tobacco smoke, gradually rising
like incense on high, became thick enough to
dissect before the curtain rose; but you could
make out quite clearly that the theatre was
packed with a very fair specimen of athletic
humanity, men who could give a literally
striking account of themselves in a scrimmage.

Samson came to the footlights, dapper, radiant in medals, tights, and dainty boots, and smiling with confidence. He wanted fair play; he offered £500 to anyone who would come on the stage and perform the feats he performed. Never mind where such a man came from; let him appear. There was no response, only a babel of cries from the audience.

"The next commotion was caused by a number of gentlemen reaching the stage by flying leaps from a side-box, sweating and touzled after fighting their way through a frenzied mob in the crowded hall outside. It was Sandow and his friends.

"At last Sandow entered, amidst general cheering; Captain Molesworth, apologising for the delay caused by the besieged state of the building and its approaches, announced that the Marquis of Queensberry and Lord de Clifford had consented to act as judges, and asked for fair play for the competitors. The two men were in the centre of the stage. Samson in his gay athletic costume, Sandow in a plain, pink, sleeveless under-vest, and black trousers encircled by a leather belt. Neither of the men is of more than medium height, but their arms were a rare spectacle, by reason of masses of muscle brought by practice to the hardness of metal. Sandow, however,

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has the more spacious chest and largest arms, and a connoisseur would probably fancy him as best for a trial of sheer strength.

"The first feat was with one of the iron pipes. Samson belaboured himself upon the chest, leg, and arms, bending it and straightening it back again by the blows. He did it gracefully and swiftly. Sandow laboured more, was clumsy, and took more time, but he performed the feat. After the inevitable discussion raised by Samson on the stage, and a tumult amongst the audience, who, apparently, were by this time largely on the side of the phlegmatic German, Captain Molesworth stated that Sandow wished it to be known that he had never done the trick in his life before. Samson darted to the front and dashed into a speech that was drowned in uproar, save the one sentence, 'Why, he did it six years ago.' Next came a prolonged squabble about a strap trick, which the judges decided Sandow was not called upon to imitate. Then there was a feat of breaking a wire rope fastened round the chest. Samson performed it with the neatness of one accustomed to the trick of twisting the ends of the wire strands together. Sandow was obviously unacquainted with the knack, and it was only after prompting from the audience as to the twisting, and several

fruitless efforts, that he succeeded. It was a splendid effort of strength. The man seemed like to burst in his effort to obtain the requisite expansion of chest, and when the iron rope burst asunder, like the withes of the Philistines around the limbs of the original Samson, the audience leaped to their feet, and shook the place with deafening cheers.

"The next thing was a chain-breaking contest. Samson, always theatrical, put one set on his forearm, and offered one to Sandow. It was too small for such an arm, and he rejected it with a slight gesture of contempt. There seemed to be a hitch here. But Sandow settled it. For once he abandoned his statuesque attitude. To the astonishment of all he whipped out from his trouser-pocket an armlet of his own, and it was then necessary to wait until the audience had bawled themselves out. The proof of equality with an emergency was another feather in Sandow's The unfortunate Samson protested, gesticulated, argued, trod the deck, and generally cavorted around. Another appeal to the judges was a matter of course. At last the rivals put on their chains and smashed them by sheer expansion of muscle, the one as cleverly as the other. Samson snatched up the fragments of Sandow's armlet and ran about shaking them derisively, asserting that they were not of the same material. A gentleman in the audience, however, handed up an invoice from a Leicester Square firm certifying that they had supplied to Sandow one dozen yards of jack chain, the same as used by Samson. It was a long while before order could be restored, the incident apparently being regarded by the audience as a clincher.

"There were at this time many demands from the gallery for a trial of lifting weights, but no notice was taken of them. Other propositions were made, amidst much talkee talkee on the stage, without avail. Samson's cloak was now off, and now on, and a more than usually tiresome consultation was ended by Captain Molesworth stating that the judges had decided that as Mr. Samson would not give a lead, Mr. Sandow might perform some feats of his own. The young German accordingly lifted a stiffened and upright man from the ground, and performed some astonishing feats with a Brobdignagian dumb-bell, weighing 150 lbs. A gentleman in the stall offered Samson £50 if he would do what Sandow had done with the dumb-bell, and Sandow's manager publicly challenged him to the same test. The challenge was not accepted. Midnight was by this time approaching, and

Captain Molesworth virtually closed the programme by announcing, amidst general cheering, that the judges had decided that Sandow had done everything that Samson had done. The audience gave the victorious man an ovation, and it was then observed that Samson had disappeared from the stage. Special cheers were given for the judges and for Captain Molesworth, and there were calls for the rival gladiators to publicly shake hands. Samson, however, was seen no more; but Sandow, in a few words of German, returned thanks."



TALK IV.

WHAT MY SYSTEM IS.

As I mentioned before, I devoted some considerable time to the study of anatomy and medicine, and the result was that I grew to understand something of the close connection existing between brain and muscle. On this principle I founded my system, and years of experience have convinced me of its truth. . I have, it is true, invented a series of exercising devices-of which details will be found in a later chapter-but the secret of success in physical development lies not in the construction of the apparatus, nor in its regular use; it lies in the brain, which directs the exercises. It may be summed up in a brief sentence-It is not HOW MUCH you exercise, but HOW you exercise.

My system is a form of physical education by means of which every part of the body is properly exercised, developed, and made healthy; the will-power increased; the various organs brought to and maintained in a healthy condition, and the individual made as nearly as possible physically perfect. It is not, as I previously inferred, a question of learning to perform acrobatic feats with dexterity or of lifting heavy weights; and I make use of only the lightest weights, thus avoiding undue strain upon any part. As the physical needs of no two people are alike, I find it necessary in some cases to employ at the start the use of light dumb-bells, in others not. Exercise, however, without a judicious use of will-power (brain-power), is of little value. In some cases it is absolutely necessary to stimulate willpower by the use of dumb-bells. All depends upon the individual. The exercises can easily be gone through in less than half an hour. At first, fifteen minutes is ample time. The movements are simple, and may be learned in a very short time.

My system is divided into four groups:-

The first group consists of exercises for the treatment of obesity, indigestion, constipation, liver and kidney troubles, and other complaints and weaknesses located in the region of the abdomen.

The second group consists of exercises principally for the development of the lungs and chest, thereby improving the circulation, strengthening the heart, restoring sleep, increasing the respiratory power, and giving that mobile chest which is associated only with sound and robust health, and which is also of

so much value to those who study the art of singing. It is a notorious fact that the development of the lungs is too often left entirely to chance, when a few natural, healthy, and simple exercises, such as I prescribe, practised regularly, would fit one out with lungs that will defy pulmonary or any other chest trouble.

The third group consists of exercises that will strengthen the great muscles that support the spine, the weakness of which is mainly the cause of curvature—a deformity so very prevalent among young girls, and which is apparently increasing in frequency. To correct this, gymnastics and other forms of recreation are often resorted to, which attempts at cure not infrequently bring about a worse state of affairs than before. Such cases require the most careful attention, and only such movements must be used as are contained in this particular group.

The above three groups are divided into numerous grades or series, so that, no matter what age or size or what condition a pupil may be in on coming to me, the exercises can be adapted to his or her particular case.

The fourth group consists of series of exercises for the general development of the whole of the muscular and nervous systems. Prescriptions from this group are only given to those whose health is what is usually described as robust-i.e., those who know nothing of chest or stomach trouble, and who do not require work such as is set forth in groups 1, 2, 3. It is what I call my body-building or double-contraction series. After a pupil has been made sound and healthy and the weak spots strengthened and all the previous ailments removed by the use of judiciously selected preliminary exercises, I begin to prescribe from this group, for the purpose of building up the body, making the physique more beautiful, and maintaining the organs in a healthy condition, thus increasing the muscular and organic strength, improving the carriage, and increasing the symmetry of the body. It is from this group that I maintain my own strength and keep myself always fit.

It is possible for any man to follow my example. It is what I live to teach. It is the mind—all a matter of the mind. The muscles really have a secondary place. If you lift a pair of dumb-bells a hundred times with your attention fixed on some object away over in Kamtschatka, it will do you very little good. If, however, you concentrate your mind upon a single muscle, or set of muscles, for three minutes each day, and say, "Do thus

and so," and they respond, there will be immediate development. The more you waste, the more you make.

It is mental culture first, physical afterwards. The whole secret of my system lies in the knowledge of human anatomy—in knowing just where one is weak—and going straight to work bringing that particular part up to the standard of one's best feature, for there is a best feature in every man, as there is also a worst. And yet, as a chain is as strong only as its weakest link, so is the body as strong only as its weakest member. The secret is to "Know thyself" as Pope says, and, knowing one's weakness, to concentrate the mind and energies upon that weakness, with a view to correcting it.



TALK V.

FOR FUTURE GENERATIONS— A TALK TO WOMEN.

I have often thought that if advocates for Women's Suffrage would spend their time in urging women to take advantage of the certain physical privileges that lie at their feet, instead of agitating for political rights, that may or may not prove to be privileges when they are obtained, they would do much more for their sisters of to-day, and vastly more for those of the generations to come.

It ought not to be difficult to persuade a woman that inestimable treasures—the gifts of health and strength, of elasticity of body and freshness of mind—have only to be stooped for and picked up.

And yet the task is not as easy as it seems, and the stumbling-blocks are Fashion and Custom. Women, more than men, are guilty of neglect of physical culture, though even with men it is often necessity rather than virtue that is responsible for the saner treatment of their bodies.

The nature of men's work compels them to dress rationally, and bring their muscles into

play, so that they are obliged to keep up a certain standard-not a very high one, it is true-of bodily development. But, unfortunately, it cannot be denied that within recent years the physique of women has been on the down-grade. What we call our higher civilisation has brought with it artificial conditions of life that are responsible for this physical decline, and the irony of it is that it is not a necessary adjunct of civilisation. There is absolutely no reason why the broader life, the higher education, the deeper sympathies-the wider outlook, in a word-of the twentieth century woman should be attended by a weaker body, a less shapely figure, and a less robust constitution. Nevertheless, it must be admitted that such is the case. The women of fair France-that land of sunshine and pleasure-form a most striking example of the physical retrogression consequent upon a slavery to fashion. The French race is slowly but surely losing its place among the civilised nations as regards physique and even actual numbers, and the reason is the systematic sacrifice of bodily health and beauty upon the altar of fashion. There is a great danger that English women are following in the footsteps of their sisters across the Channel, and, as the fashions of the Homeland seem to be the

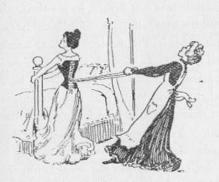
fashions of these colonies, it might not be out of place for me to sound a note of warning as a preface to a few words of advice on Physical Culture for Women.

It is interesting to glance back through the generations, even as far as the ancients. If we stop midway back we find that we drive where our ancestors walked; we are replacing the stairs with the lift; the automobile is displacing the bicycle; we favour indoor amusements rather than outdoor games and contests. In short, we are in danger of becoming a race of people whose sole physical exertion will consist in pressing buttons and turning levers.

It is not difficult to understand how the ideas of womanly beauty came to demand that the figure should be twisted and contorted. Rodin, far and away the greatest living sculptor, gives it as his dictum that an artist's tendency ought to be towards the accentuation of Nature's lines. That is to say, the tendency ought to be towards making the full parts fuller, the slender parts more slender, the broad parts broader, and the small parts smaller. And in this I consider he is right. Doubtless the same idea, unexpressed, is at the bottom of the cramping corset and the pinched foot. It is forgotten that there is an ideal which must be observed, and which cannot be passed, and

it must be remembered that the ideal must be attained by development, not by contortion.

