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# ALL-AROUND ATHLETICS

BY

HARRY CORNISH,

PROFESSOR OF ATHLETICS, CHICAGO A. A.

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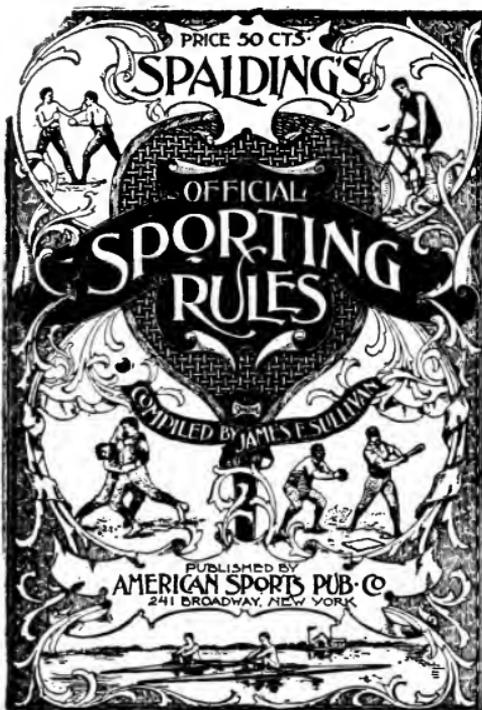
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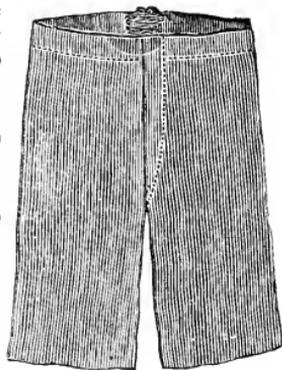
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H. S. CORNISH.

# ALL-AROUND ATHLETICS.

BY

HARRY CORNISH,

Professor Athletics Chicago A. A.

A BOOK DEVOTED TO THE SCIENCE OF ALL-AROUND ATHLETICS, PROPER DIMENSIONS OF AN ALL-AROUND ATHLETE, AND THE MUSCLES USED IN EACH EVENT. AMOUNT OF WORK TO BE DONE EACH DAY. TRAINING AND DIETING. GROWTH AND DECAY OF MUSCULAR POWER. TREATMENT OF ACCIDENTS OCCURRING IN TRAINING.

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# ALL-AROUND ATHLETICS.

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## Introduction.

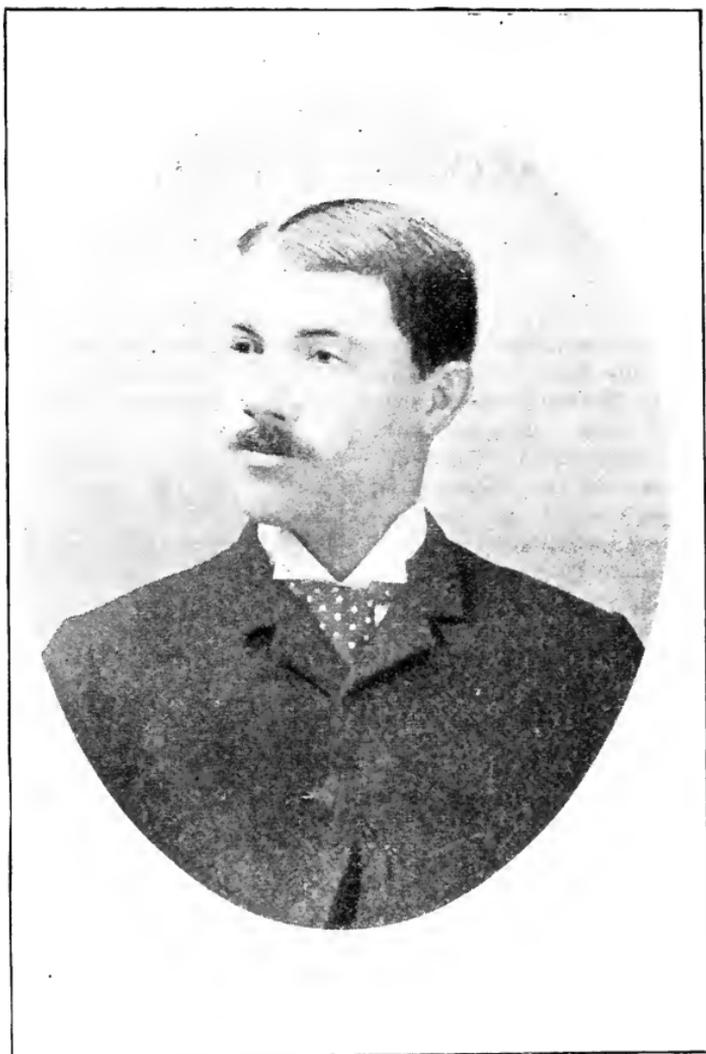
There are ten events on the programme of the All-Around Athletic Championship of America, namely: the 100-yard dash, high jump, long jump, pole jump, throwing 16-pound hammer, putting 16-pound shot, throwing 56-pound weight, 120-yard hurdle race, half-mile walk and one-mile run. The competitor who can score the highest percentage on the programme wins the title of All-Around Champion. It at times happens though that a man not proficient in all the events will make a good showing; as for instance, a man may be a first-class weight-thrower and a poor runner or jumper; and on the other hand a good sprinter may be a bad weight-thrower; then in both cases the mark scored in their particular specialty will partially make up for their deficiency in the other events. How-



POLE-VAULTING.

ever, we have found that the winner was generally a man who could average a fair performance through the programme.

We live in an age of athletic wonders, and in order to be in the front rank we should stick to one particular form of athletics. But there are men who can perform at everything and be first-class at one event; and to those and others of fair all-around ability we direct the following remarks and suggest a fixed routine for their guidance.



A. A. JORDAN.

### Proper Dimensions of an All-Around Athlete and the Muscles Used in Each Event.

The following measurements will be found a fair average of the dimensions of an all-around athlete, and may be taken as a fair guide of what the proportions of the limbs should be respectively:

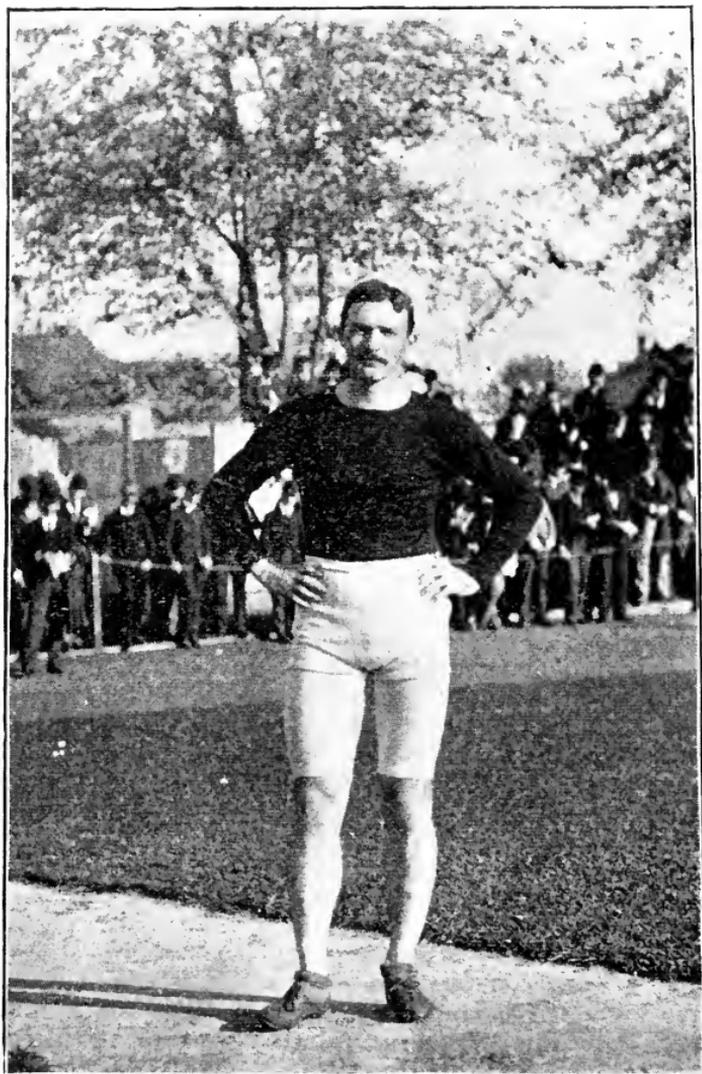
|            |             |             |              |          |
|------------|-------------|-------------|--------------|----------|
| Height.... | 5 ft. 6 in. | 5 ft. 8 in. | 5 ft. 10 in. | 6 ft.    |
| Weight..   | 120 lbs.    | 140 lbs.    | 155 lbs.     | 168 lbs. |
| Chest..... | 35 in.      | 37 in.      | 39 in.       | 40 in.   |
| Waist..... | 27 in.      | 28 in.      | 29 in.       | 31 in.   |
| Hips.....  | 34 in.      | 55½ in.     | 37 in.       | 38 in.   |
| Thigh..... | 20 in.      | 21 in.      | 22 in.       | 23 in.   |
| Calf.....  | 13½ in.     | 14 in.      | 14½ in.      | 15 in.   |

As regards the muscles that are used in the various exercises, it may be remarked that though perhaps in any one exercise nearly all the principal muscles of the body are brought into action, yet there are two or three on which the real strain comes, and on the strength and quickness of which most of the proficiency depends.

In high jumping, the front muscles of the thigh are principally used. They are attached at one end to the top part of the thigh bone, at the other to the knee cap, which passes over the knee and is fixed to the top part of the shin bone. In the act of jumping, these muscles contract violently, and straighten the leg with a jerk, the quickness of which mainly contributes to the height of the jump.

In long jumping, the muscles of the back part of the thigh are used; front muscles are also used. These are attached to the back part of the shin bone at one end, and to the lower part of the pelvis at the other, and by contracting, draw the leg backwards on the trunk. This action is also assisted by the glutæris maximus, which is fixed at one end of the top part of the thigh, at the other to the lowest part of the vertebræ column.

In long-distance running, the front and back muscles of the thigh are used in equal proportions; the former in raising the body at every stride, the latter in propelling it forward. But in the case of running on the toes, the calf of the leg will be



E. W. GOFF.

the weak part; so much so that no amount of practice will enable some men to run any distance on their toes.

In sprinting, the front muscles of the thigh, which lie nearest to the trunk, bring the leg forward in the rapid repetition of the strides. These are a different set from those that straighten the leg, and are used in long-distance running; they are attached at one end to the lower and front part of the



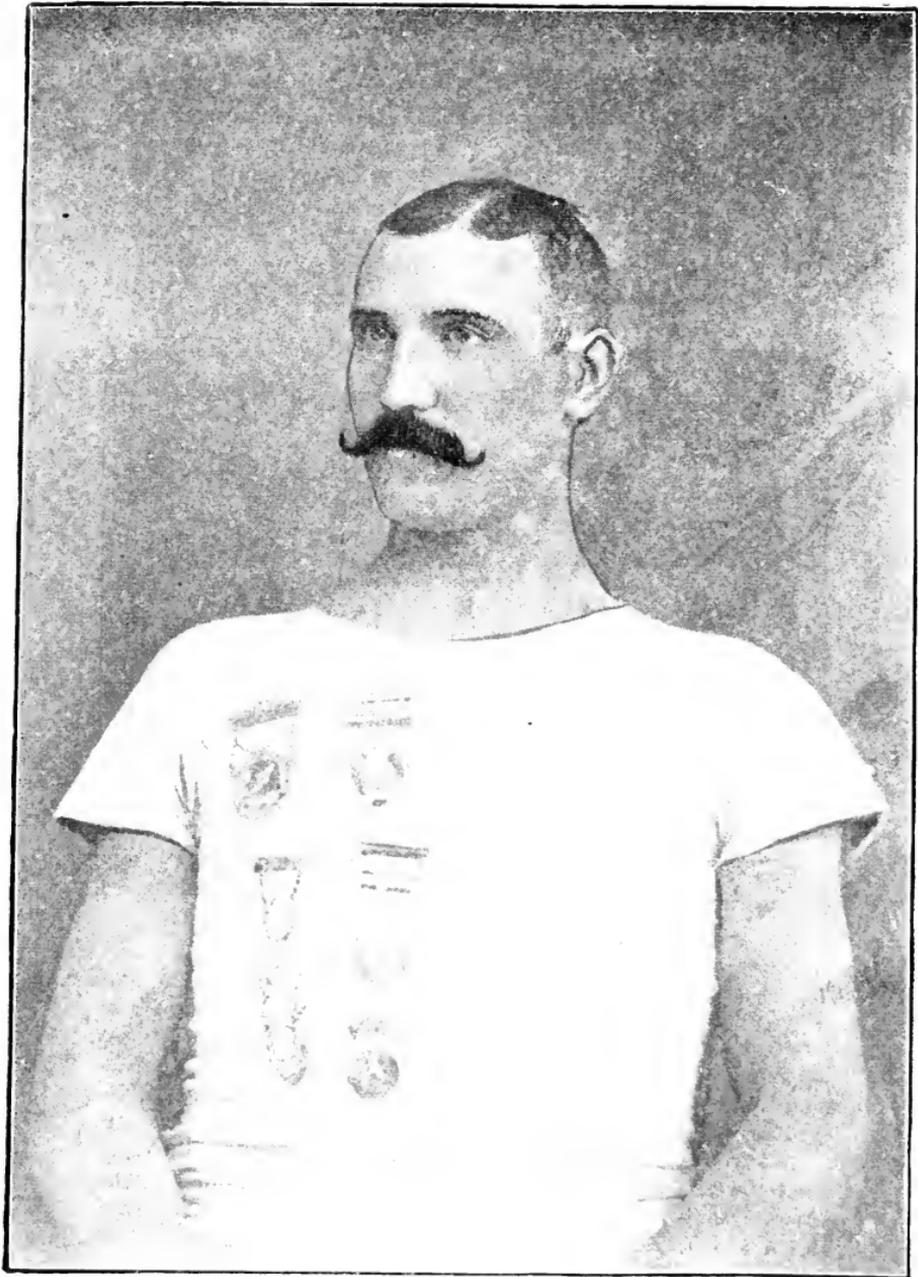
A RUB BETWEEN EVENTS.



ORTON FINISHING A MILE RUN.

pelvis, and at the other end to the hip part of the thigh bone. The back muscles of the thigh are the same that are used in long-distance running for propelling the body forward. A narrow pelvis is a great assistance in this, as indeed in all running; for on the narrowness of the pelvis facility in repeating the strides principally depends.

In throwing the hammer and 56, more depends on the swing than on the strength of any particular muscle, though the strain comes more particularly on the small of the back, that is, on the muscles which raise and keep the back erect, and are attached to all the vertebræ of the spine.



M. O'SULLIVAN.

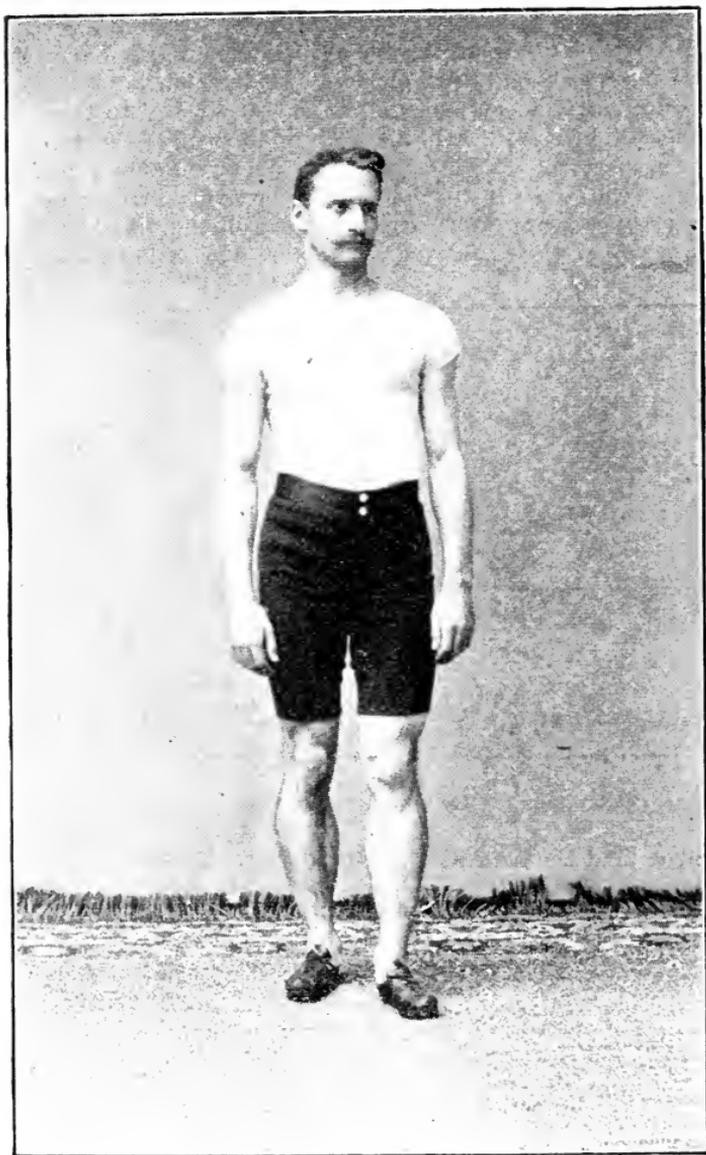
In putting the shot, the muscles called particularly into action are the front part of the deltoid, which is attached to the top part of the arm, and at the other end to the collar bone, and brings the arm upwards and forward; the top part of the pectoral muscle, which also runs from the top of the arm to the collar bone, and brings the arm forward; the triceps, which are fixed at one end of the shoulder and shoulder blade and at the other end of the fore-arm, below the elbow,



CRUM WINNING IN 100 YARDS CHAMPIONSHIP. MAY 25, 1895.

and extend the arm at the elbow joint. The put is also assisted by a simultaneous spring with the legs and a rapid move of the body.

In walking, the muscles of the whole body are brought into action more than in any other exercise we have alluded to. The arms and back assist the legs greatly in changing the balance of the body and in bringing the hips forward at each stride. The calf of the leg has much work to do, even as much as in running on the toes. The muscle, however, that suffers most is that which rises on the outside of the shin-bone, near the knee, and runs down the leg, crossing the shin near the ankle, to be inserted near the inside of the sole of the foot. This muscle rises the foot, and draws it back towards the leg

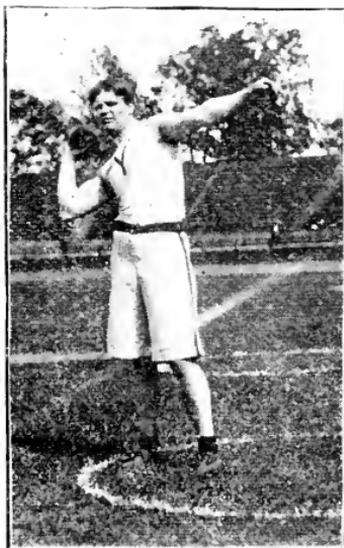


M. W. FORD.

at the end of the stride, and also points the heel at the commencement; so that in fast walking it has no rest, and consequently becomes very painful. The front and back muscles of the thigh also come in for a large share of the work.

### Amount of Work to do each Day.

Before a man begins to train for the all-around championship he should have a good substratum of health and strength

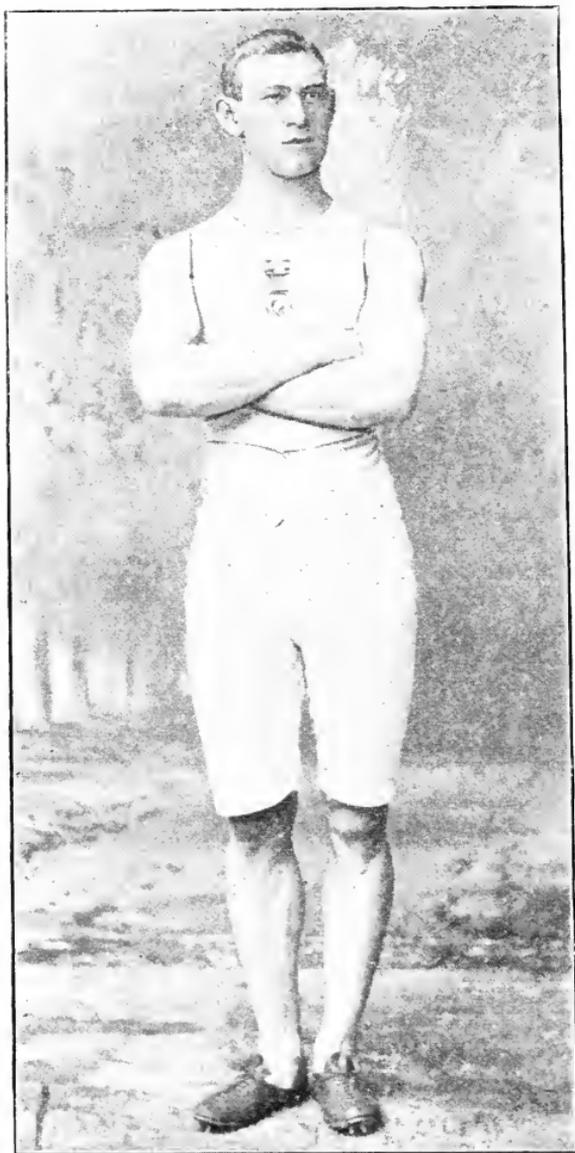


HICKOK PUTTING THE SHOT.