It passes the wit of man to discover how selfrespecting women can employ the various deceptions so commonly used, with a view to heighten their attraction. We have the highheeled shoe, the pointed toe, and many another artifice which will occur to the minds of my lady readers. Now, this is all bad. It is foolish, to begin with; for the creation of woman was not so imperfect that it requires the art of man to improve upon it. Such contrivances in men would be properly despised, and in women they often are. But few women can escape from the thraldom of fashion. What high personage it is, or secret conclave of great power seated in some mysterious dictatorial throne, I know not; but, once the edict has gone forth, no tyranny, no imperial Cæsar. was ever obeyed with such absolute and slavish obedience. The word goes forth that the skirt is to trail along the ground. No one knows where the word comes from; but from country to country, and continent to continent. it goes, and the world of women wears the trailing skirt. I regard this compulsion to obey fashion as the great cause of the physical decline of women. Whatever the cause is, the results are serious.



CAUSE.



EFFECT.

Women, I take it, were meant to be healthy. A woman was not meant to go through life a tremulous mass of disease and weakness. But, in spite of this, the modern mother teaches her growing girls as though this were one of the first laws of Nature. Now, let it be understood, to begin with, that any arrangement of dress that does not give free play to the body is bad. The narrow, thin shoe, for example, not only destroys the foot and makes it ugly, but interferes with the circulation, causing chilblains, etc. Not only does it interfere with the local circulation; it also does with the general circulation. I have seen women faint from wearing too small shoes, and half the colds and chills are brought about by the feet being insufficiently protected against the cold. It is hardly necessary for me to say anything here about the corset; my views on this subject are well known.

The changes which I should like to see in the life of the modern woman are three:—(1) Loose, easy clothing; (2) encouragement to engage in outdoor sports in girlhood: (2) systematic exercise, carried on throughout life.

As regards clothing, the corset should be so mobile as to give the muscles of the trunk free room for play. Of course, the ideal figure is one in which the muscles are so developed that they will need no support, and yet allow the figure to be graceful. The Venus of Milo is for us the absolute type of feminine beauty. If any curious reader takes the trouble to secure a picture of Venus de Milo, and sketch in a "corset-waist" over the figure, she will find how little it improves the statue. But that pitch of perfection is not for our day. Generations of destruction must be followed by generations of construction; and I do not think it at all likely, or indeed advisable, that women should leave off corsets at once. What I do advise, however, is the use of common sense in the choice of the corset. The dressmaker's law is that the woman is made to fit the corset. Reverse this law, and make the corset fit the woman. Then as the muscles grow they must be allowed room to contract and expand, and not be put in splints.

Just think for a moment of the results of corset-wearing: lateral curvature of the spine, short-windedness, susceptibility of lung disease, anæmia, congestion of the abdominal organs, are some of them. Now, I want women to understand that they can be healthy; and with health comes beauty. But neither can be obtained by the aid of the dressmaker.

But the corset is not the only article of wear that harms the body. Take the average wo-

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man's foot-gear, and you will find that it is an instrument of malformation—an implement of torture as surely as the infamous "boot" of the Inquisition, and borne with equal heroism in a less worthy cause. The two simple illustrations given here explain themselves.



It would be absurd, however, to attribute all the ills to which woman's flesh is heir, to corsets and shoes. Negative evils as well as positive evils are responsible. There has been dire neglect, as well as foolish distortion, and whilst the adoption of common-sense clothing is a step in the right direction, exercise is the one thing that will first bring all the muscles into a healthy condition, and, second, make them of true value to their possessor.

Now, it was exercise, simple life, and untrammelled bodies that made the Grecian women what they were, and it is exercise, simple lives, and untrammelled bodies that will make our modern women modern Venuses.

"What exercise?" you say.



First: Simple exercise on the hill-side; unconscious, recreative exercise.

When Sydenham, the father of English medicine, was dying, he said that he died happy because he left behind him two great physicians—fresh air and exercise. Nothing could be truer; and I am happy to say that these two essentials to health and strength are not denied to women to-day as they were one hundred years ago.

Second: Systematic exercise.

"But," you will say, "the Greek women never exercised systematically."

Yes, that they did, and in public too, day by day, in Athens and Sparta. In Sparta, both

male and female had to exercise publicly in the parade ground from the age of five. What exercises they did we know not, nor shall we ever find out, I am afraid. Their system of movements, which must have been an ideal one to produce such ideal results, is irrecoverably lost, but I do not despair of replacing it. Science has taught us much which the Greeks did not know, and with a combination of science and experience much may be done.

What is the effect of exercise? one may ask. The first, but, in my opinion, by no means the most important result is the increase in physical strength. And yet this means that the woman is capable of standing a greater or a longer strain than before; that tasks which before were exhausting are now performed with ease, or even become exhilarating. It is by no means the muscles of the limbs that stand alone in need of development. It is the muscles of the trunk.

To over-estimate the importance of these muscles would be impossible. The great muscles of the torso are the muscles which usually give way under a strain; and strength in the limbs is of but little use unless there be present also strength of the great trunk muscles.

And when we can secure a system of exercise which does not omit a single part of the organic and muscular system, then we may rest assured that the practice of it will give a complete balance of health and vigour in every part that will make the individual's life an enviable one.

The ordinary out-of-door sports are excellent, although they are not so good as the ancient Greek game of ball; but exercise, to be of proper avail, must be systematic, to secure an even development and symmetrical proportion of all parts.

Fencing has come more into vogue in late years, but it is almost certain to cause curvature of the spine in a girl whose spinal muscles have never been permitted to become strong, but have been kept weak by the support of artificial stays. Even in strong men "fencer's scoliosis" is extremely common. Rowing and cycling tend to contract the chest; and dancing in a close room, with intervals of ices and sitting out, can hardly be classed among the exercises.

We must therefore fall back upon a system of exercise specially constructed so as not to omit the development of any single part or organ. And let it be remembered that the great objection to women exercising—namely,

the fear of becoming muscular-is quite without foundation. It cannot be too often repeated that woman is not simply a weaker man: she is physically an entirely different being. The muscles in women are long, and never develop in size so as to form large masses or hard, abrupt lines. In men the muscles are short; and, when they are powerful, one sees all over the frame the strong, striking lines and muscular masses characteristic of men of vigour. In women the muscles simply become firm, close-knit, and wellrounded, and show under the layer of fatty tissue intervening between muscle and skin only in soft, hardly discernible masses, just sufficiently to give a delicate moulding to the form.

This layer of fatty or adipose tissue is peculiar to women: it exists in the male until adolescence, and then disappears; but in woman it persists, except in disease or bad health, until the age of fifty. It softens all the outlines, so that the danger really is, not that a woman should have too strong lines, but that want of exercise should cause her to have no lines at all, but a sort of shapeless rotundity.

As this layer of adipose tissue does not form where no muscle lies between bone and skin, there is in woman where the bones are subcutaneous an exquisite dimpling which is a characteristic beauty of the sex. In man, the bones in these situations show as hard, prominent masses. So it will be seen that in these and many other points women cannot approach to the masculine type, even if they tried.

Exercise makes every tissue healthy by strengthening the heart and circulation, deepens the lungs so that the blood is properly oxygenated, assists the venous circulation by movement and muscular contraction so that the portal vein is properly emptied and the liver circulation is not allowed to become sluggish. The improved digestion which follows as a matter of course, together with the other changes, gives a health and purity of skin, a cleanness and firmness of tissue, symmetrical proportions, bright eye, and clear brain, without which the beauty, vigour, and happiness of health can never be attained.

Until my system was published, there was, if we except the Greeks, practically no such thing as the physical education of women. In England, calisthenics, as they were called, consisted chiefly of exercises, or rather movements with light wands, which were practised more for spectacular effect than for physically bene-

ficial results, and were given to young ladies in high-class boarding schools, and described in prospectuses as physical education and deportment. These might be graceful when performed in concert, but would have absolutely no effect upon the physical well-being of the body, as in most cases the pupils were encouraged to be lackadaisical rather than to exert any physical energy. The style of deportment that was prevalent only a few years ago was responsible, to a large degree, for certain common malformations.

Married ladies are frequently writing to me, testifying as to the value of my system of Physical Culture, which, as they say, has made them such healthy mothers, and signifying their intention of bringing up their children on the principles laid down by me for the cultivation of sound health and strength, since these were the means of rescuing them from an unhealthy and weakly existence. This is a point on which too much emphasis cannot be laid, and women should remember that in properly developing the trunk muscles they are not only saving themselves untold agony, but are really building for the generations to come.

With children I have been particularly successful, by paying special attention to the development of the lungs. The development of the lungs in children is practically the only safeguard against pulmonary diseases; and mothers should make sure that these organs in their children are correctly developed, thus reducing the possibilities of consumption and other lung diseases to a minimum. The prevalence of post-nasal growths is remarkable in these days; but let me say that these growths in children can be prevented by proper attention to nasal breathing. I have devised a special series of light and simple exercises for this purpose, that have proved conspicuously successful in a number of cases where the surgeon's knife has failed to remove these growths.

In my book on "Strength, and How to Obtain It," I have given a regular set of exercises, arranged on scientific principles, and in them I have taken into consideration the harm already done, and have given the weakened parts special attention. These exercises ought to be gone through before a meal, not after, and should invariably be followed by a cold sponge, cold chest sponge, tepid sponge, warm bath, or cold bath, according to strength. The spinal spray or spinal douche is also good. If, after the bath, a splendid glow is not felt, then you are not getting the full benefit, and you

must modify it, making it tepid, instead of cold, for example, or limiting it to the chest instead of making it general.

No unnecessary time should be spent in the bath, and the clothes should be resumed as soon as possible. It is a mistake to stand about in the bathroom elaborately drying the body, on account of the risk of cold. While one part of the body is being vigorously scrubbed to induce warmth and dryness, another part may catch cold. My advice is that the body should be wiped rather than rubbed, and as soon as the superfluous water is removed the clothes should be put on while the body is still damp. There is less danger of cold being taken if this course is followed than if great pains be taken to dry the body before putting on the clothes.

The exercise should last about twenty minutes, though it is advisable to work up to that. At first it should be gone through gently, and in a day or two the movements may be performed more thoroughly and with more will-power.

I have designed special apparatus for women, with lighter bells and more flexible cords, so that there is no danger of strain. I might specially mention here my latest invention, which has been termed "The Obesity Reducer," but which is of special benefit to women of all ages.

If exercise is taken at night instead of in the morning, it should be followed by the bath or a sponge down. If the bath before retiring causes sleeplessness, take your exercise earlier, but do not give up the cold bath; it is one of the surest known preventatives against catching cold.

It will be instructive, while dressing after the exercise and bath, to stand with back to the wall, heels, hips, shoulders, and back of head touching the wall. Now attempt to button the corset as you wore it before. You cannot. Well, you are beginning to see the difference between being your dressmaker's woman and Nature's woman.

If a woman persistently neglects to exercise those muscles which Nature has provided her to assist her in the great crises of life, she will have to pay the price—a double price of pain to herself and risk to her offspring. Civilisation has rendered maternity a painful, dangerous and tedious business. The women of the olden days were saved much suffering and danger. The Roman and Grecian women did not wear corsets, but they accompanied their husbands to the wars, and when a child was born they took it up and walked on. We

find savage women doing the same thing now; but in highly "civilised" countries a child is born only after exhaustive exertions, and the mother is often ill for weeks, and her whole nervous system is shattered.