MITCHELL THROWING 56-LB. WEIGHT.

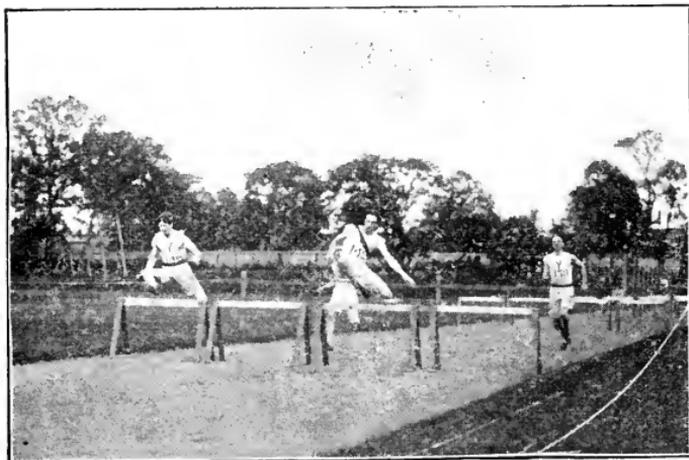
to start upon. If he is out of condition, and fat and flabby from laziness and high living, it will do him no harm to take several Turkish baths at intervals to begin with. Some smart five-mile walks followed by a good rubbing down with a rough towel will soon make him fit to begin his training, if he has in the meantime kept regular hours and lived on a modicum of good healthy food of the kind which he is usually accustomed. Without this preliminary care, not only will he



W. R. THOMPSON.

get stiff and jaded by beginning violent exercise too quickly, but he will incur the greatest possible chance of straining or snapping a muscle, and thus placing himself *hors de combat* for a season. Granting, however, that our aspirant is, from the effects of football, walking, or tennis, in fair ordinary condition, we will follow his course through the different events and for each day of the week.

MONDAY—The athlete should practice about fifteen start of the hundred yards. As it is now admitted on all sides



HURDLE RACE.

that starting on all-fours is the safest method. The competitor can hold his mark for any length of time, and will always have full confidence in himself. He should dig a hole for both feet, one about nine inches behind the other. When on his mark he should hold his legs well up under his body, as the straighter the knees are the more strength will be imparted to the thighs in propelling the body forward. This sprinting practice should end with the athlete running about seventy-five yards at full speed. Without delay he should then essay five or six starts over the hurdles. The obstacles should be placed the regulation distance from each other, and

the trainer should at all times remember and clear them without hesitation. Two or three hurdles are enough at each start. Immediately he should take some trials at the 16-pound shot and hammer. Six trials at each weight must be taken and these alternately. We do not, for a moment, intend to offer any advice on the best method or advocate any particular style in this work for the matter has been exhaustively dealt with by experts in two numbers of this library, notably—the



GOFF BROAD-JUMPING.



BUCKHOLTZ STARTING FOR THE  
POLE-VAULT.

Athletes' Guide and College Athletics. However, we would advise that the hammer be swung as loose as possible, and the strength of the body be brought in to play in the effort of putting the shot. A shower bath or good sponging should be taken immediately; and followed by a brisk toweling.

TUESDAY—Running broad jump, pole jump and throwing the 56-pound weight should be the order on Tuesday. The running broad jump requires less preparation than any other event on the programme, consequently, if the athlete be a fair jumper, four or five trials will suffice. He should try and get up in the air as much as possible. A good plan to practice

this important feature is to stretch a line across the landing turf about eighteen inches high and about seventeen feet from the take-off. To clear this at each trial will give the habit of getting well up in the air. The pole jump should be commenced at a height of about seven feet, and gradually raised until the limit is reached, when the athlete should retire to the 56-pound weight. This is an event that requires the least



THROWING THE HAMMER.

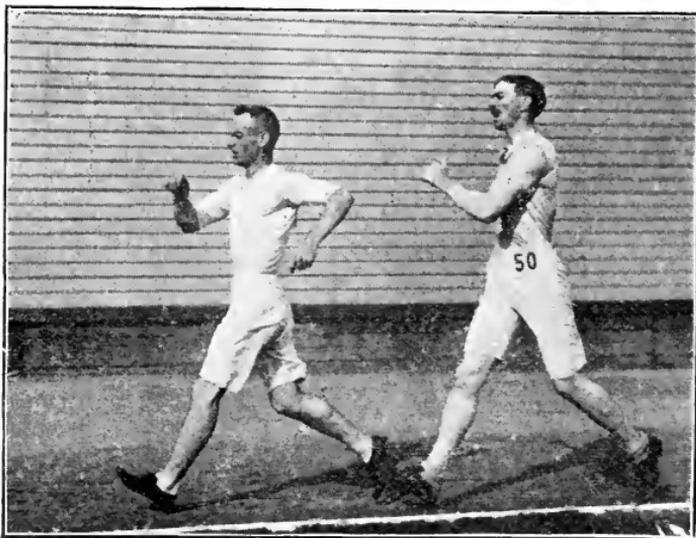
indulgence of any on the all-around programme; only six or seven trials should be taken. The weight should be swung with both hands over the head, and great care should be exercised, as even the strongest performers at the game are constantly liable to strain. Tuesday's work should wind up with a gentle jog of half a mile, well up on the toes, and followed with a bath and rub down.

WEDNESDAY—The day's work should commence with some high jumping, followed by starts and sprints over the hurdles. Putting the shot and throwing the hammer should be again indulged in, and a half-mile walk at a good lively gait

**THURSDAY**—Pole jumping and broad jumping, followed up by a three-quarter mile run at a lively gait in order to bring on a fair perspiration.

**FRIDAY**—This should be practically a day of rest, but it is best to do a little at the 56-pound weight and a walk of one mile.

The whole programme should be gone through on Saturday, when the athlete should be assisted by a friend or two who



MEEK.

WALKING.

SHERMAN.

will act as timers and measurers. To some this might appear to be too much on a Saturday, but the rest of the Sunday following will bring the athlete back again to his old condition.

### **Training and Dieting.**

Of the very oldest system of training, which is now thoroughly obsolete, little need be said, as no amateur of recent years has thought of following it. It was a method which

may be called pre-athletic, as it was, in fact, nothing but adopted for training for the prize ring. The weight was to be reduced to its minimum at all hazards; the liquid consumed was to be a maximum of two pints a day; the edibles were almost entirely meat and bread, and the natural physical result of such a diet was counteracted by daily purging medicines. Sweating, meat eating and purging constituted the old system



RUNNING HIGH JUMP.

of training; and those who wonder how such a custom could ever have been adopted must recollect that it was chiefly applied to men of the lower class, used to coarse food, and with no highly organized nervous system. It needs no argument to show that such a method could not be beneficial, or even practicable, to an amateur who takes up athletic sports as a recreation and not as a business.

However, while from the first amateurs admitted that the old plan was wrong, a movement happened which is well known to historians—the old creed was overthrown.

There is certainly this apparent justification for the traditional course, that, as a rule, people in modern times do not adopt as frugal and temperate a habit of diet as they should, and a great many of them are either without the inclination or without the opportunity of taking sufficient exercise. There is no reason why an athlete who desires to get fit should lead other than a natural life, or alter an ordinary natural diet more than is rendered necessary by the increased amount of exercise which he has to take. Another difficulty which arises in laying down any regimen for training is the indubitable physical fact that no two men are alike in their internal economy any more than they are in their outward features; and when proverbial philosophy informs us that "one man's food is another man's poison," it becomes impossible to speak merely from practical experience with any absolute confidence. When, however, it is understood that the problem, "What should an athlete eat and drink when in training?" resolves itself into nothing more than this, "What is healthy diet for a young man who wants to get his muscles hard and keep his wind good?" it will be seen that it should not be difficult to give some short and simple rules for guidance.

The staple articles of an athlete's diet should be composed of plain-cooked meats and a reasonable quantity of fresh fruit and vegetables. Beef, mutton and chickens are more digestible than veal and pork, and should be more frequently eaten, as indeed is the case in ordinary life; but to treat veal and pork as so much poison, as some trainers do, is simply silly. Taken occasionally by a man who is accustomed to them, they form a pleasing change, and, where a healthy man has an appetite for any food, one can pretty safely say that he can digest it. Fish is light and nutritious, and may judiciously be taken at any meal in the day. Soft-boiled eggs are both light and wholesome, but to eat them on the top of a heavy feed of steak or chops is a huge mistake, and leads to the usual result of over-feeding—biliousness.

The most rigid of the trainers of the present day give chops or steaks and eggs for breakfast; beef or mutton and vegetables for lunch; and beef or mutton again for dinner, together with stewed fruit and rice or bread pudding. This is a good sample of diet, we have no doubt; but variety is

pleasing, and as soon as any food, however healthy, begins to pall, it should be changed for something which, although less digestible, will please, and therefore reinvigorates the trainee.

Regarding eatables common sense tells a man that heavy pastry, or "stodgy" sweet puddings, or highly spiced dishes, are not healthy food, and that the less that is taken of them the better for an athlete; but, at the same time, one requisite for a healthy diet is that a man should like it. Porridge makes an admirable dish for breakfast, but not to a man who doesn't like it. Pepper and mustard may possibly be deleterious to the coats of the stomach, and tea without sugar may possibly be healthier than tea with sugar; but if a man dislikes his beef without mustard, or his tea without sugar, he had much better use these condiments than go without them, and he will do well to have kidneys and bacon for breakfast rather than to force down his throat the admirable porridge which he may not happen to like. Nothing which is unpalatable should be eaten as a duty.

Many men in training have the chief meal in the middle of the day, and a great many doctors recommend this as more healthy, saying that the digestion is stronger in the earlier part of the day, and that when the body is jaded after the day's work it is not fair to put a strain upon the digestion in its weakened state. Whether this view be right we do not pretend to say, and content ourselves with offering the practical advice that the athlete should dine at that hour when he feels most hungry. Men who are accustomed to dine in the evening may, we think, advantageously stick to their old practice when in training, and take their chief meal after their day's work. Of one thing we feel convinced, that a man in training (unless his consumptive powers are as abnormal as those of Milo of Crotona) does not want a heavy lunch and a heavy dinner as well. If he dine in the middle of the day, his breakfast and supper should be lighter in proportion, and if he dine late he will only want a light lunch of a chop or a plate of cold beef and vegetables, with little or nothing else. On the whole we prefer the system of a good breakfast, light lunch, and a moderate dinner after the day's work.

Another important item in the daily life of the trainee is the amount of liquid he should take. He should never drink between meals unless he is absolutely thirsty, in which case

he should drink to assuage his thirst and not for enjoyment; and at meal times he should drink as much as he reasonably feels a craving for. If the drink be unnaturally stinted, the man will soon break down, his skin will get unhealthy, and his sleep and digestion will be impaired.