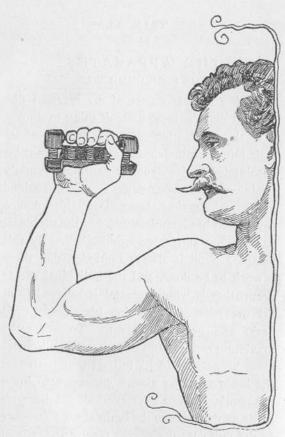


A Cartoon from Physical Culture.

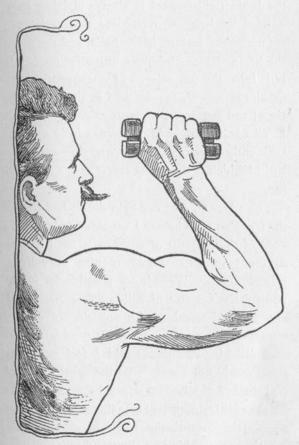
TALK VJ.

THE APPARATUS.

During the early part of my career I discovered that the most difficult thing to do was to teach some beginners to so fully concentrate their minds on their muscles as to bring them absolutely under control without unduly straining the nervous system. This troubled me for a long time, but at last I hit upon a device that has completely solved the problem; namely, my spring grip dumb-bell. By this means a pupil is always reminded that there is work to be done, and the individual whose occupation is wholly mental is relieved from the necessity of overtaxing his already tired brain and nervous system. To secure the maximum results from exercise, the will-power must be exerted to its fullest; that is to say, the brain must be always concentrated upon the work, but not over-exerted. I have already explained how the brain sends a message to the muscles: the nerves receive it first and pass it on. Therein lies the difficulty. The brain of a beginner requires a great deal of stimulation; and my grip dumb-bells will



THE GRIP DUMB-BELL-OPEN.



THE GRIP DUMB-BELL-CLOSED.

supply that want, because when using them the brain (will-power) is always striving as a natural tendency to overcome that resistance set up by the springs in the bells, and the more the brain strives, the more muscular energy is put into the exercise. Consequently, the maximum results are reached in the minimum time; and a power that is so valuable to us all in all conditions of life becomes fully and intelligently developed, the possession and control of which is the great secret of a successful life.

The advantage of my grip dumb-bell lies in the fact that with its use I am able to absolutely control the amount of will-power used by my different pupils. Some require very little, others much. Were it not possible for me to control the amount of will-power expended, I could not determine with any degree of accuracy the character and quantity of work accomplished. Neither could I feel sure the pupil would not overdo. By the substitution of coil springs of a known power between the two halves of this dumb-bell (see illustrations) I can absolutely control the work of every pupil, whether at my side or a thousand miles away.

At the time when I conceived this idea of the grip bell I had given up all idea of my own development and endurance being further increased; but to my gratification I find that both have largely increased since practising with my grip-bell, and I feel sure that I would have possessed even greater development today, had I hit upon this idea in my early days.

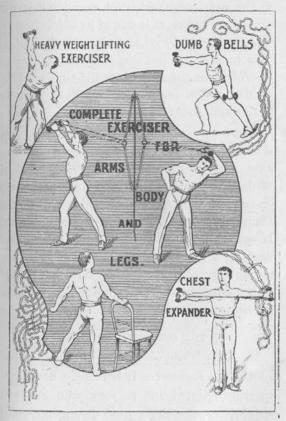
You should use the Spring Grip Dumb-bell because:—

- 1. Exercise is of little value without judicious use of will-power. The grip on the dumbbell compels the use of will-power without excessive mental strain.
- 2. There is no danger of any strain on the heart.
- The heaviest Spring Grip Bell weighs only 3 pounds.
- 4. An athlete can do more work with a pair of these than he can with a pair of 20-pound bells.
 - 5. With light springs a child can use them.
- They last a lifetime, and you do not require to be continually buying heavier bells.
- 7. As your development increases, you can keep pace with it by adjusting the springs.
- 8. They prevent swing and jerk getting into the work.
 - 9. Exercise becomes a pleasure.
- Brain-workers are relieved of undue mental strain while exercising.

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I propose to say very little about my Combined Developer. It is so well known, and so many hundreds of thousands are in use at the present time, that the public are already sufficiently familiar with its principles. The idea of devising the apparatus came to me shortly after I started teaching Physical Culture. It soon became obvious that a rubber Developer of some kind was necessary. But the makes in use at that time possessed too many imperfections to be of sufficient service in the task I had set myself. The old-fashioned rope and pulley devices in very general use at that time were, of course, out of the question, as, in addition to being cumbersome and costly, they have a tendency to make the athlete slow and too deliberate in his movements. Undoubtedly rubber was the ideal material, but rubber by itself was not enough. After much thought, I invented, and have since brought to perfection, the apparatus known as Sandow's Own Combined Developer.

The machine is simply made, and is easily fixed on a door or wall. It does no damage to the object to which it is fixed, and cannot get out of order. There being no pulleys, no oiling is required, and there is no fric-



THE SANDOW DEVELOPER.
In Its Various Uses.

tion to wear out the covering of the rubber cords.

The wonderful variety of exercise that the Developer embraces is one of its chief charms. The student of Physical Culture finds a pleasure in working out the different forms of healthful exercise figured on the charts. Day by day, almost imperceptibly, he increases in health and strength.

There is none of the monotony of doing one set of exercises morning after morning. The injurious use of medicated "pick-me-ups" is no more necessary, for the Developer, combined with the Dumb-bells, is the finest pick-me-up on earth. It opens the lungs, gets the liver into proper working order, and sends the blood coursing through the veins in a healthy flow that brings with it a feeling of life and vigour unattainable by any other means.

THE OBESITY REDUCER.

My latest invention is what has been termed an Obesity Reducer. It is really a developer specially adapted for persons who are too weighty, or who suffer from derangements of the stomach, liver, and kidneys. The need for a special apparatus to cure Obesity may not at first be apparent, as the Combined Developer can be used with effect in combating the almost universal tendency to corpulence existing among healthy, full-blooded persons. It is a fact that the Combined Developer can be used for this purpose; but in the case of ladies, and indeed many men in whom the ab-



Reducing His Weight.

dominal muscles are particularly weak and relaxed, the effort necessary to localise the Developer work on the abdominal regions is apt to cause undue fatigue. I have consequently invented a distinct apparatus, which will act solely on this region, and which will automatically concentrate its action on the abdomen.

It consists of a rubber cord with handles, the former passing over pulleys and terminating in a belt, which, when in use, passes over



For Women the Obesity Reducer is Invaluable.

the stomach. Each movement of the arms, therefore, causes the belt to press upon the abdominal region, thus calling forth the resistance of the abdominal muscles. By this means is secured both friction and muscular

action, the only two methods of attacking corpulence, and at the same time such friction of muscular action is localised to the region which it is necessary to operate upon.

The arm movements are varied, and many excellent breathing exercises are given, thus bracing up the chest and strengthening the diaphragm, the relaxed condition of which is almost as much the cause of the protruding abdomen as corpulence itself. I have already strongly recommended the use of this apparatus, as I believe that its effect will be to cause a very distinct improvement in the development of the bust, and will impart to the figure generally that lithesome and graceful figure that it is the aim of every woman to possess.



TALK VII.

EXERCISE FOR ALL AGES.

Physical Culture is applicable right through life, from its dawning day till its closing hours. The principle on which the human body is constructed is not that of adding a little, day by day, to the old bulk, but of destroying atoms, and then replacing them with new and additional ones. Nature teaches the babe in the cradle the rudiments of physical culture. Watch the chubby little fellow when he wakes. His fists are clenched and bored into his eyes; his tiny legs are drawn up and stretched out. "He is rubbing the sleep out of his eyes," says the fond mother; but the fact is that he is taking his first lessons in muscular development in response to a natural impulse.

In his crawling days, if left alone and not encumbered with outrageous clothing, the youngster continues to develop, and does it naturally and mechanically. It is when he gets a little older that the danger of physical neglect is greatest. It is one of the highest duties of the parent to see that their children begin to build the foundation of a sound body and healthy mind early in life. It will save them countless pitfalls, and make for their

physical, mental and moral wellbeing. Itstands to reason that if a boy or a girl is allowed to contract round shoulders through habitually stooping, or an ungainly walk through habitually slouching along, they will be heavily handicapped if they desire to take up physical culture in later life. Prevention is always better than cure, and I have carefully worked out a chart which may be begun when the child is, say, five or six years old, and followed till he is well on in his teens. The apparatus that the child will exercise on will, of course, be suited to his age and build.

Readers may think that the preceding chapters contain my views on Physical Culture for the normal man or woman in the prime of life alone. But it is scarcely necessary to say that the benefits to be obtained by conscientiously working upon the system are by no means confined to the young and vigorous. On the contrary, it is particularly suitable for the middle-aged, who are all too apt to suffer from the effects of the period of physical indolence which has succeeded their youthful activity. To such, the system should prove invaluable. It is quite a false notion to suppose that, when once youth is passed, exercise is no longer necessary. So long as life lasts, if an individual wants to keep healthy, regular exercise

is just as necessary as food. It is through neglecting to recognise this that so many men become aged before their time. When a man begins to get into middle life he has a natural tendency to "take things easy." He lives more luxuriously, devotes more time to the pleasures of the table, and exerts himself as little as possible. Is it anything to wonder at that his health suffers, that he grows fat and flabby, and that his digestive apparatus quickly gets out of gear?

Of course, while it is advisable that the middle-aged man should exercise regularly, he must be warned not to do too much. He must remember that what is perfectly safe and prudent at five-and-twenty may be rash and hazardous at fifty; in short, that he, while exercising consistently and steadily, must be careful not to overtax his powers. If he bears this in mind he will find that the discomforts and ailments which he has perhaps got to regard as natural to his time of life are quickly banished, and that, in spite of his grey beard and thinning hair, it is still "good to be alive."

As regards physical culture for people of advanced years in comparison with men in their prime, the same principle, but perhaps not the same method, applies to them. If a man finds

at sixty that he is weak, he need only to go to work to make himself strong, just like one half his years, but, of course, intelligently, and from his own standpoint. I have had pupils of eighty-six years of age, and built them up astonishingly. Oh, it is never too late; never while there is life and will-power. Cato learned Greek at eighty, did he not? And the late good Queen Victoria mastered Hindustani in her seventy-fifth year, I believe. Age has nothing to do with progress if the enthusiasm and will-power are still there. Of course, I direct my teaching most of all to young men, for the elders think they have passed the age of physical improvement. It is my ambition to revitalise the youth of this generation and make them physically fit for the highest duties. But I repeat that, while life lasts, a man should make the most of it, and he can do that by careful physical culture adapted to his age.



TALK VIII.

PHYSICAL CULTURE AND ATHLETICS.

It has been said that I and my system are opposed to athletics. This is quite a mistaken notion. No one could admire more than I do the swift runner, the powerful swimmer, the strong oarsman, the fleet footballer; and it may be added that the would-be runner, rower, footballer, sportsman of any kind, could have no better friend than my system of Physical Culture.

But I am in quarrel at two points with athletics as practised to-day. In the first place, they are used as a substitute for Physical Culture, and in the second they are wrongly followed out.

Take the first point. Most men are strictly limited as to the amount of time which they can devote to sport, and few are able to follow up more than three or four games with anything like thoroughness. In Australia, for instance, there is football in winter and cricket or tennis in summer, with perhaps ping-pong and billiards indoors. Now, while one game may develop one set of muscles, no man can afford the time to play so many games that

he is able to get all his muscles developed. Wrestling is, perhaps, the sport that brings most of the muscles into play, but comparatively few men care to indulge in wrestling as a pastime. Football touches something like 64 muscles, cricket 34, and riding, which is commonly supposed to be a very good form of exercise, only brings 12 muscles into play. Therefore, in order to achieve thorough development, a man must take some form of exercise that will bring all his muscles into play. But, the reader may ask, "Do you propose that I shall give up all sports and devote myself entirely to dumb-bells and rubber developer?" Certainly not. Physical culture and sport go hand in hand, but physical culture should come first, because a well developed, robust constitution is essential to lasting success in sport. A systematic course of physical culture fits a man for excelling in any branch of sport.

If two men start to train for a race or a fight or a football match, and one has done a course of physical culture and the other has not, I would back the physically cultured man every time. I do not, of course, say that it will make a slow man into a swift runner, but I do say that it will bring him to the highest possible pitch of which he is capable in the

shortest possible time. He will, moreover, run a minimum amount of risk in undertaking training, as he will be practically building up a reserve fund of strength.

I had a striking instance of the benefit of physical culture in sport a few years back. The University boat race had been won year after year by the Oxford crew, and one year, when there was no prospect of a reversal of the decision as far as could be judged by the form of the crews, I offered to bring about a change in the result if I were allowed to train the Cambridge crew for the race. The matter was, however, delayed so long that it was only four weeks before the race that the crew began to train under my system, and they lost the race by about a foot, and that was due to bad steering. Next year, the Cambridge eight adopted my principles earlier, so as to give the system a fair chance. When the day of the race came, they were perfectly fit, and simply ran away with the victory. It was to my mind a convincing proof of the value of physical culture in sport.

Then, in the second place, athletics are wrongly indulged in. If a man is an enthusiastic oarsman, he develops a certain number of muscles and devotes his whole energies to their training. The upshot is that his

other muscles suffer through maction, and when the crisis of the race is over and his "rowing" muscles have been strained to their utmost, he simply collapses, because he has no reserve strength. The same thing applies to training for cricket, football, boxing, and so forth.

It should be remembered also that the man with a great biceps or a wide pair of shoulders is not necessarily a strong man. The man with magnificent thighs is not always the possessor of a sound chest. It is true that as a chain is only as strong as its weakest link, so a man is only as strong as his weakest member.

Is it not a fact, too, that a great many men follow only one branch of sport, and, during the season that that sport reigns, they take very violent exercise and then neglect their muscular culture all the rest of the year? It is much better to avoid violent exercise altogether than to act in this manner. Other men, again, follow muscular sports for a number of years, then suddenly give them up altogether. Men are sometimes enthusiastic footballers or cricketers or oarsmen in their young days, and, as they advance in years, they settle down, perhaps get married, and concentrate the whole of their attention upon

business and home matters. Consequently they have no time for following the sports in which they indulged in their youthful days, and so neglect their physical culture entirely, allowing fat to take the place of muscle. Such a procedure as this very frequently produces a breakdown of health, because, as the nuscles degenerate, the nerves suffer correspondingly, and the whole system becomes deranged.



TALK IX.

EMBROCATION AND MUSCLE.

Many modern athletes and muscular men have too much confidence in their training and development to call in the aid of any outside means which may render their muscles supple and pliant. It is a common thing to see a sprinter take a run up the track just before the race, and before a hurdle race to see the competitors leap one or two hurdles and come back to wait for the pistol shot. A weight-lifter will always begin with the lightest weights first, coming to his greater efforts after he has exerted himself a little. The phrase "preliminary canter" is proverbial.

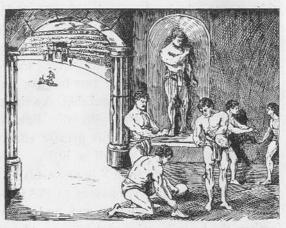
The reason for this is obvious to the initiated. The muscles when at rest, and when, further, the body is stripped, become cold and comparatively stiff. A few minutes' mild exertion brings them into action and warms them, after which they become "fit," and are ready for work.

These mild efforts may not, indeed, exhaust much energy, but that they do use up some small amount there can be no doubt—and that at a moment when every iota of power is needed. It has been left for men of these

E

latter days to waste their energy in warming their muscles before testing them.

The Spartans, the Greeks, and also the Romans knew better: before each contest they were carefully yet vigorously rubbed and anointed with various stimulating and soothing oils, and for a month before the great



Preparing for the Great Games in the Coliseum.

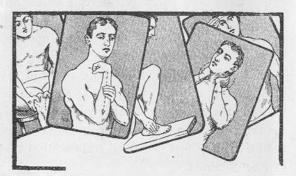
Games the competitors were rubbed night and morning. Thus they found themselves, at the commencement of a race or contest, with muscles pliant yet firm, strong yet elastic, warm yet unfatigued in the slightest degree.

I have lately come across an embrocation which, as a stimulating lubricant for the muscles, to warm them and render them fit

for work, I have found unequalled. Some of the embrocations which are on the market are undoubtedly very good indeed, and I have found them most useful and beneficial. But somehow, I always felt there could be something more in any one of them than there was; in other words, something was wanting in all of them. Consequently, I began to experiment on my own account. Picking up a hint here and a wrinkle there in my wanderings, which have been fairly extensive, I at last obtained a compound which I thought, and still think, with difficulty can be further improved upon. I have used it on big occasions and on little; I have tested it before some of my most trying stage performances; and I have no hesitation in saying that my years of experimenting have resulted in the production of the finest and most beneficial embrocation that can be obtained.

Having arrived at this desirable end, I resolved to give my pupils and friends the benefit of the knowledge I had gained, a few of whom used it and found it as useful as I did; and it has at last become so popular among them that I have resolved to have it manufactured and put on the market in order to introduce it to my wider circle of friends in physical culture and sport.

So far, so good. I hope many athletes and physical culturists will profit by my experience. But I want to emphasise the need of discriminating use of the embrocation. A sprinter will need to rub, or have rubbed, a different set of muscles from the footballer, whose exercise calls for the active use of a distinct set more than the former. It is most necessary to know where and how to rub, and to this end a chart is given away with every



How to Rub Scientifically,

bottle, showing the whole of the muscles of the body; these are fully numbered, and a corresponding table, with such heads as Swimming, Boxing, Running, etc., will, I hope, make a discriminating use of the embrocation, before exercise, an easy matter.

Of course, no one doubts the efficacy of an embrocation after strenuous exercise, when

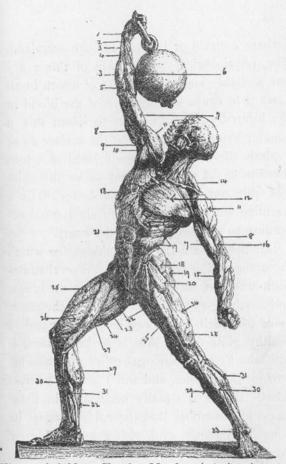


Figure of Athlete, Showing Muscles, Anterior Aspect.

1. Annular ligament. 2. Flexor longus pollicis. 3. Flexor carpi radialis. 4. Palmaris longus. 5. Pronator teres. 6. Supinator longus. 7. Biceps. 8. Triceps. 9. Coraco-brachialis. 10. Teres major. 11. Deltoid. 12. Pectoralis major. 13. Serratus magnus. 14. Trapezius. 15. Supinator longus. 16. Brachialis anticus. 17. External oblique. 18. Gluteus medius. 19. Gluteus maximus. 20. Tensor vagina femor s. 21. Rectus abdominis. 22. Adductor longus. 23. Gracilis. 24. Semi-membranosus. 25. Rectus femoris. 26. Vastus internus. 27. Sartorius. 28. Vastus externus. 29. Gastrocnemius. 30. Tibialis anticus. 31. Soleus. 32. Tendo Achillis. 33. Anterior annular ligament. 34. Fascia lata.

perhaps a strain or bruise has been sustained. The physiological explanation of this every one probably knows, the effect of which in all cases is to cause a congestion of the blood in the injured part. In order to lessen this a counter-irritation is set up on the surface so as to draw the blood from the injured part into the fine blood vessels in and under the skin. For this purpose nothing is better than a warming embrocation scientifically applied according to the directions on the chart.

But there are many other things for which the embrocation will be used. For rheumatism, lumbago, sore throat, colds on the lungs, and anything affecting the system in the treatment of which a restored circulation and a healthy glow of the skin is to be desired, it will take its place amongst other preparations now on the market, and will I believe surpass them. But it is equally necessary, in these cases, to remember that the rubbing must be done intelligently, and with a knowledge of the position of the affected muscles or nerves. The chart, I believe, will make all this clear to the most uninitiated understanding. I have devoted more time to the study of human anatomy than almost any living man, and this chart contains the result of many years of study.

TALK X.

THE QUESTION OF DIET.

Ever since I introduced my system I have been overwhelmed with correspondence, a great part of which is devoted to the question of diet. To my mind, one of the most objectionable people on the face of the earth is the faddist, and I am certainly no faddist. I believe that Nature is the best guide as to what we should eat and drink; and provided that we do not eat or drink too much, I think one cannot go far wrong in taking those things which a healthy appetite and a natural inclination suggest. The danger lies not so much in the quality as in the quantity of the food and the manner of taking. I would rather eat six times a day-a little at a time-than live on two heavy meals.

The general opinion of the medical profession is that there is too much meat eaten in England, and I am informed that a similar state of affairs exists in Australia. My own opinion is that the amount of food consumed by the average person is considerably in excess of the amount required. If the quantity of food taken were smaller, the substance

lighter, and the mastication more thorough, the labour of the excretory organs would be less, and the general health much better.

The question of alcohol is one which seems to trouble a great many of my correspondents, and is the subject of many anxious inquiries. Now, I myself am not a total abstainer. In moderation I believe alcohol is a valuable food; but, of course, one cannot but shrink from the enormous drink traffic of civilisation. Let me say, then, that alcohol is not necessarv to the upbuilding of the muscular system, but if taken in strict moderation can do little or no harm. In the same way, tobacco in excess is bad. But a man who is a follower of Physical Culture need not fear an occasional pipe or cigar. Coming more particularly to the strengthening quality of foods, those articles which contain the most albumen are, of course, the most nourishing. Milk, cheese, and eggs contain large percentages of albumen; but the stomach cannot deal with more than a limited quantity of these foods without being upset. Of recent years, however, a method of extracting albumen from milk-or rather from buttermilk-has been discovered, and the extract has been put on the market under the name of "Plasmon."

This plasmon was discovered by an enterprising German chemist, and its use is spreading all over England and the Continent; in fact, all over the world, for I have seen it on sale in America and Australia. It is used medically as an article of diet. Doctors who are about to perform operations give their patients plasmon instead of drugs before the operations, as the bulk is very small, and the waste practically nil.

As to its sustaining qualities, I can bear personal testimony. I lived entirely on it for seven weeks, taking about eight teaspoonfuls a day, dissolved in water, this being my only food during that period, and I was performing twice a day. It is prepared in various ways, being free from flavour and smell, and perfectly soluble. It can be dissolved in water and made into soup, or added to other soups or gravies, or may be kept on the table and added dry. It can be dissolved in milk, and then added to tea or coffee, and is now, I believe, made up in chocolate bars, beef extract, biscuits and bread. Whenever I travel, I carry some with me.



TAIK XI.