Doubtless it is quite true that a couple of good-sized cups of tea at breakfast, half a pint of sound ale or beer for lunch and a pint at dinner is enough for most men in training; but to hold that a man who finds himself parched after his exercise at 4 o'clock is to wait until his dinner at 6 o'clock before he can touch a drop of liquid is to turn a useful generalization into a ridiculous rule.

### **Growth and Decay of Muscular Power.**

The food, after maceration by the teeth, and solution by the action of the saliva, gastric and other juices, is taken up by a system of vessels, and mingling with the nervous blood, it is carried to the heart, whence it is sent to the lungs to be aerated, and back again by another set of vessels to the heart, to be finally pumped through the arteries to all parts of the body, carrying materials for the repair of the tissue, and production of heat. In the very minute terminations of the capillary arteries in those structures, where the molecular change of the body goes on, the current of the blood is very slow, to enable the warmth and sustenance of the body to be kept up by the chemical actions of distribution and reproduction of tissue, the oxygen in the arterial blood obtained from the lungs is carried throughout the system and assists these actions, therefore, perfect respiration and pure air are great promoters of change of tissue. This shows the necessity of the blood being in a sufficiently liquid state to hold gases and nutritive matter in solution for the purposes of oxidizing tissue, and of forming flesh. The amount of water in the blood determines, to a great extent, the health of the body, the blood being the organ of the vital processes of change; the severe restrictions on liquid imposed on those in training, who, by arduous exercise, waste much tissue and need much repair, are, therefore, physiologically wrong. The action of the air on the skin stimulates the secretion and exercise, and by indirectly raising the heat of the body, it induces

perspiration, which is nature's remedy to keep the temperature of the body constant. Evaporation and secretion require water. On a daily average, two pounds of water are thrown off by the skin in moderate exercise. Water forms seventy per cent. of the whole body, and for the digestive fluids, the proportion of water to solid is as 12 to 1. Liquidity is necessary also, for the actual processes of decay and repair, by causing the passage of fluids of different densities through the various animal membranes from the oxidation of nervous blood in the moist air of the lung cells to the repair of the tissues by the smallest capillary in the extremities.

Want of liquid causes a stagnation of the circulation, and an inflammatory state of the body, and it excites the nervous system to an extraordinary degree, owing to this want, under the usual system of training regimen, the body is frequently in a state of fever about the second week, until, either the trainer gives up the preparation, or his constitution had temporarily accommodated itself to the change at the expense of his vital energy.

The nourishment of the body by the food taken is important in its regard to health, and in its variety. The primary object of food is to form blood, and according to the condition in which the body receives it, greater or less nutriment, at the same expense of vital activity, will be obtained. The assistance of nature, by proper cooking and careful selection of articles, is in our own hands. Our vegetables should be well cooked, and the animal food should be done so as to retain the juices of the meat. Let it be rather under than overdone; brown meat is more nutritious than white. If the digestion is good, the athlete need not be particular as to description of food; rich sauces are not to be recommended, or even heavy puddings, but jellies and light ones are most acceptable. A healthy, robust man, in hard work, may eat anything in moderation. The food should be well masticated, to enable the saliva to dissolve the starchy matter in it, and also to prevent a sudden loading of the stomach. The blood during digestion is principally employed about the stomach; exercise or mental work therefore directly after a meal will retard the operation of digestion by taking away the blood to the limbs or brain. The time of taking meals, and the quantity at each, may vary with each individual. Two good meals a day and

one light one are sufficient for any athlete. It is better not to drink between meals, and at meals, to sip the liquor, not to bolt it. After severe exercise, a good night's rest is indispensable, and we would fix eight hours as the minimum.

By sleep, fresh energy, muscular and nervous, is stored up for the next period of activity. The internal organs still continue their round of motion in a diminished degree, but those of locomotion which have been severely taxed in the daytime are at perfect rest, and need it in proportion to their past exertion. Great mental activity requires much repose; and we find that the athlete of nervous temperament in hard exercise requires nine or ten hours' rest.

In the winter more sleep is required than in summer, from the fact that the activity of the system in keeping up its warmth, etc., though of shorter duration, is greater; while, as a rule, in summer a certain amount of rest is taken at intervals in the daytime. Sleep after food is often required by nervous persons of weak digestion, but the robust athlete is better without it, an amusing book, light study, etc., taking its place. Before going to bed, if a hearty meal has been eaten, a short turn in the open air will be beneficial in cooling the system. It is a mistaken innovation of the age to have fresh, cold air in a bedroom at night, the stimulus given to the lungs by continued supplies of oxygen tends to increase the waste of the body, to abstract its warmth, and to prevent the repose of the system, which is essential to its renovation. The ventilation of a bedroom at night is amply provided for by a chimney; in rooms without air the window may be slightly opened at the top. Since warm air induces sleep and restraining waste, it seems fairly to be inferred that during the period of repose, the waste of the tissue and the abstraction of warmth from the body, can be lessened by keeping off the cold night air. A glance at the habits of animals who crowd together for warmth during sleep will show the force of our argument. We are not dealing with any cases of ill-health, etc., when the object is to remove the impure air containing the germs of infection as soon as possible. A mattress gives the soundest sleep; the quantity of clothing should be sufficient to keep up a gentle exhalation from the skin. We have not placed any limit as to the amount of food at each meal; the quantity must vary with the exercise, weather and

constitution of each individual. Instinct prompts us to replenish the furnace, for if there is no fuel in the furnace the human engine consumes its own structure. It has been proved by the experiments of Chossat that the body in daily work loses about 1-24 of its weight, and that life ceases when the waste has reduced it to three-fifths of its original weight. In the nerves, however, the loss is hardly perceptible, while the fat suffers in double the proportion of the muscle, 99 and 45 per cent. respectively.

This may well explain the nervous excitability of the body when kept beyond its regular time for food, or when supplied with food of deficient quality. The arrangement of the internal mechanism must go on, respiration continues, circulation and heat result, at the expense of the machine itself. By regularity in meals the stomach accommodates itself to the change of action and repose, and the system harmonizes with it.

In discussing the improvement of health, the principal organs of the body will next demand consideration, their actions in intent being sufficiently identical for the purposes of description: though they vary, however, in such an amazing degree in their character and quality as to become a study of great importance to those physiologically interested in training. The peculiar nature of life, its unknown source, and its relation to circumstances, make the laying down of fundamental rules in detail for its improvement beyond the substance of our remarks. The operation of external forces, viz., air, heat, food, etc., on an organized mechanism, contribute principally to the production of vital force, and, to a certain extent, their action can be reduced to rules. But why this subtle force should be so capricious in its quantity and quality we are at a loss to know. The training off of an athlete is often a direct loss of vital energy from one cause or another, as it is of an actual reduction of muscular substance. Both cases occur, and the reasons we can assign are frequently correct; but why two athletes, organized machines under the same exterior circumstances, and, with a preparation, for the sake of hypothesis, equally favorable to each, of the same weight, height and measurement. should be invariably different in power and endurance in a contest, we can ascribe to nothing but the specific vital force of each individual,

This fact is much overlooked in all preparations for athletic contests where a severe strain is put upon the constitution, as in running, jumping and weight throwing.

When so delicate a structure as the human body is submitted to the operation of air, food and exercise, so powerful for evil, as well as for good, it may be supposed that every possible variety in vital motions thence resulting will be displayed. Excess, defect, or nice adjustment here play a more important part in affecting health than they do in the construction of the organism itself. The forces employed to drive the machinery require more care in application than is necessary, or even possible, in the securing of a good constitution of the machine itself. The latter we have to take as we find it. The former are placed by Providence very much under our control. And it is upon their proper use or abuse that all of health taken individually, which we have it in our power to influence, depends.

#### **Treatment of Accidents Occurring in Training.**

Blisters on the hands and feet occur—on the hands from throwing the 56-lb. weight and hammer, and on the feet from walking or running, in both cases without due precaution. When on the hands they should be pricked with a fine needle—if this can be done before they have burst. The needle should be inserted obliquely, and the watery fluid contained in the blister should then be pressed out; and this should be repeated as soon as the blister has filled a second or third time. In this way the contact of the air is avoided, and in two days the true skin becomes protected by a new cuticle or scarf-skin. If, unfortunately, the blister is broken, the best plan is to apply some collodion with a brush; but it gives considerable pain, and seldom remains on more than six hours, after which time it requires renewal. If possible, some time should elapse before the hammer or weight is taken in hand and then a kid glove should be worn.

When the feet are the seat of the mischief, there is the same necessity for the preservation of the cuticle, and the needle should be used in the same way; if, however, this protection is removed, a piece of fine kid should be spread with soap plaster, and applied over the skin, extending for at least half an inch beyond the blister in every direction. This treatment

answers on the feet, while on the hands it is wholly useless, because the friction of the hammer handle soon rubs off the plaster while under the shoe it remains tolerably well and smoothly applied.

**CORNS AND BUNIONS**—Blisters are troublesome enough to the athlete, but corns are a thousand times worse. The former are only temporary evils, while the latter are a perpetual cause of discomfort and misery. Corns are of two kinds, hard and soft; and this distinction is not only dependent upon situation, as some people imagine, for the essence and even the cause of a soft corn are entirely different and distinct from those producing the hard variety. The soft corn only occurs between the toes, and partakes more of a warty character than that of the true corn. There is really a growth of the cutis or true skin, which shoots up some little sprouts covered with a cheesy matter, and these become exquisitely painful if pressed upon by the adjoining toe. On the other hand, the true or hard corn is simply an effort of nature to protect a part unduly pressed upon; but the effort is carried to an inordinate extent. It is an over secretion or formation of cuticle, which, as it becomes thicker and harder, is again pressed into the influenced cutis by the shoe, and thus, by acting as a foreign body, aggravates the mischief, and causes it also to react on itself, by increasing the already inordinate secretion of cuticle. Thus these causes act and react on each other, till you often find a deep process of hardened cuticle driven into the skin, and which is often called the root of the corn. But it must be understood that these do not grow first, but are the last results of a very obstinate and long-standing mischief. In all cases, the corn, first of all, has no root whatever; its growth is not from within outwards, but from without inwards, and the term "root," therefore, is misapplied. Bunions are different in appearance and character from either hard or soft corns; they are frequently caused by pressure, but in them the skin is not the seat of the inflammation, but the synovial bag on the inner side of the ball of the great toe, or sometimes on the outer side of the foot or on the instep. In all cases they are soft, pulpy, bag-like projections, often, though not always, without hardness or roughness of skin. They are attended with great pain and tenderness, and cause considerable lameness.

The treatment of soft corns should be as follows: With the nail pick off as much of the cheesy matter as can be removed; then, if the next day can be given up apply a piece of lunar caustic to the surface, rubbing it pretty well in, but avoiding contact with the adjoining skin. After this keep a piece of cotton between the toes night and day, and it will be found that after twenty-four hours' rest all pain will have disappeared, the surface will have lost its moisture, and will have become hard, black and dry. If the cotton is renewed daily this state of ease will be maintained for a week or ten days; but then it is necessary to pick off the blackened surface and re-apply the caustic, again using the cotton. This second application will probably last a fortnight, but by that time the edges of the blackened cuticle becomes loose, and the application should be repeated; but not till three weeks have elapsed. In this way by three or four applications the most obstinate and painful set of corns yield to treatment, and become permanently cured; but the skin between the toes should be kept constantly washed and rubbed with a soft towel, so as to remove every particle of secretion daily. With regard to hard corns, nothing will be effectual as a cure unless the pressure which caused them is discontinued. In that case they require very little treatment; but if it is continued, as it must be when they occur at the sole of the foot, the only remedies are palliative, and require constant and careful repetition. Chiropodists are constantly holding certain hopes of a cure, but this is a fraud upon the unwary, and only leads to the picking of their pockets. Anyone, however, who has the use of his hands may readily treat his own corns, if he will attend to the following directions: In the first place, the cuticle should never be allowed to grow to such a degree as to occasion pain; it should be carefully removed before that time, and the best instrument for its removal is a pair of nail-scissors; with these a small piece of the thickened cuticle should be caught hold of *and raised from its bed at the same time*, then gradually closing the blades, it is removed without any great pain; for if much is given, it is only necessary to raise the scissors still more, and, as it were, drag the corn out of its bed, when the pain ceases, and the excision of that portion is effected. After removing this small slice, another slice is to be taken hold of and removed in the same way, till all vestige of the hardened

cuticle is gone; after which it may either be covered with a piece of wash-leather, spread with soap plaster, or left to its fate. The former is of course the better plan; but, if the corn is removed as often and as fast as it grows, there is no necessity for adopting it. This treatment will generally suffice, but not in very obstinate cases. Such cases, however, are seldom adapted for training, and therefore are not within my province.

**BOILS**—These are an effort of nature to get rid of a dead piece of cellular membrane by means of inflammatory action. In consequence of some peculiar condition of the blood, of the exact nature of which very little is known, a death (or sloughing, as it is called) of a portion of cellular membrane takes place close under the true skin; to remove this foreign body nature sets up an inflammation, which is invariably of a slow and congestive character. It appears as if the poisonous nature of the slough irritates the surrounding parts to such a degree as in some measure to interfere with the process of absorption, and, consequently, a painful and hardened circle of swelled and reddened skin is formed around the dead cell. In most cases the thickening is so great as to stop the circulation of the interior of the circle and the boil remains stationary for a long time. The only remedy for this condition is either the application of some stimulating greasy application, such as a linseed poultice, or the division by means of a knife. Either of these remedies more or less speedily puts an end to the inactive condition, and then a healthy suppuration goes on to remove the cell, and by throwing up fresh granulations, as they are called, to restore what has been removed. Such is the nature and ordinary treatment of a boil, but in training it is almost impossible to bear the use of a knife, if the boil is in any part that is subjected to much friction.

**HÆMORRHOIDS**, or as they are commonly called, piles, are very often exceedingly troublesome in training; they are generally symptomatic of congestion of the liver, and are relieved by those measures which remove that condition. The reason for this is obvious—the veins which return the blood to the heart from the lower bowels pass through the liver on their way, and consequently whatever impedes the passage of the blood through them has a tendency to produce the effect

on the hæmorrhoidal veins. Hæmorrhoids are, in fact, varicose veins in the rectum, sometimes bleeding, in consequence of their wall giving way; they are also divided into external and internal piles, the distinction, however, being only one of situation. It will be unnecessary for me to describe the appearance of these troublesome little swellings, as they are so exceedingly common to be well known to almost everyone. In their treatment three points are to be attended to—first, to unload the liver; secondly, to prevent mechanical visitation by the presence and passage of solid forces; and, thirdly, to allay the inflammation already existing by local remedies. The first and second of these objects may generally be combined, but in very badly congestive state of the liver a dose or two of blue mas pills may be given in addition to this remedy. It should be avoided, however, if possible, as its *immediate* effect is rather to aggravate than to allay the local irritation. Generally speaking, the following remedy will be the best, acting in the double capacity which I have alluded to: Take of powdered brimstone half an ounce; cream of tartar and powdered jalap, of each two drachms; powdered ginger, one drachm; electuary of senna, three ounces; syrup of buckthorn, enough to make an electuary, of which one teaspoonful may be taken every night. This quantity should be increased or diminished so as to keep the bowels gently moved every day. When the bowels are usually sufficiently relaxed, but the piles are still painful, then give five grains of the confection of black pepper, with an equal quantity of common pitch, night and morning, made into two pills. As a local remedy, when the irritation is great and recently come on, the use of very hot water with a sponge to the parts two or three times a day will afford great relief. This should be followed by the application of a little of the following ointment: Take of gallic acid and finely powdered opium, of each one drachm; ointment of acetate of lead, an ounce and a half. When the piles are of long standing these remedies may be used; but, in addition, four ounces of cold water should be thrown up into the rectum immediately before each time that the bowels act. By these methods of treatment piles may almost always be relieved, and generally cured; but on the recurrence of a disordered liver, they will be sure to reappear, and therefore that condition must be guarded against.

ACUTE RHEUMATISM is quite incompatible with training, and its treatment need not, therefore, enter into our inquiry. Chronic rheumatism, on the other hand, is constantly interfering with hard work, and its attacks are anxiously to be avoided. It may be divided into muscular rheumatism and rheumatism of the joints; the former shows itself by occurrence of pain, often very severe, on the slightest movement or attempt at movement, even of the particular muscle or muscles attacked, which again are generally quite free from pain while quiescent. On pressing upon the muscles attacked great pain and soreness occur, and the seat of the disease in this way may be discovered; on the other hand, when the ligaments around the joints, it requires the joint itself to be moved, either actively or passively, before pain is experienced. Thus, supposing there to be rheumatism of the arm, if the upper and lower arms are firmly grasped, so as to fix the elbow, and the patient is told to bend the elbow, if muscular rheumatism is present he will give himself even more pain than usual; but if the joint only is affected, no pain, or much less than usual will be felt. During training, whenever rheumatism is so severe as to require internal medicine, the disease is of such a nature as to demand rest; but it often happens that local remedies will suffice, and this is particularly the case with muscular rheumatism. It is generally in those muscles which are more particularly called into play by the nature of the exercise that rheumatism shows itself, and every time exercise is taken the rheumatic condition only goes off during use, to return with increased activity after a rest. In all these cases prevention is better than cure, and all unnecessary exposure of the body should be avoided, especially if in cold or wet weather. Flannel should be worn next the skin during the day, and after stripping, the coat should be put on again without delay. As a local remedy, one of the following may be tried, and I give them in the order of their severity, beginning with the mildest. First, take of tincture of capsicum half an ounce, spirits of camphor one ounce; tincture of arnica, one drachm; mix; on using it add an equal quantity of hot brandy, and rub the part affected for a quarter of an hour. Secondly, take a liquor of ammoniac, spirits of turpentine, laudanum and neatsfoot oil, equal parts; mix and rub in before a good fire twice a day. These remedies will often allay

any muscular rheumatism which may occur in training, and I have even known rheumatism, when attacking the joints, subside on the use of the last mentioned application. As I before said, more remedies are incompatible with training.

**VARICOSE VEINS**—By this term is meant an enlargement of the veins, generally of the leg, accompanied by a breakdown or insufficiency of the valves which are situated at short intervals along their course, so that the veins bulge out in places, and become much more tortuous than usual. The disease appears to depend upon some natural or rather congenital weakness in the structure of the coat of the veins; at all events we know no other cause. Many families are quite exempt, while others, again, are almost in every case predisposed to their occurrence. A radical cure may often be effected by the surgeon, but it is not unattended with danger. Still, few of those who suffer from them are capable of going through severe wear while afflicted in this way, and therefore, in most cases, either the operation must be done or all severe training must be abandoned.

As a palliative measure, the elastic stocking may be tried, but the heat of the parts is so much increased by their use that few people wear them without suffering material inconvenience. In spite of the pain and danger of the operation, I confess that were I subject to varicose veins, I should incur both without a moment's hesitation. In some cases a thin slip of elastic band, about a quarter of an inch wide, may be worn with effect. It should be applied spirally from the top to the bottom of the leg at about two inches interval. This is not so hot as the stocking, and in mild cases acts equally well.

**All-Around Champions of America since 1884.**

|                                    | POINTS. |
|------------------------------------|---------|
| 1884—W. R. Thompson, Montreal..... | —       |
| 1885—M. W. Ford, N. Y. A. C. ....  | —       |
| 1886—M. W. Ford, N. Y. A. C. ....  | 45      |
| 1887—A. A. Jordan, N. Y. A. C..... | 36      |
| 1888—M. W. Ford, S. I. A. C.....   | 28      |
| 1889—M. W. Ford, S. I. A. C.....   | 30      |
| 1890—A. A. Jordan, N. Y. A. C..... | 41      |
| 1891—A. A. Jordan, N. Y. A. C..... | 30      |
| 1892—M. O'Sullivan, N. A. C.....   | 45      |
| 1893—E. W. Goff, N. J. A. C.....   | —       |
| 1894—E. W. Goff, N. J. A. C.....   | —       |

**The Champions since 1884.**

The following are the champions, with scores of each competitor, according to percentage scoring :

1884.

|                             |                         |      |
|-----------------------------|-------------------------|------|
| W.R.Thompson, Montreal,5304 | A. A. Jordan, N. Y..... | 4705 |
| M. W. Ford, N. Y.....       | J. P. Thornton.....     | 4060 |

1885.

|                            |       |                   |      |
|----------------------------|-------|-------------------|------|
| M. W. Ford, N. Y.....      | 5045  | A. Ing, N. Y..... | 4695 |
| J. J. Purcell, Dublin..... | *4214 |                   |      |

\* Under old system of scoring Purcell won second prize.

1886.

|                           |      |                             |      |
|---------------------------|------|-----------------------------|------|
| M. W. Ford, N. Y.....     | 5899 | A. Ing, N. Y.....           | 4230 |
| A. A. Jordan, N. Y.....   | 5321 | J. K. Schell, Philadelphia, | 3618 |
| J. P. Thornton, N. Y..... | 4553 | J. J. Van Houten, N. Y....  | 3313 |

1887.

|                          |       |                           |      |
|--------------------------|-------|---------------------------|------|
| A. A. Jordan, N. Y. .... | 5236  | J. J. Van Houten, N.Y.... | 4682 |
| A. Schroeder, N. Y.....  | 4958  | W.R.Thompson, Montreal,   | 4346 |
| M. O'Sullivan, N. Y..... | *4161 | G. Brinton, Philadelphia  | 3949 |

\* Under old system of scoring O'Sullivan won third prize.