HOW TO SPEND A RATIONAL DAY.

Without doubt the world generally is beginning to take a more commonsense view of its physical life. If the advance of knowledge has brought with it fads and follies of many kinds it has at least added to the common stock of happiness and health. In coming vears there can be but little doubt that the physical condition under which nations live will be as near perfect as possible. The reward will then come for the long intermediate period between the natural life of the early world and the perfected application of knowledge to the circumstances of physical life, which is surely coming. Homes will be made sanitary, every household will possess a bath and an abundant supply of water, every river will be kept pure, adulteration of food will be rendered impossible, the air will not be laden with impurities, and science will repair the evils which science has created.

I wish, in this talk, to make a few remarks on the various conditions which go to make life healthy. I take chiefly the points on which I am daily consulted by correspondents. The modern press and strain of life has militated greatly against rational habits. There are thousands and thousands of people who go to bed tired at night and wake up tired in the morning. An even greater number know what it is to suffer daily and nightly under nervous strain caused by excessive competition. In such cases it is supremely necessary that a man should study his physical life.

One is only too apt to get up in time for breakfast, tumble off to business, spend the day in an insanitary office, with the exception of an hour, during which a heavy, indigestible meal is bolted, returning home at night to another heavy meal, and so to bed. Here is a life in which the physical element does not exist, and which is absolutely certain to end in physical ruin.

I have often been asked to sketch out what I should prescribe as a healthy life for a man who works hard, either mentally or muscularly. A general description of a healthy habit of life under these circumstances would be as follows: Early rising should be practised, summer and winter. I believe this to be conducive both to health and to a good day's work.

This should be followed by about twenty minutes' exercise, with or without apparatus.

The exercise should conclude with a cold bath. There should be no time wasted in rubbing down. The water should be merely whisked off. After an interval of rest, during which the morning papers, etc., may be read, and private correspondence gone through, a short walk should be taken in the open air before breakfast. I must say I believe in a substantial breakfast for those whose duties begin early in the day; but it is not good for anyone to eat to satiety. Plenty of time should be allowed, and no rushing for trains, 'buses, or trams should be indulged in.

I would recommend everyone to walk at least a part of the way to business, during which walk most of the problems of the day can be solved, thus leaving the mind free for detail work. The lunch should, in my opinion, be light and nourishing. The ordinary "business" lunch is heavy and unwholesome. In the evening, when the day's labour is over, the day's worries should be completely forgotten. Easy to say! you reply. Yes, and easy to do, if you stick to a healthy habit of life and regular business habits.

Part of the way home, at least, should be walked. Dinner should consist of at most three courses. The greatest mistake of the day lies in the heavy dinner in vogue. As regards sleep, the hours of sleep should be regular, if at all possible. The old saw about early to bed and early to rise is literally and absolutely true in practice. Ten hours for youngsters and eight hours for adults is about the stretch.

An apple or an orange first thing after the morning bath is a very healthy habit, and is more generally practised than people think.

The cold bath every morning is now an essential in the life of every self-respecting man or woman. Regarding this, I can only say that, to my mind, the morning bath is an absolute necessity if health of mind and body is desired. But it should not be overdone. If you do not feel glowing and happy after your dip, cut down the time you are in the water, or take the chill off the water until you feel no discomfort, but the reverse, after your bath. In some cases, when the heart is weak, you may have to restrict it to a chest sponge, or a sponge-down, but experience is the only criterion.

The morning exercise should be honest work—the whole mind should be bent upon each movement, and you should leave off warm, if not perspiring, and happily tired for the time being. A minute or so should elapse between the exercise and the cold bath, to let

the heart get regular in action again. After the bath, brush off the water with a towel, and dress quickly.

I emphasise the point about exercise being honest, downright hard work, because that is what constitutes the distinction between systematic and recreative exercise. On the Saturday afternoon or Sunday, when recreative exercise is indulged in, the mind should not be set on the muscular work at all. I always think that a man who fixes a mechanical walk or cycle ride is wasting his time. Recreative exercise should be made recreative exerciseunconscious to the body, enjoyable to the mind. The country passed through and the various historical or archæological features should be studied or recalled. Botany and geology are valuable studies to the walker or the cyclist. One pleasant companion of similar tastes in the Sunday walk is invaluable. The Sunday should be sacred from business for health reasons. One day's rest is necessary from the mental strain of the week. But it is not conducive to mental relaxation to spend the Sunday indoors or loafing. It should be spent in the open-air, when possible under change of scene and atmosphere. I trust the reader will bear in mind the distinction between systematic and recreative exercises. In the morning's grind the mind cannot be too fixed upon the action of the muscles. In recreative exercise, competition, sport, study, conversation or curiosity should fully occupy the mind, leaving the body movements mechanical. If the bowels are sluggish, start off with a purgative twice a week. Exercise will soon make you regular. Above all things, do not suffer yourself to become constipated, or your liver to become overladen. A sallow skin should never be permitted. Your eye should be bright and your skin clear. If not, your digestion is out of order. Sports of all kinds -cricket, football, golf-whatever they may be, are the life of the country and of the individual

Clothing should be sensible, night clothing not too heavy. The bedroom should be well ventilated, so that it does not smell stuffy in the morning; otherwise you will not awake refreshed and invigorated.

In these remarks I have endeavoured to give as broad a view as possible of what I regard as a healthy habit of life. Each reader has, of course, the limitations of circumstance; but, generally speaking, the above regime will enable one to cultivate and develop the life physical, on which are built the life mental and the life moral.

TALK XII.

HOW TO BREATHE.

"The nostrils, as you know from your anatomical studies, form part of the respiratory tract. The mouth has no business to form part of the respiratory tract. It never was intended for respiration; it was intended for mastication and deglutition." The foregoing quotation, from one of the chief authorities on physiology, is so apt that I shall make it the text for this talk. I wish to treat of the chest and its development with special reference to the lungs. Experience has taught me that, as regards both health and strength, the first and most important part to be attended to is the chest. The three points in breathing are: 1st, lung development; 2nd, nasal breathing; 3rd, pure air. To take the last point first. One would think that, of all classes in the world, the naval class would be most exempt from chest disorders, in virtue of their open, healthy life. Yet the British Admiralty's own figures show that consumption is three times as prevalent in our naval training ships as it is among the general population.

Commander Dawson attributes this to the close packing in the sleeping-rooms, and also to the system of tricing the hammocks to within a foot or so of the ceiling, all the fœtid air naturally stagnating in the upper part of the sleeping-chamber. I imagine that the army barrack room shows quite as insanitary conditions. The barrack-room atmosphere has been a bye-word for many years.

The necessity of adequate breathing-space may be gathered from the fact that in repose the ordinary man uses up about half a million cubic inches of air every day. If working hard, he uses a million and a half cubic inches of air daily. Now it is of the first importance to see that this air is pure. Air should never be breathed twice. The custom so prevalent in churches and halls of letting the meeting warm the place with breath and gas is full of dangers. Leaving a place like this, with lungs and throat relaxed by the hot, feetid air, and allowing the cold night air to pass through the mouth and strike directly upon these parts, is certain to have an evil if not a fatal result. The nose is the natural passage for the air. In passing through the nasal passages the air is both filtered and warmed.

Nothing is more simple than to acquire the habit of nasal breathing. Many people will

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tell you they can't—" My nose is stopped, I cannot do it." It only requires practice. Do all your deep-breathing exercises with the mouth shut, no matter how uncomfortable it is at first. In a few days it will be less uncomfortable, and in a week or two you will sleep naturally with the mouth shut. So much for nasal breathing.

Now I come to the part which lies more particularly in my province. How are we to deepen the shallow chest and expand the power-chamber of the body? If a fire gets choked up with ashes and the draught of air is prevented, then it smoulders low and will eventually go out. The water in the engines will not give off steam and the engine will stop running. The cure is simple. Get away all ashes and debris and allow the life-giving air to get at the fire. The fire burns strongly and soon the engines are working again at full speed.

Now, the fireplace represents the lungs; the engine is the heart; the water is the food; and the machinery to be set in motion is the body.

If you breathe foul or impure air, not only is there not enough oxygen to keep the engine going, but the tissues are poisoned. You can feel the effects of this poisoning on the brain, for a headache is the result—Nature's warning

against impure or insufficient air. Men with big chests do not suffer from headaches.

Now let us see what can be done to increase the draught of air and get away the debris from the fire. Ordinarily you breathe 30 cubic inches of air with each inspiration. By a very deep inspiration, as deep as you can make it, you can inhale another 100 cubic inches, making 130 in all. By a complete expiration you can send out 100 cubic inches of air beyond the usual 30, making 130 in all. In addition to this you have about 100 cubic inches of air in your chest, called residual air, which remains even after the completest expiration.

From this it will be seen that instead of the ordinary 30 cubic inches of air, you can inhale and exhale 230 cubic inches at each inspiration by deep-breathing, or eight times as many.

This is increasing the draught, and sweeping away the debris and ashes as well. The blood is thoroughly purified and fully stored with oxygen; and parts of the lungs are suddenly awakened into splendid life that have lain asleep for years, closed to everything but disease. If you possess a "Sandow Developer" and a pair of grip dumb-bells, you will find that with them are charts giving exercises

specially arranged to develop the chest, with the heart and lungs.

The muscles of the upper part of the trunk are also brought into play. Some of the exercises are free, others are done with dumbbells, and the rest with the developer. The combination of grip dumb-bell and developer or obesity-reducer exercises is a very happy one, as it brings the muscles into play in various groupings and supplies the two strains, horizontal and vertical. With the dumb-bell, especially if heavy weights are used, the strain is vertical, opposing gravitation. The developer supplies the horizontal strain and makes the exercise complete. The bells and obesity-reducer will bring down the weight and produce a perfect figure in both sexes.

After practising the exercises conscientiously until an intelligent understanding has been arrived at as to the method of performing them, and as to the true value of breathing, the pupil should make a special and careful study of the development of the chest wall. By this I mean that mobility and prominence of chest so remarkable among our leading singers. By so doing, you relieve the pressure on the lung and enable it to expand without resistance. At first, you will probably find, on attempting to expand your lungs fully, that the chest wall acts as a dead

resistance. This resistance of the chest wall is the cause of people becoming puffed or blown in running to catch a train. The lung, in this instance, not being fully developed, forms the first obstacle to the capacious breathing demanded by the rapid exercise; and, in the second place, even if the lung had the power to expand, the rigid structure of the undeveloped chest wall would hamper its expansion.

An athlete has the advantage that his sport gives him a certain amount of chest development unconsciously gained, whereas the ordinary individual, who has neither time nor inclination for following outdoor sports, has merely that chest capacity that will take him through life at the very lowest vital standard. While in this condition he will never know what health is or what energy is, and he will be a prey to various pulmonary diseases. Everyone is conscious that to take a deep breath is good for him. In the first place it assists the circulation of the blood in the great veins of the chest and in the heart. It is for this reason that we sigh. A man sighs when his heart is surcharged with blood. It may be through heart depression, brought about by mental depression, or it may be actual disease. A habit of sighing always calls the physician's attention to the state of the heart. Sighing is Nature's means of relieving the congestion of blood in the chest by taking a deep breath.

For the athlete the importance of chest development cannot be overestimated. In fact, I would recommend every man in training to work steadily day by day through the chart for grip dumb-bells and developer. He will find that his going power and his staying power have been enormously increased, and that, when he comes to the actual test, his superiority over his former rivals is both sudden and striking, especially in long-distance work. Remember, it is not the muscle that gives out in an athlete, it is invariably the engine-room -the heart or the lungs-where the point of weakness lies. Nay, further, I can promise that there will not be so many cases of over-strain under trial if the heart and lungs are made sound by systematic exercise. This especially applies to sports like rowing and sprinting, where so many young athletes utterly ruin their physique. There are, in my schools, many such wrecks, slowly repairing the damage they have sustained by over-effort without fit preparation.

Now the method of securing the mobility of the chest wall I spoke of lies in expanding the chest by muscular effort without inhaling. Stop breathing and raise the chest wall by muscular effort. This develops the intercostal muscles, the serratus and also the muscles of the neck, all concerned in forcible inspiration and in raising and maintaining the arch of the chest.



TALK XIII.

EXERCISE VERSUS MEDICINE.

Perfect health is a consciousness of full vitality, of exhilaration, keen enjoyment of life, and strength to perform any task, and it is a melancholy reflection that not one in, a thousand men and women of middle-age has it. Yet the average healthy child fulfils these conditions, simply because of his unceasing activity-an activity that knows no tiring from early morning till, tired out, he falls asleep at night-keeps the various organs of his body in constant exercise. No muscle has the chance of stiffening, no organ grows weak from disuse, or sluggish because of tasks set beyond its powers. The savage knows nothing about the secret of health, but his life is spent in the manner of an irresponsible pleasure-loving child; hence the ailments of civilisation are practically unknown to him in his normal state.

Weakly people talk enviously of others who have had a heritage of health, and undoubtedly there is such good fortune inherited by some. But it should not be forgotten that a heritage may be built up as well as inherited, and that

while we are building it up we are enjoying its accumulation ourselves, as well as laying up treasure for those that come after. It is my firm conviction that every young man who has not yet begun life hopelessly handicapped by an inheritance of organic disease, may build up a constitution and health which will enable him to live his life as gladly as does a child; to perform, without undue pain, the part in life Nature has destined for him; and to leave to his offspring, in later years, such a heritage of health as will make them bless his memory.

Of course it will be thought by the foolish that all this talk of mine is a bit of special pleading for the system of Physical Culture with which my name is associated. however, could be further from the truth. The children and savages whom I have used, by way of illustration, have no scientific system of physical exercise, and yet they represent a state of health to which two-thirds of civilised mankind are strangers. So it is clear that health may be enjoyed apart from my system. Only, it must be remembered that children and savages lead a perfectly natural life; plenty of open air and plenty of exercise, and no duties which involve unnatural postures of the body, late hours, or over-work. The special value of my system is that it accomplishes scientifically, if artificially, what in former cases is accomplished naturally and without thought.

All good things suffer from exaggeration of their virtues. The moment any drug is recommended as a panacea, a cure-all, it becomes degraded to quackery, and I am afraid that exercise has suffered to some extent by the vague and general manner in which it has been recommended for every ailment under the sun. No such thing exists in nature as a universal remedy, and it is unwise in the highest degree to exalt any remedial measure to such a height.

Before closing this chapter, I should like to say something about medical exercises and their field. First, discussing the question from a very general point of view, I must remind you that the exercise of any faculty is necessary to the retention and development of that faculty.

The love of play and recreation develops the physical powers. Existence itself demands the continual exercise of the mental powers, and the problems of this life are quite sufficiently many and mysterious to exercise from day to day the moral faculties. The use of any function brings improvement and perfection; its disuse brings degeneration and decay.

The tendency of the day is, of course, to take less and less exercise, partly because of want of time, partly because of facilities for rapid transit. Now, of course, this denial of bodily activity makes for physical degeneration and must be in some way replaced. Systematic exercise is exercise reduced to a science, and when we come to compare it with recreative exercise the result is as follows:—

Systematic Exercise.

A .- Occupies little time.

B.—Is immediately invigorating and refreshing.

C.—Is a distinct addition to the permanent strength.

Recreative Exercise.

A.—Occupies a long time.

B.—Is fatiguing.

C.—Is not a considerable addition to the permanent strength.

Physiologically speaking, exercise is universally beneficial; that is to say, the health and energy are naturally improved and increased by exercise and every tissue is beneficially affected. But it would not be wise to argue that because this is so therefore medical exercises form a cure for all diseases. In the first place, all acute disorders fall outside the scope of medical exercise; the field rather confines itself to sub-acute or chronic disorders.

To take deformities in the first place. Of course nearly every muscular deformity can be cured by exercise; especially is this so in the case of lateral curvature, where certain muscles become weaker and weaker, while the opposing muscles become stronger, thus rapidly increasing the vicious habit of the curvature. Another muscular group is that of bad development or under-development. Take, for example, the case in which the muscles of one limb have fallen behind in consequence of some congenital defect. This, of course, can easily be cured. A third group we might take is that associated with nervous disorders. such as wry neck, writers' cramp, paralysis, etc. In the case of paralysis the scope of exercise will be much clearer if the following point is quite understood. Where there is the possibility of exercising will-power it should be used. Some kinds of paralysis are so advanced that the sufferer has entirely lost the power of conscious movement. These cases, of course, must be treated with hand massage or electricity. But where the power

of movement exists, in even a slight degree, immeasurably better results will follow if actual exercise, with the employment of will-power, be used along with massage. That is to say, the more severe the paralysis, the more we must fall back upon hand massage and electricity; the less severe it is, the more we must employ movement massage, resistive movements, and voluntary exercise.

Another muscular group is that associated with bony deformity. Into this group come club-foot, knock-knees, the severer kinds of curvature, many rickety deformities, etc. These require almost special treatment, in which surgery must work hand in hand with exercise.

Leaving muscular disorders, we come to organic complaints, in which the great arteries are more or less diseased. In the first place, one danger which has to be pointed out is the prescription of exercise by an incompetent man. The danger is not in any way, however, so great as that of leaving hand massage at the discretion of an ignorant person. For this reason, then, if there is any doubt, a medical man should be consulted. It must be said, however, that many conditions exist which are generally supposed to make exercise dangerous, but which are, as a matter of fact, im-

proved by exercise. Taking two of these I may mention cases of rupture and of heart disease. In the first case, provided a truss is worn whilst exercising, exercise may be taken without danger and with distinct benefit. As a preventive of rupture, exercise is infallible.

Heart affections fall into two classes: one where actual disease is not present, the other where the valves are affected. The first condition can generally be absolutely cured by exercise, the second condition can generally be considerably ameliorated. Of course it goes without saying that, in cases of heart weakness, exercise should be prescribed only by an expert.

The three great organic groups where exercise comes as a sovereign remedy are:—First, nervous disorders; second, lung disease; third, ailments which have as their cause abdominal congestion. In the first group come all kinds of nervous prostration or disorders. In the second, of course, the case resolves itself into combating that great scourge of civilisation—consumption. I am convinced that exercise, combined with the taking of cod-liver oil, will be an effectual cure, except in the last stages. The third group of abdominal disorders includes congestion of the liver or sluggish liver, constipation and its attendant train of evils.

TALK XIV.

WHAT THE YEARS HAVE SEEN.

PHYSICAL CULTURE IN ENGLAND.

It was in 1893 that I began seriously to preach the gospel of strength in England. My public performances had aroused such interest in the subject of physical culture, and I received so many letters on the subject, that I published a book, "Strength, and How to Obtain It," giving illustrated instructions for carrying out the sets of exercises which I had personally used. This merely had the effect of increasing the volume of correspondence, and, recognising that an ounce of practice is worth a pound of theory, I opened a school of instruction in Physical Culture in St. James' Street, London.

The success of the school was immediate, not only in the number of pupils, but in the results attained. Very soon a second school was established, then a third and a fourth, till there are now nearly twenty schools in England, five of them being in the metropolis itself.

When I say that in Great Britain alone over 300,000 pupils have passed through my hands, either directly or indirectly, in ten years, I think I may claim, without boasting, that I have been successful in my endeavours to raise the standard of health and strength in the United Kingdom. The Prince of Wales is an ardent admirer of my system, has himself undergone a thorough course of instruction, and uses the bells and developer. When he and the Princess—as Duke and Duchess of York—set out on their tour of the world, I fitted the dressing-rooms on the Ophir with my exercisers, at His Royal Highness' special request.

AMERICA.

I have paid three visits to America, and am happy to say that in the States Physical Culture has taken a firm hold on the public. There is a very large school at Boston, and as soon as I leave Australasia I am going back to America to establish others.

AUSTRALASIA.

I need not say that the main object of my present visit to Australasia is not to entertain the public with feats of strength—that is merely a living illustration, as it were, of what may be done by persistent work. What I most earnestly desire is to awaken in theminds of the people of these States a sense of the true value of their bodies, and give them what I

consider the most rational system for achieving physical perfection that has been invented.

But my object is not to pass the whole British race through my schools, even if that were possible. What I aim at is the recognition that Physical Culture should be part of the national system of education. I firmly believe that in England the day is not very far distant when every child from the age of five to fourteen will exercise, daily, under proper supervision.

In Australia, climatic and other conditions seem to me to be exceptionally favourable to the pursuit of Physical Culture. I have been reminded that Australia is a land of long, hot summers, but I find that the best results from my system are obtained in the summer, especially with beginners, because the circulation is then freer and perspiration more easily created; and, consequently, the impurities of the system (if any exist) are more easily got rid of through the skin, thus relieving the liver and kidneys of unnecessary work. If one is troubled with excess of adipose tissue, the amount removed will be far greater if exercise is taken in the summer. It is in the winter that the greatest amount of wear and tear of our vitality takes place.

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I have already made arrangements for the establishment of Schools of Instruction in several of the larger cities of Australia, and I hope, ere long, to see instructions in all the larger Australasian cities. I will send out from England trained instructors to each of these schools—men who have been through at least a ten years' course in one of my English schools and have obtained a certificate.

INSTRUCTION BY POST.

It may happen that out in Australia there are some people who are not living within convenient distance of a School of Instruction. To such I would recommend a course of Physical Culture through the post. I have given instruction to thousands of persons in all parts of the world through the medium of the Post Office. All that is necessary is to obtain the necessary forms, fill them up, and forward them to me at my London address, when they will be immediately attended to.

On receipt of my prescription for you, I wish you to thoroughly study the movements and instructions contained therein, also the general instructions concerning my system before beginning work. I shall endeavour to underestimate your strength at first, so that you can put all your will-power, which means

energy, into your work without fear of overdoing it.

Be most careful to let me know every detail concerning any particular weakness or complaint you may be suffering or have in the past suffered from, in order that I may be able to fully understand your needs at once. Do not hesitate to write me often, should you have any doubts or questions. Every letter shall have my immediate attention.

One important point I wish to impress upon you is not to hand your prescription of exercise to a friend to try, even though he or she may be in the same apparent physical condition as yourself; for it does not follow that two individuals possessing similar physical weakness should be treated in a similar manner, because the natural physical condition of the one may be decidedly inferior to the other, which would require a material altering of the prescription of exercise.



TALK XV.

A PHYSICAL CULTURE COMPETI-TION.

One of the most interesting events in the history of Physical Culture was the Thousand Guineas Competition which was held in England three years ago. In order to extend the interest in Physical Culture throughout Great Britain, I offered a prize of £500 for the bestdeveloped man in the United Kingdom who had trained under the Sandow system. Second and third prizes of £300 and £200 respectively were offered, and a number of medals in gold, silver, and bronze were struck. The idea was to hold a series of local competitions in the counties, award the medals to the three bestdeveloped men in each county, and then have a final competition for the bigger prizes, which took the form of a gold statuette of myself by Pomergy, first; a silver replica of the statuette, second; and a bronze one, third.