1888.

|                         |      |                          |      |
|-------------------------|------|--------------------------|------|
| M. W. Ford, N. Y. ....  | 5161 | A. Schroeder, N. Y.....  | 4544 |
| A. A. Jordan, N. Y..... | 4911 | M. O'Sullivan, N. Y..... | 4014 |

1889.

|                         |       |                                |      |
|-------------------------|-------|--------------------------------|------|
| M. W. Ford, N. Y.....   | *5186 | G. R. Gray, Canada. ....       | 4424 |
| A. A. Jordan, N. Y..... | 5520  | C. Livingston, N. Y... Stopped |      |
| A. Schroeder, N. Y..... | 4711  | M. O'Sullivan, N. Y. ....      | 4669 |

\* Under old style scoring Ford won first prize.

1890.

|                           |      |                                |  |
|---------------------------|------|--------------------------------|--|
| A. A. Jordan, N. Y.....   | 5358 | J. C. Devereux, N. Y.. Stopped |  |
| M. O'Sullivan, N. Y... .. | 4111 | E. G. Abbott, N. Y.... Stopped |  |

1891.

|                          |       |                                |       |
|--------------------------|-------|--------------------------------|-------|
| A. A. Jordan, N. Y.....  | 6189  | E. W. Goff, N. Y.....          | *5464 |
| J. J. Mooney, N. Y.....  | *5091 | H. H. Baxter, N. Y.... Stopped |       |
| M. O'Sullivan, N. Y..... | 5229  | O. Pulvermiller, N. Y.....     | 4325  |

\* Under old style of scoring Mooney finished second and Goff fourth.

1892.

|                          |       |                         |      |
|--------------------------|-------|-------------------------|------|
| M. O'Sullivan, N. Y..... | *4464 | G. Schwegler, N. Y..... | 4566 |
| E. W. Goff, N. Y.....    | *5232 | D. Long, Boston.....    | 2965 |
| H. H. Morrell, N. Y..... | 4859  |                         |      |

\* Under old style of scoring O'Sullivan won.

1893.

|                            |      |                       |      |
|----------------------------|------|-----------------------|------|
| E. W. Goff, N. Y.....      | 4860 | Friederich, N. J..... | 3914 |
| Schaefer, N. Y.....        | 4190 | Larkin, N. Y.....     | 3841 |
| O. Pulvermiller, N. Y..... | 3975 |                       |      |

1894.

|                       |      |                    |      |
|-----------------------|------|--------------------|------|
| E. W. Goff, N. Y..... | 5748 | Butterworth.....   | 4156 |
| Cosgrove, N. Y.....   | 5472 | G. Gray, N. Y..... | 3651 |
| Larkin, N. Y.....     | 5434 |                    |      |

## HOW TO SCORE THE INDIVIDUAL ALL-AROUND CHAMPIONSHIP.

The following is an explanation of the system by which the annual contests for the individual all-around athletic championship are scored, and also the tables used by the officials. Compiled by W. B. Curtis, and published in the *Spirit of the Times*

The principle of the rules now in force is as follows: In each event the world's best amateur record is taken as a maximum for which 1,000 points are allowed. Then a standard or limit is established, and performances equal to, or worse than these standards score nothing. For performances between the maximum and the limit, points are allowed in accordance with graded scales, which we print below.

For instance, the maximum for the 100-yard run is  $9\frac{1}{8}$ s.—the world's best amateur record—and the standard or limit is  $14\frac{3}{8}$ s. The run scores from  $9\frac{1}{8}$ s. up to  $14\frac{3}{8}$ s., allowing 1,000 points for  $9\frac{1}{8}$ s., and 42 points less for each  $\frac{1}{8}$ s. above  $9\frac{1}{8}$ s. For instance, 10s. scores 958 points;  $10\frac{1}{8}$ s., 916 points; 11s., 748 points; 13s., 328 points; 14s., 118 points;  $14\frac{1}{8}$ s., 34 points; and  $14\frac{3}{8}$ s., no points. For times slower than  $14\frac{3}{8}$ s. nothing is scored. For times faster than  $9\frac{1}{8}$ s. 1,000 is scored, and 42 additional points for each fifth of a second better than  $9\frac{1}{8}$ s.

The 1-mile run, the half mile walk and the 120-yard hurdle race are scored in the same manner, but each with its own maximum and limit.

Again, in the running broad jump, the maximum is 23ft.  $6\frac{1}{2}$ in.—the world's best record—and the standard or limit is 13ft. 1in. The jump scores from 23ft.  $6\frac{1}{2}$ in. down to 13ft. 1in., allowing 1,000 points for 23ft.  $6\frac{1}{2}$ in. and 8 points less for each inch below 23ft.  $6\frac{1}{2}$ in. For instance, 21ft. scores 756 points, 20ft. 4in. 692 points, 14ft. 8 $\frac{1}{2}$  points, 13ft. 2in. 4 points, and 13ft. 1in. 0. For jumps shorter than 13ft. 1in. nothing is scored. For jumps longer than 23ft.  $6\frac{1}{2}$ in. 1,000 points are scored and 8 additional points for each inch better than 23ft.  $6\frac{1}{2}$ in.

The running high jump, pole vault, shot-putting, hammer throwing and weight-throwing are scored in the same manner, but each with its own maximum and limit.

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### SPECIAL INSTRUCTIONS FOR THE CONDUCT OF THE 100-YARD RUN AND 120-YARD HURDLE RACE.

Ordinary timing watches cannot record any fraction of time less than a fifth of a second,

and at the finish of a 100-yard run or 120-yard hurdle race the runners cover from 4 feet to 7 feet in a fifth of a second. Hence, one runner might be 3 feet or 4 feet or 5 feet or even 6 feet behind another and yet the watches would give the same time for each of the two. This 3 or 4 or 5 or 6 feet would be worth 15 or 20 or 25 or 30 points in the hurdle race, and 21 or 28 or 35 or 42 points in the 100 yard run. Consequently, in order to get a fair score, the contestants must not be timed separately, but only the first man must be timed and the others must be scored by their distance behind the winner.

The final 10 yards of the course should be marked off with whitewash lines one foot apart just as is done at the start of handicaps.

The judges should station themselves in such positions as will enable them to note accurately the distance from the finish line of the second, third and fourth men at the moment the first man touches the tape.

If there are only four contestants all may be allowed to start in one heat, although heats of three would be better, because more easily and accurately judged. If there are more than four contestants, they should be divided into heats of not more than three starters. The fastest three men, as nearly as the officials can judge, should be placed in one heat, the next three in speed in the next heat, and so on down to the slowest three for the last heat. In this way the finishes will be closer than if fast and slow men were started together, and the judging will be more accurate.

When the judges announce the distances between the contestants the scorers will allow points as follows:

In the 100-yard run, to the first man the points allowed in table for his time, to the second, third and fourth men the points allowed for the first man's time, less seven points for each foot that each man is behind the winner.

For instance, if the judges should report as follows: A wins in 10 $\frac{1}{2}$ s.; B second, by 2 feet; C third, by 3 feet, and D fourth, by a foot. The score will be: A, 790; B, 790, less 2 feet, at 7 points, equals 14 points—776 points. C, 790, less 5 feet, at 7 points, equals 35 points—755 points. D, 790 points, less 6 feet, at 7 points, equals 42 points—748 points.

In 120-yard hurdle race, to the first man the points allowed in table for his time; to the second, third and fourth men, the points allowed in table for the first man's time, less five points for each foot that each man is behind the winner.

For instance, if the judges should report as follows: A, first, in  $17\frac{1}{5}$ s.; B, second, by a foot; C, third, by 4 feet; D, fourth, by 3 feet, the score would be made up as follows; A, 760 points; B, 760 points, less 1 foot at 5 points per foot, equals 5 points—755 points; C, 760 points, less 5 feet at 5 points per foot, equals 25 points—735 points; D, 760 points, less 8 feet at 5 points per foot, equals 40 points—720 points.

These instances will illustrate the method of scoring of the distances between the several contestants.

## 100 YARD RUN.

| <i>Time.</i>        | <i>Points.</i> | <i>Time.</i>        | <i>Points.</i> | <i>Time.</i>        | <i>Points.</i> |
|---------------------|----------------|---------------------|----------------|---------------------|----------------|
| $9\frac{1}{5}$ s.   | 1,000          | $11\frac{1}{5}$ s.  | 664            | $13\frac{1}{5}$ s.  | 286            |
| 10s.                | 958            | $11\frac{1}{10}$ s. | 622            | $13\frac{1}{10}$ s. | 244            |
| $10\frac{1}{10}$ s. | 916            | $11\frac{2}{10}$ s. | 580            | $13\frac{2}{10}$ s. | 202            |
| $10\frac{2}{10}$ s. | 874            | 12s.                | 538            | $13\frac{3}{10}$ s. | 160            |
| $10\frac{3}{10}$ s. | 832            | $12\frac{1}{10}$ s. | 496            | 14s.                | 118            |
| $10\frac{4}{10}$ s. | 790            | $12\frac{2}{10}$ s. | 454            | $14\frac{1}{10}$ s. | 76             |
| 11s.                | 748            | $12\frac{3}{10}$ s. | 412            | $14\frac{2}{10}$ s. | 34             |
| $11\frac{1}{10}$ s. | 706            | $12\frac{4}{10}$ s. | 370            | $14\frac{3}{10}$ s. | 00             |
|                     |                | 13s.                | 328            |                     |                |

For times slower than  $14\frac{3}{10}$ s. score nothing.

For times faster than  $9\frac{1}{5}$ s. score 1,000, and an additional 42 points for each  $\frac{1}{10}$  of a second faster than  $9\frac{1}{5}$ s.

See special instructions above for the conduct of this race.

## 1-MILE RUN.

| <i>Time.</i>           | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> |
|------------------------|----------------|--------------|----------------|--------------|----------------|
| 4m. $17\frac{1}{5}$ s. | 1,000          | 5m. 24s.     | 669            | 6m. 32s.     | 329            |
| 4m. 18s.               | 999            | 5m. 25s.     | 664            | 6m. 33s.     | 324            |
| 4m. 19s.               | 994            | 5m. 26s.     | 659            | 6m. 34s.     | 319            |
| 4m. 20s.               | 989            | 5m. 27s.     | 654            | 6m. 35s.     | 314            |
| 4m. 21s.               | 984            | 5m. 28s.     | 649            | 6m. 36s.     | 309            |
| 4m. 22s.               | 979            | 5m. 29s.     | 644            | 6m. 37s.     | 304            |
| 4m. 23s.               | 974            | 5m. 30s.     | 639            | 6m. 38s.     | 299            |
| 4m. 24s.               | 969            | 5m. 31s.     | 634            | 6m. 39s.     | 294            |
| 4m. 25s.               | 964            | 5m. 32s.     | 629            | 6m. 40s.     | 289            |
| 4m. 26s.               | 959            | 5m. 33s.     | 624            | 6m. 41s.     | 284            |
| 4m. 27s.               | 954            | 5m. 34s.     | 619            | 6m. 42s.     | 279            |
| 4m. 28s.               | 949            | 5m. 35s.     | 614            | 6m. 43s.     | 274            |
| 4m. 29s.               | 944            | 5m. 36s.     | 609            | 6m. 44s.     | 269            |
| 4m. 30s.               | 939            | 5m. 37s.     | 604            | 6m. 45s.     | 264            |
| 4m. 31s.               | 934            | 5m. 38s.     | 599            | 6m. 46s.     | 259            |
| 4m. 32s.               | 929            | 5m. 39s.     | 594            | 6m. 47s.     | 254            |
| 4m. 33s.               | 924            | 5m. 40s.     | 589            | 6m. 48s.     | 249            |
| 4m. 34s.               | 919            | 5m. 41s.     | 584            | 6m. 49s.     | 244            |
| 4m. 35s.               | 914            | 5m. 42s.     | 579            | 6m. 50s.     | 239            |
| 4m. 36s.               | 909            | 5m. 43s.     | 574            | 6m. 51s.     | 234            |
| 4m. 37s.               | 904            | 5m. 44s.     | 569            | 6m. 52s.     | 229            |
| 4m. 38s.               | 899            | 5m. 45s.     | 564            | 6m. 53s.     | 224            |

## 1 MI. E RUN.

| <i>Time.</i> | <i>Points</i> | <i>Time.</i> | <i>Points</i> | <i>Time.</i> | <i>Points.</i> |
|--------------|---------------|--------------|---------------|--------------|----------------|
| 4m. 39s.     | 894           | 5m. 46s.     | 559           | 6m. 54s.     | 219            |
| 4m. 40s.     | 889           | 5m. 47s.     | 554           | 6m. 55s.     | 214            |
| 4m. 41s.     | 884           | 5m. 48s.     | 549           | 6m. 56s.     | 209            |
| 4m. 42s.     | 879           | 5m. 49s.     | 544           | 6m. 57s.     | 204            |
| 4m. 43s.     | 874           | 5m. 50s.     | 539           | 6m. 58s.     | 199            |
| 4m. 44s.     | 869           | 5m. 51s.     | 534           | 6m. 59s.     | 194            |
| 4m. 45s.     | 864           | 5m. 52s.     | 529           | 7m.          | 189            |
| 4m. 46s.     | 859           | 5m. 53s.     | 524           | 7m. 1s.      | 184            |
| 4m. 47s.     | 854           | 5m. 54s.     | 519           | 7m. 2s.      | 179            |
| 4m. 48s.     | 849           | 5m. 55s.     | 514           | 7m. 3s.      | 174            |
| 4m. 49s.     | 844           | 5m. 56s.     | 509           | 7m. 4s.      | 169            |
| 4m. 50s.     | 839           | 5m. 57s.     | 504           | 7m. 5s.      | 164            |
| 4m. 51s.     | 834           | 5m. 58s.     | 499           | 7m. 6s.      | 159            |
| 4m. 52s.     | 829           | 5m. 59s.     | 494           | 7m. 7s.      | 154            |
| 4m. 53s.     | 824           | 6m.          | 489           | 7m. 8s.      | 149            |
| 4m. 54s.     | 819           | 6m. 1s.      | 484           | 7m. 9s.      | 144            |
| 4m. 55s.     | 814           | 6m. 2s.      | 479           | 7m. 10s.     | 139            |
| 4m. 56s.     | 809           | 6m. 3s.      | 474           | 7m. 11s.     | 134            |
| 4m. 57s.     | 804           | 6m. 4s.      | 469           | 7m. 12s.     | 129            |
| 4m. 58s.     | 799           | 6m. 5s.      | 464           | 7m. 13s.     | 124            |
| 4m. 59s.     | 794           | 6m. 6s.      | 459           | 7m. 14s.     | 119            |
| 5m.          | 789           | 6m. 7s.      | 454           | 7m. 15s.     | 114            |
| 5m. 1s.      | 784           | 6m. 8s.      | 449           | 7m. 16s.     | 109            |
| 5m. 2s.      | 779           | 6m. 9s.      | 444           | 7m. 17s.     | 104            |
| 5m. 3s.      | 774           | 6m. 10s.     | 439           | 7m. 18s.     | 99             |
| 5m. 4s.      | 769           | 6m. 11s.     | 434           | 7m. 19s.     | 94             |
| 5m. 5s.      | 764           | 6m. 12s.     | 429           | 7m. 20s.     | 89             |
| 5m. 6s.      | 759           | 6m. 13s.     | 424           | 7m. 21s.     | 84             |
| 5m. 7s.      | 754           | 6m. 14s.     | 419           | 7m. 22s.     | 79             |
| 5m. 8s.      | 749           | 6m. 15s.     | 414           | 7m. 23s.     | 74             |
| 5m. 9s.      | 744           | 6m. 16s.     | 409           | 7m. 24s.     | 69             |
| 5m. 10s.     | 739           | 6m. 17s.     | 404           | 7m. 25s.     | 64             |
| 5m. 11s.     | 734           | 6m. 18s.     | 399           | 7m. 26s.     | 59             |
| 5m. 12s.     | 729           | 6m. 19s.     | 394           | 7m. 27s.     | 54             |
| 5m. 13s.     | 724           | 6m. 20s.     | 389           | 7m. 28s.     | 49             |
| 5m. 14s.     | 719           | 6m. 21s.     | 384           | 7m. 29s.     | 44             |
| 5m. 15s.     | 714           | 6m. 22s.     | 379           | 7m. 30s.     | 39             |
| 5m. 16s.     | 709           | 6m. 23s.     | 374           | 7m. 31s.     | 34             |
| 5m. 17s.     | 704           | 6m. 24s.     | 369           | 7m. 32s.     | 29             |
| 5m. 18s.     | 699           | 6m. 25s.     | 364           | 7m. 33s.     | 24             |
| 5m. 19s.     | 694           | 6m. 26s.     | 359           | 7m. 34s.     | 19             |
| 5m. 20s.     | 689           | 6m. 27s.     | 354           | 7m. 35s.     | 14             |
| 5m. 21s.     | 684           | 6m. 28s.     | 349           | 7m. 36s.     | 9              |
| 5m. 22s.     | 679           | 6m. 29s.     | 344           | 7m. 37s.     | 4              |
| 5m. 23s.     | 674           | 6m. 30s.     | 339           | 7m. 38s.     | 0              |
|              |               | 6m. 31s.     | 334           |              |                |

For any performance slower than 7m. 38s. score nothing.

For any performance faster than 4m. 17½s. score 1,000, and 1 additional point for each fifth of a second better than 4m. 17½s.

For fractional times, between the even seconds, deduct 1 point for each fifth of a second. For instance, 5m. 9s. scores 744 points, 5m. 9½s. scores 743 points, 5m. 9¾s. 742 points, 5m. 9⅘s. 741 points and 5m. 9⅚s. 740 points, etc.

Each runner must be timed separately.

## 120-YARD HURDLE RACE.

| <i>Time.</i> | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> |
|--------------|----------------|--------------|----------------|--------------|----------------|
| 15½s.        | 1000           | 18s.         | 640            | 20½s.        | 310            |
| 15¾s.        | 970            | 18½s.        | 610            | 20¾s.        | 280            |
| 16s.         | 940            | 18¾s.        | 580            | 20¾s.        | 250            |
| 16¼s.        | 910            | 18¾s.        | 550            | 20¾s.        | 220            |
| 16½s.        | 880            | 18¾s.        | 520            | 21s.         | 190            |
| 16¾s.        | 850            | 19s.         | 490            | 21½s.        | 160            |
| 16¾s.        | 820            | 19½s.        | 460            | 21¾s.        | 130            |
| 17s.         | 790            | 19¾s.        | 430            | 21¾s.        | 100            |
| 17¼s.        | 760            | 19¾s.        | 400            | 21¾s.        | 70             |
| 17¾s.        | 730            | 19¾s.        | 370            | 22s.         | 40             |
| 17¾s.        | 700            | 20s.         | 340            | 22½s.        | 10             |
| 17¾s.        | 670            |              |                | 22¾s.        | 0              |

For time slower than 22¾s. score nothing.

For time faster than 15¾s. score 1,000 points, and an additional 30 points for each ½th of a second faster than 15¾s.

See special instructions above for the conduct of this race.

## HALF-MILE WALK.

| <i>Time.</i> | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> | <i>Time.</i> | <i>Points.</i> |
|--------------|----------------|--------------|----------------|--------------|----------------|
| 3m. 2¾s.     | 1000           | 4m. 9s.      | 687            | 5m. 17s.     | 327            |
| 3m. 3s.      | 997            | 4m. 10s.     | 662            | 5m. 18s.     | 322            |
| 3m. 4s.      | 992            | 4m. 11s.     | 657            | 5m. 19s.     | 317            |
| 3m. 5s.      | 987            | 4m. 12s.     | 652            | 5m. 20s.     | 312            |
| 3m. 6s.      | 982            | 4m. 13s.     | 647            | 5m. 21s.     | 307            |
| 3m. 7s.      | 977            | 4m. 14s.     | 642            | 5m. 22s.     | 302            |
| 3m. 8s.      | 972            | 4m. 15s.     | 637            | 5m. 23s.     | 297            |
| 3m. 9s.      | 967            | 4m. 16s.     | 632            | 5m. 24s.     | 292            |
| 3m. 10s.     | 962            | 4m. 17s.     | 627            | 5m. 25s.     | 287            |
| 3m. 11s.     | 957            | 4m. 18s.     | 622            | 5m. 26s.     | 282            |
| 3m. 12s.     | 952            | 4m. 19s.     | 617            | 5m. 27s.     | 277            |
| 3m. 13s.     | 947            | 4m. 20s.     | 612            | 5m. 28s.     | 272            |
| 3m. 14s.     | 942            | 4m. 21s.     | 607            | 5m. 29s.     | 267            |
| 3m. 15s.     | 937            | 4m. 22s.     | 602            | 5m. 30s.     | 262            |
| 3m. 16s.     | 932            | 4m. 23s.     | 597            | 5m. 31s.     | 257            |
| 3m. 17s.     | 927            | 4m. 24s.     | 592            | 5m. 32s.     | 252            |
| 3m. 18s.     | 922            | 4m. 25s.     | 587            | 5m. 33s.     | 247            |
| 3m. 19s.     | 917            | 4m. 26s.     | 582            | 5m. 34s.     | 242            |
| 3m. 20s.     | 912            | 4m. 27s.     | 577            | 5m. 35s.     | 237            |
| 3m. 21s.     | 907            | 4m. 28s.     | 572            | 5m. 36s.     | 232            |
| 3m. 22s.     | 902            | 4m. 29s.     | 567            | 5m. 37s.     | 227            |
| 3m. 23s.     | 897            | 4m. 30s.     | 562            | 5m. 38s.     | 222            |
| 3m. 24s.     | 892            | 4m. 31s.     | 557            | 5m. 39s.     | 217            |
| 3m. 25s.     | 887            | 4m. 32s.     | 552            | 5m. 40s.     | 212            |
| 3m. 26s.     | 882            | 4m. 33s.     | 547            | 5m. 41s.     | 207            |
| 3m. 27s.     | 877            | 4m. 34s.     | 542            | 5m. 42s.     | 202            |
| 3m. 28s.     | 872            | 4m. 35s.     | 537            | 5m. 43s.     | 197            |
| 3m. 29s.     | 867            | 4m. 36s.     | 532            | 5m. 44s.     | 192            |
| 3m. 30s.     | 862            | 4m. 37s.     | 527            | 5m. 45s.     | 187            |
| 3m. 31s.     | 857            | 4m. 38s.     | 522            | 5m. 46s.     | 182            |
| 3m. 32s.     | 852            | 4m. 39s.     | 517            | 5m. 47s.     | 177            |
| 3m. 33s.     | 847            | 4m. 40s.     | 512            | 5m. 48s.     | 172            |
| 3m. 34s.     | 842            | 4m. 41s.     | 507            | 5m. 49s.     | 167            |
| 3m. 35s.     | 837            | 4m. 42s.     | 502            | 5m. 50s.     | 162            |