A wonderful amount of interest was created in the contest, and on the night of the final competition in the Albert Hall, ten thousand persons were turned away. Dr. (now Sir) Conan Doyle and Sir Charles Lawes were the judges, and I acted as referee.

To me, the most interesting feature of the Competition was that the prize-winner was a young clerk from Nottingham, who, eighteen months before, had been ordered to get out of England to save himself from the ravages of consumption.

It is my intention to inaugurate a somewhat similar competition in Australasia. And I am hoping that it will be one incentive to young men to take an interest in physical culture.



THE SANDOW MEDAL. In Gold, Silver, and Bronze.

TALK XVI.

SOMETHING ABOUT MYSELF.

In this chapter I do not wish to make any boast of my strength as if it were by my own unaided efforts that I have attained it. All that I have done is to develop, as far as I know how, the muscular outfit which the Creator has given me.

Dr. Sargent, of Harvard University, whose letter I append, described me as "the most perfectly developed man the world has ever seen," and, that being so, I think it may not be uninteresting to give readers my present measurements.

Some years ago, a rather stupid attack was made on my system by some envious persons, who declared that Sandow exercises not only do not improve the general health, but actually damage the vital organs and the constitution. In very truth, the effects of my system are exactly the opposite. Hundreds of men and women have come into my schools narrow-chested and weak-hearted, and have gone out broad and strong and healthy. Scores of young people have come to me as "refusals" from life insurance companies, and

have gone back and been accepted within six months.

It was also stated that I personally suffered from weak heart and was in bad condition. My reply to this statement was to go to the Norwich Union Company, and ask if they would insure my life for a large sum. The Company's doctor examined me, and not only passed me in the highest class, but expressed great surprise at the wonderful soundness of all my organs.

When I first went to America, Dr. Sargent, of Harvard, was kind enough to take a great interest in me. He examined me carefully, and was enthusiastic in his praise of my physique. When I returned to the United States nine years later, I again saw the doctor, and he sent the following letter to the "New York Herald":

"Dear Sir,—It was nine years ago that I first made measurements of Eugen Sandow; and I have, naturally, been interested to learn whether he has continued to advance toward even greater development and power. From my personal observation of Sandow at that time, I was led to believe that his living habits were of so correct a nature and his system of physical culture so intelligently conducted, that his advancement would be steady. I have not been disappointed.

"At that time Sandow was but twenty-five years old, and it was apparent that the climax of his power would not be reached for many years. In my recent examination I found that he had made the improvement that I had expected.

"His superb physical condition may be attributed to his regular habits and his intelligent method of going about his work. It is easy to see at a glance that Sandow takes the best care of himself, and this is shown by the brightness of his eye and the clearness of his skin; and a perfect circulation is also easily apparent.

"Muscularly, he shows that same symmetry; but greater power also shows in the increased size of the man. He is also possessed of a great reserve of nervous energy, and this is apparent in his every action.

"That he is in perfect physical condition is shown in his great good humour. He seems to be at no time overworked or trained to a point of nervousness, as many athletes are likely to be. He seems to have worked out his own system, and solved for himself the question of how to stay constantly at his best without overdoing and without mental strain.

"A gentleman who has built up for himself such a remarkable physique, and has aided others to emulate him, is a particularly valuable object-lesson to young men of America. Sandow's visit to the university will stimulate great interest among the students. The fact is impressed upon them that what he has been able to do, others may do.

"In conclusion, I do not hesitate to say that, in my opinion, Sandow is the most perfectly developed man the world has ever seen.

" D. A. SARGENT."

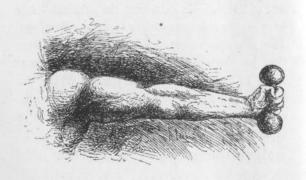
Dr. Sargent also lectured before the students, and used me as an object-lesson. At the close of the lecture I presented to Harvard University a plaster cast of myself. This cast is one of but three in existence, the original being in the British Museum, London, England. The gift was received with great demonstration by the students, who packed the great room of the new Harvard Union, where the lecture was given. An account of how this unique cast was taken is, I think, worth a separate chapter.

My "personal statistics" at latest date are:

Age	 35 years
Weight	 14 st. 6 lb.
Height	 5 ft. 9\frac{1}{4} in.
Neck	 18 in.
Chest	 48 in.

"Personal Statistics."—(Continued.)

Chast amonded	6-14
Chest expanded	
Waist	30 in.
Hips	42 in.
Thigh	26 in.
Knee	14 in.
Calf	
Ankle	81 in.
Upper Arm	19½ in.
Forearm	$16\frac{1}{2}$ in.
Wrist	71 in.



TALK XVII.

THE CAMERA AND THE CAST.

Every public man nowadays spends no small amount of his time with the newspaper reporter and the photographer. I have given my views to several hundred reporters, and have had my "views" taken by about as many photographers. I have been photographed wholly and in sections; nor has the photographer confined himself to the exterior of my person only. In London I had two very fine Rontgen Rays photographs taken, and medical men, as well as the photographer, remarked upon the extreme smallness and delicacy of my bones. If the life-sized photograph of my arm, which appears as a supplement to this book, were an X-rays photograph, it would be noticed that the bony structure is almost as small and fine as that of a woman. This proves what I have always contended, that the texture of a bone counts for more than the size of it.

But the most trying experience I have ever undergone was the operation—or rather series of operations—of taking the moulds for my life-sized cast. This was done at the request of Professor Lankester, who desired to place a cast in the British Museum. It is a unique exhibit, for this was the only occasion when a living man has been moulded for a plaster cast in a state of contraction.

Of course, the ordinary process of making a mould for the reproduction of a statue is a simple one. A mould roughly corresponding in shape, but somewhat larger than the object of which the cast is to be taken, is fixed round the statue. The space between the statue and the rough mould is filled in with plaster of Paris in a semi-fluid condition, and when this hardens a perfect mould of the figure is quite easily obtainable. Before the plaster is poured in, the object is oiled to prevent sticking. But there is a mighty difference betwen pouring liquid plaster of Paris round an inanimate statue and performing the same operation on a living, breathing, human being, particularly when that human being has to be reproduced with all his muscles set. For one thing, the smallest movement would disturb the hardening plaster and spoil the mould. Messrs. Brucciani, who undertook the work, were very doubtful as to its success, and it was indeed a long and wearisome task, with occasional disappointments.

A hundred times I thought I would have to give it up. The strain at times was terrific. When they were moulding my chest, abdomen, neck, and face, I thought I was on the point of suffocating. No one can form any conception of the suffering I endured. In fact, when the sculptors applied the plaster to my chest for the first time I could not stand the pain for more than ten minutes.

You see, I had to keep the muscles of the chest and abdomen still; and, to do that, I had to take short, quick breaths. I could never, of course, empty or fill my lungs. I had to take in—almost continuously—just enough fresh air to replace what I used up. And at the same time, of course, I had to keep the muscles up to their highest tension, so as not to disturb the cast.

That was very hard. I kept it up as long as I could; but at last that awful feeling of suffocation came over me, and with an effort I threw the plaster off. I had been under an intense strain then for ten minutes. Two days later, however, I tried it again; and that time the mould was a success.

You can imagine that, apart from the danger of suffocation, the difficulty in regulating the breathing so as not to disturb the contour, and the peculiar "biting" feeling of the plaster as it dried on the skin, made the experience one to be dreaded. When they had taken the

mould of my chest, I thought, of course, that my sufferings were over; but, heavens! that was nothing compared to what I endured when they took the cast of my face. They told me that, compared to the operation on the chest and abdomen, I would not mind it—that one man in two hundred could stand having the face done, but that one man in a million could not be found who could stand having his chest moulded in a strained position.

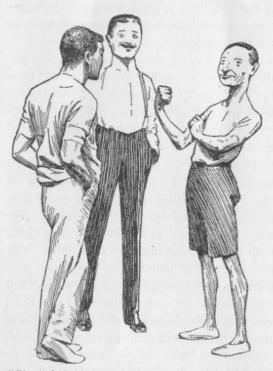
So I took them at their word. They placed linen over my hair and moustache, oiled my face thoroughly, told me to close my eyes, and strike the attitude. I did so. Then they applied the plaster. There was not merely the weight of the plaster, that pulled on my skin and eyes until I thought the latter would come out, but in addition the sculptors had to keep their hands on my chest and on various places on my head and face; and to me the merest touch seemed like a great weight.

Four times, when the work was almost completed, I brushed the men aside, threw off the plaster, and drank in the fresh air; and I was winded more and perspired more after each of these trials than after any of my severest weight-lifting performances.

The fifth trial, however, was successful; and the entire cast was concluded. But all the money in the world could not tempt me to undergo the suffering again. Of course, I realise that it is a great honour to have my cast in the British Museum as an example, as the trustees declare, of the perfect man.

But what gives me greater pleasure is the thought that succeeding generations will have the specimen before them as an illustration of how an originally delicate child can perfect himself physically by simple and natural means.

A rough outline in paper of my figure was taken to serve as a guide for the making of the "shells" for the support of the plaster forming the moulds. After the shells were made, the figure was worked into sections, each of which was moulded separately. For the purpose of maintaining the same pose throughout the position of the feet was worked out on the floor, and a support for the right elbow and the fingers of the right hand was provided. These of course were merely helps. The muscles had to be kept contracted by an effort of the will. The Messrs. Brucciani, the famous Italian sculptors, executed the work. The cast is now in the South Kensington branch of the British Museum, and a fac-simile has been exhibited throughout Australia.



"Physical Culture."]

OVERHEARD IN A DRESSING-ROOM.

Little Tom Noddy: "Ah, yes, great strain, of course, being cast in plaster. Still, I'm thinking of being done,"

TALK XVIII.

PHYSICAL CULTURE FOR SOLDIERS.

For many years I have been advocatingand, I am happy to say, not unsuccessfullythe introduction of scientific Physical Culture into the British army. And wherever I have been in my tours through America and Australia I have always been pleased to give free instruction to the officers and men of the local military forces. The British soldier has, almost from time immemorial, been famous for his strength. Indeed, looking at history, one cannot but be struck by the emphasis nearly all chroniclers lay upon the point. Troops of other nations may, at certain periods, have been more mobile, more highly trained and organised, but the characteristic of the English soldier would always appear to have been a superior "sturdiness" which pulled him through at the critical moment. I am specially referring to bodily "sturdiness," although, of course, that without pluck would avail men little; but the two have more in common than many people suppose. I don't suggest that all bravery depends upon bodily strength, but in that bravery which is specially called for on

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the battle-field a sound body, healthy organs, and a well-balanced nervous system, are no inconsiderable factors.

Perhaps the "sturdiness" of the British soldier has been best shown by the success with which he has undergone the hardships and privations of campaigning, which try an army so severely. Hunger and hardships and fatigue-these, in almost every campaign, kill more men than the weapons of the enemy. That marching is infinitely harder work than actual fighting, entailing, as it does, not merely great physical exertion, but the additional nervous strain owing to the constant expectation of being attacked, is universally acknowledged by those whose authority is accepted as beyond question. And it seems to me that here the British soldier has invariably shown himself without a peer.

Then, naturally, the question comes to be asked, What is the reason of this? How is it that the personnel of the Army of England is superior to those of other nations? How is it that the British soldier is physically so much finer and hardier than the men of Continental armies? How is it that, when it comes to hand-to-hand combat, in "soldiers' battles," where the issue depends more upon the strength and hardihood of the rank and file

than upon the skill of the commanders; in long marches, when the deadly enemies—fatigue, starvation and disease—have to be faced, that he comes out of the ordeal so triumphantly?

Honestly, I firmly believe that it is largely, if not entirely, due to the fact that the young Britisher has grown up with a tradition of athletic excellence of prowess in sports and manly pastimes.

Some ten years since and for several years onwards, many people who had the best interests of the Army at heart were seriously disturbed by the fact that the British recruit did not at all come up to their ideas as to what he should be. In consequence of the lively interest shown in my system by Colonel Fox, the then Inspector-General of Army Gymnasia, I not only gave a demonstration of my system at Aldershot, but gave some tuition to the non-commissioned officers who were going through an instructor's course. What Colonel Fox thought of my system is apparent from the letter he wrote me which is published in my book, "Strength, and How to Obtain It." He was, indeed, so delighted with it, that he made great efforts and succeeded in getting a modified form of it adopted throughout the Army, with, I believe, the happiest results. Of course it takes time for an innovation of

this kind to "catch on," nevertheless I believe that even during these few short years the improvement in the physique of recruits after their gymnasium course has been very marked. Not only that, but many men, quite apart from their compulsory course, have gone in for the system in its entirety and kept it up steadily. I have had many letters from soldiers serving both at home and abroad telling me that the writers do the exercises with dumb-bells and developer regularly, and thanking me for the benefit they have derived therefrom. As for the officers-well, the names of those who have taken up the system, either at one of the schools or "on their own," are legion. If I attempted to enumerate them, I should practically have to copy out the Army List.

In conclusion I may give the views of the military expert of the "Daily News" with regard to Physical Culture in the Army, as expressed by him in the issue of December 23. After quoting Napoleon's maxim that legs win more battles than arms, he goes on to say, "I want to impress upon the City Fathers and Mr. Wilson that Sir W. Gatacre being, in his view of the physical training of the soldier, wholly right, and Lord Durham merely wrong, it is essential to the efficiency on landing of the corps they are so patriotically sending out that

there should be ample facilities on all the ships for regular and steady daily exercise for horses, officers, and men. On some of the best ships that were sent out to the Cape this was amply provided. On some it was wholly wanting. It is not at all difficult to manage for the horses. In addition to ordinary exercise, opportunities for officers and men, I would suggest a large number of Sandow's equipments. I know that where one or two officers had remembered to take these, there has been a rush by the foolish virgins who had forgotten so to trim their lamps to obtain the use of them."



TALK XIX.

SOME EARLY REMINISCENCES.

The career of a man who has been performing before the public for fifteen years is naturally full of incident.

A TRICK AND ITS CONSEQUENCES.

One of the happiest periods of my life was when, as a comparatively unknown man. I made a very successful tour in France and Italy in company with a genial fellow whose name was Francois, and who was an exceptionally clever circus performer. We used to give an amusing little performance entitled "L'Afficheur "(" The Billsticker "), and we appeared under the stage name of the Rijos Brothers. Francois used to dress up as a doll, and I would throw him about all over the place, now in at a window, now out by the door, and it was only after a time that the audience realised that Francois was not really a rag doll of huge proportions. Then François would rapidly change from one costume to another, each one representing some article of daily use. Each time he appeared, I would catch him up and throw him up against the wall as high as I

could, and he would very cleverly hang there, whilst the audience, recognising the poster he was personating, laughed and applauded. The show became very popular, and we had a splendid run.

Later on, I was induced to give up the stage and become a wrestler. Whilst I was performing in Rome, King Humbert and his Court took agreat interest in the performances, and came to see me wrestle and achieve feats of strength. It was whilst I was in Rome, too, that the incident I am about to relate took place.

If the photographer who took the picture of my arm for the frontispiece had taken the front instead of the back, there might have been seen in the photograph a peculiar scar. That is the reminder I carry about with me of the occurrence. I had challenged and beaten a number of famous wrestlers, and one day I accepted a challenge from a man named Muller, a wrestler who was noted for his unfairness in the arena. I had been warned against wrestling with him, but I was determined to meet him, and equally determined not to allow him to take any unfair advantage of me. We had not been in the ring for many minutes before he began his tricks, but I succeeded in warding off all his attacks, and soon saw that as a wrestler pure

and simple he was not very much to be feared. After several vain attempts, he managed to grasp my right forearm with both his hands, with the evident intention of breaking the limb and so disabling me. He was unable to obtain sufficient leverage, however, to snap the wrist, but succeeded in forcing two of his fingers into the flesh with such power that the veins burst. The pain was maddening, and, snatching away my arm from his grasp, I clasped him round the waist and simply hugged him. I am afraid it was not a loving hug, for his face became purple, and he dropped limply from my arms to the sawdust. When he recovered consciousness, his injuries were found to amount to four broken ribs, which everybody agreed was not a whit more than he deserved. I myself was laid disabled for four months, the veins of the arm being badly torn and the nerves lacerated.

SOME WRESTLING HONOURS.

Those early days when wrestling was in its prime were grand. I remember well the series of contests by which I became the champion wrestler. The first match of importance was the outcome of a challenge from Bartoletti, a noted Roman wrestler, who offered 5,000 francs if I could beat him. The issue was

never in doubt, and I was proclaimed an easy winner.

Some time after, I met Bartoletti again, with the same result. Then Sali, acknowledged to be the best wrestler in Italy, came forward. He had a wide reputation, having won laurels in various parts of the world, even in Australia. The match created a tremendous amount of enthusiasm, and the gymnasium of Milan put up the money for the stakes. It was a much better match than the previous one against Bartoletti, but after an hour's wrestling I came out triumphant. Sali afterwards put up a pupil of his, named Milo, but I had him on his back in about five minutes.

It was next suggested that I should tackle two men at a time, so I agreed that a challenge might be issued. The stakes were fixed at 3,000 francs, and quite a number of competitors came forward. Eventually, however, they were thinned down to two, whose names were Sarini and Vocoli. There was considerable interest in the affair, but it was only a matter of a few minutes, and both my opponents were down.

As this was rather a tame contest, I published a further challenge, offering to wrestle any three men who would come against me. The conditions were that all three might tackle

me at once, and if they succeeded in throwing me, theirs was the victory. On the other hand, if I threw one of them, he could take no further part in the contest while I was dealing with the other two. Sarini and Vocoli again came forward, and succeeded in getting Bartoletti to join them as third man.

It was a good battle, and a great crowd of people witnessed the match. We were wrestling for about an hour and a half, and everything was fair from first to last. I managed to upset Sarini early in the match, and eventually carried off the honours.

A ROYAL GIFT.

There was naturally a great deal of congratulation and applause from my friends on my victory over the triple alliance; but what was my surprise and delight to receive a command from the late Emperor of Germany, who was at San Remo, undergoing treatment for his throat, to come and see him. I gave an exhibition of my muscular powers, and His Majesty seemed greatly pleased. At the close of the audience, the Emperor asked me if I had done any card-tearing, and, sending for a pack of cards, he tore it down the middle. I replied by taking two packs, placing them together, and tearing them into halves. His

Majesty was as eager in his applause, and not only said many kind things, but gave me a gold ring of considerable value, which he had worn for eighteen years. The ring, which, of course, I treasure very highly, is of beautiful French enamel, encircled with brilliants, with the initial F and a crown over it, the letter and crown being composed of diamonds.



SOME RECENT TESTIMONIALS.

Since coming to Australia I have received the following letters from America. They are but samples of hundreds which come to me weekly:—

Somerville, N.J., Aug. 19, 1902.

Mr. Eugen Sandow, Boston, Mass.

Dear Sir,—In trying to express my opinion of the improvement in general health and strength which I derived in this last course with you, and that which I have gained in following as best I might the laws set down in your book, I am at somewhat of a disadvantage at that. Thanks to your system of training as laid down in the book, I have not known what it was to feel otherwise than healthy.

At the age of sixteen I feared consumption, and took up your system of Physical Culture. To-day—six years later—people laugh at me for ever having feared it, and say they would do anything to have muscles as well developed as mine. When I tell them that it is all due to Sandow, they say it is too hard work, or that I was strong naturally, which is not true, as I was always sickly, and had regular sick headaches, which have disappeared almost entirely under your system.

I can say, and am glad to say, that anyone in no matter what a deplorable state physically they may be, if he will follow Sandow's System of Physical Culture, as he should, will be made a new man, and in the majority of cases a stronger and healthier man than the average of his fellows, who call themselves "perfectly in health."

Next summer I take with you the full course, and am more enthusiastic than ever about you and your System.—Yours very sincerely.

WM. K. TERRIBERRY.

Mason & Hamlin Co., Boston, Mass., 8/8/02.

Dear Mr. Sandow,—The satisfaction and benefit derived by myself from your method gives me a great pleasure to say the following:—In a few months' time, by conscicutiously following the exercises given me by you, my muscles have been developed to a remarkable degree, as also has my general health been improved. Your System has cured me completely of dyspepsia and

constipation, the effect has been immediate, and almost beyond belief. I have now no more difficulty in as-

similating and digesting food consumed.

Having always appreciated the advantage to be derived from proper exercise, taking gymnasium work for years, and having also tried all kinds of exercisers, I must say I never received anything like the benefit or development that has resulted from the application of your most excellent system. Your patent "Sandow dumb-bell" is the most wonderful, and, at the same time, simplest apparatus I have ever seen to develop muscles and to concentrate the mind to the work at the same time. I also appreciate very much the individual attention which you gave me, and will say that if there is anybody desiring information in reference to your System, refer them to me. I am, believe me,—Very gratefully yours.

R. D. GERTZ, Superintendent.

Niantic, R.I., May 26, 1902.

Dear Sir,—Allow me to thank you for your kindness for the past two months, and for your instructions, which has been to me one of the richest blessings that I have ever received. At the time of beginning your exercises I was simply a nervous wreck, was easily over-taxed when attempting work of any kind, and it seemed almost impossible to recuperate without leaving off for months all mental and physical labour; but, thanks to you, I was enabled, with your exercise, to continue my work, and now I feel like a new man—strong and tireless.

J. E. PHILLIPS (aged 54 years).

Cleveland, Ohio.

Mr. Eugen Sandow, Boston, Mass.

Dear Sir,—I take great pleasure in writing to tell you that I think your methods and system far superior to all others. I have tried the Swoboda system for about six months, and I have made comparisons, with the above results. One great, thing you have accomplished in your methods, and that is: to have the pupil concentrate his mind on his work. He cannot help but do this when using your clever device, the "Spring Grip Dumb-bell." Wishing you unlimited success, I am,—Yours in vitality,

HENRY W. UHL.

AN OPEN LETTER

REGARDING MY PHYSICAL CULTURE APPLIANCES.

To my Readers,—I occasionally hear of people who have been using one of my appliances, and are somewhat disappointed in the results. I therefore pen this postscript to explain the method of using my appliances.

In the first instance, my Spring-grip Dumbbells should be used according to Charts accompanying them. This gives an all-round and symmetrical development of every muscle of the body, rendering them firm and strong, and my Developer or Obesity Reducer should be used *afterwards*, in conjunction with the Grip Dumb-bells.

The Developer renders the muscles flexible, and gives an even and finished appearance to the form.

Both these appliances are necessary to the attainment of the full benefit of my system.

All those desirous of improving their physique—young, old, healthy, weak and delicate of both sexes—will find full information and instructions in my Book, entitled "Strength, and How to Obtain It."

Engen Phulous



Specially taken by Swiss Studios, Melbourne.]