## HALF-MILE WALK.

| <i>Time.</i> | <i>Points</i> | <i>Time</i> | <i>Points</i> | <i>Time</i> | <i>Points</i> |
|--------------|---------------|-------------|---------------|-------------|---------------|
| 3m. 36s.     | 832           | 4m. 43s.    | 497           | 5m. 51s.    | 157           |
| 3m. 37s.     | 827           | 4m. 44s.    | 492           | 5m. 52s.    | 152           |
| 3m. 38s.     | 822           | 4m. 45s.    | 487           | 5m. 53s.    | 147           |
| 3m. 39s.     | 817           | 4m. 46s.    | 482           | 5m. 54s.    | 142           |
| 3m. 40s.     | 812           | 4m. 47s.    | 477           | 5m. 55s.    | 137           |
| 3m. 41s.     | 807           | 4m. 48s.    | 472           | 5m. 56s.    | 132           |
| 3m. 42s.     | 802           | 4m. 49s.    | 467           | 5m. 57s.    | 127           |
| 3m. 43s.     | 797           | 4m. 50s.    | 462           | 5m. 58s.    | 122           |
| 3m. 44s.     | 792           | 4m. 51s.    | 457           | 5m. 59s.    | 117           |
| 3m. 45s.     | 787           | 4m. 52s.    | 452           | 6m.         | 112           |
| 3m. 46s.     | 782           | 4m. 53s.    | 447           | 6m. 1s.     | 107           |
| 3m. 47s.     | 777           | 4m. 54s.    | 442           | 6m. 2s.     | 102           |
| 3m. 48s.     | 772           | 4m. 55s.    | 437           | 6m. 3s.     | 97            |
| 3m. 49s.     | 767           | 4m. 56s.    | 432           | 6m. 4s.     | 92            |
| 3m. 50s.     | 762           | 4m. 57s.    | 427           | 6m. 5s.     | 87            |
| 3m. 51s.     | 757           | 4m. 58s.    | 422           | 6m. 6s.     | 82            |
| 3m. 52s.     | 752           | 4m. 59s.    | 417           | 6m. 7s.     | 77            |
| 3m. 53s.     | 747           | 5m.         | 412           | 6m. 8s.     | 72            |
| 3m. 54s.     | 742           | 5m. 1s.     | 407           | 6m. 9s.     | 67            |
| 3m. 55s.     | 737           | 5m. 2s.     | 402           | 6m. 10s.    | 62            |
| 3m. 56s.     | 732           | 5m. 3s.     | 397           | 6m. 11s.    | 57            |
| 3m. 57s.     | 727           | 5m. 4s.     | 392           | 6m. 12s.    | 52            |
| 3m. 58s.     | 722           | 5m. 5s.     | 387           | 6m. 13s.    | 47            |
| 3m. 59s.     | 717           | 5m. 6s.     | 382           | 6m. 14s.    | 42            |
| 4m.          | 712           | 5m. 7s.     | 377           | 6m. 15s.    | 37            |
| 4m. 1s.      | 707           | 5m. 8s.     | 372           | 6m. 16s.    | 32            |
| 4m. 2s.      | 702           | 5m. 9s.     | 367           | 6m. 17s.    | 27            |
| 4m. 3s.      | 697           | 5m. 10s.    | 362           | 6m. 18s.    | 22            |
| 4m. 4s.      | 692           | 5m. 11s.    | 357           | 6m. 19s.    | 17            |
| 4m. 5s.      | 687           | 5m. 12s.    | 352           | 6m. 20s.    | 12            |
| 4m. 6s.      | 682           | 5m. 13s.    | 347           | 6m. 21s.    | 7             |
| 4m. 7s.      | 677           | 5m. 14s.    | 342           | 6m. 22s.    | 2             |
| 4m. 8s.      | 672           | 5m. 15s.    | 337           | 6m. 23s.    | 0             |
|              |               | 5m. 16s.    | 332           |             |               |

For any performance slower than 6m. 23s. score nothing.

For any performance faster than 3m. 2 $\frac{3}{4}$ s. score 1,000, and 1 additional point for each fifth of a second better than 3m. 2 $\frac{3}{4}$ s.

For any fractional time, between the even seconds, deduct 1 point for each fifth of a second. For instance, 4m. 17s. score 627 points; 4m. 17 $\frac{1}{5}$ s., 626 points; 4m. 17 $\frac{2}{5}$ s., 625 points; 4m. 17 $\frac{3}{5}$ s., 624 points; 4m. 17 $\frac{4}{5}$ s., 623 points, etc.

## RUNNING HIGH JUMP.

| <i>Height.</i> | <i>Pts.</i> | <i>Height.</i> | <i>Pts.</i> | <i>Height.</i> | <i>Pts.</i> |
|----------------|-------------|----------------|-------------|----------------|-------------|
| 6ft. 4¼in.     | 1000        | 5ft. 6in.      | 672         | 4ft. 7in.      | 320         |
| 6ft. 4in.      | 992         | 5ft. 5in.      | 640         | 4ft. 6in.      | 288         |
| 6ft. 3in.      | 960         | 5ft. 4in.      | 608         | 4ft. 5in.      | 256         |
| 6ft. 2in.      | 928         | 5ft. 3in.      | 576         | 4ft. 4in.      | 224         |
| 6ft. 1in.      | 896         | 5ft. 2in.      | 544         | 4ft. 3in.      | 192         |
| 6ft.           | 864         | 5ft. 1in.      | 512         | 4ft. 2in.      | 160         |
| 5ft. 11in.     | 832         | 5ft.           | 480         | 4ft. 1in.      | 128         |
| 5ft. 10in.     | 800         | 4ft. 11in.     | 448         | 4ft.           | 96          |
| 5ft. 9in.      | 768         | 4ft. 10in.     | 416         | 3ft. 11in.     | 64          |
| 5ft. 8in.      | 736         | 4ft. 9in.      | 384         | 3ft. 10in.     | 32          |
| 5ft. 7in.      | 704         | 4ft. 8in.      | 352         | 3ft. 9in.      | 0           |

For jumps below 3 feet 9 inches score nothing.

For jumps above 6 feet 4¼ inches score 1000 points, and 4 additional points for each ¼th of an inch above 6 feet 4¼ inches.

For fractional performances, between the even inches, score an additional 4 points for each ¼th of an inch. For instance, 5 feet 2 inches score 544 points; 5 feet 2½ inches, 548 points; 5 feet 2¾ inches, 556 points; 5 feet 2¾ inches, 568 points, etc.

## RUNNING BROAD JUMP.

| <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> |
|------------------|-------------|------------------|-------------|------------------|-------------|
| 23ft. 6½in.      | 1000        | 20ft. 1in.       | 668         | 16ft. 6in.       | 324         |
| 23ft. 6in.       | 996         | 20ft.            | 660         | 16ft. 5in.       | 316         |
| 23ft. 5in.       | 988         | 19ft. 11in.      | 652         | 16ft. 4in.       | 308         |
| 23ft. 4in.       | 980         | 19ft. 10in.      | 644         | 16ft. 3in.       | 300         |
| 23ft. 3in.       | 972         | 19ft. 9in.       | 636         | 16ft. 2in.       | 292         |
| 23ft. 2in.       | 964         | 19ft. 8in.       | 628         | 16ft. 1in.       | 284         |
| 23ft. 1in.       | 956         | 19ft. 7in.       | 620         | 16ft.            | 276         |
| 23ft.            | 948         | 19ft. 6in.       | 612         | 15ft. 11in.      | 268         |
| 22ft. 11in.      | 940         | 19ft. 5in.       | 604         | 15ft. 10in.      | 260         |
| 22ft. 10in.      | 932         | 19ft. 4in.       | 596         | 15ft. 9in.       | 252         |
| 22ft. 9in.       | 924         | 19ft. 3in.       | 588         | 15ft. 8in.       | 244         |
| 22ft. 8in.       | 916         | 19ft. 2in.       | 580         | 15ft. 7in.       | 236         |
| 22ft. 7in.       | 908         | 19ft. 1in.       | 572         | 15ft. 6in.       | 228         |
| 22ft. 6in.       | 900         | 19ft.            | 564         | 15ft. 5in.       | 220         |
| 22ft. 5in.       | 892         | 18ft. 11in.      | 556         | 15ft. 4in.       | 212         |
| 22ft. 4in.       | 884         | 18ft. 10in.      | 548         | 15ft. 3in.       | 204         |
| 22ft. 3in.       | 876         | 18ft. 9in.       | 540         | 15ft. 2in.       | 196         |
| 22ft. 2in.       | 868         | 18ft. 8in.       | 532         | 15ft. 1in.       | 188         |
| 22ft. 1in.       | 860         | 18ft. 7in.       | 524         | 15ft.            | 180         |
| 22ft.            | 852         | 18ft. 6in.       | 516         | 14ft. 11in.      | 172         |
| 21ft. 11in.      | 844         | 18ft. 5in.       | 508         | 14ft. 10in.      | 164         |
| 21ft. 10in.      | 836         | 18ft. 4in.       | 500         | 14ft. 9in.       | 156         |
| 21ft. 9in.       | 828         | 18ft. 3in.       | 492         | 14ft. 8in.       | 148         |
| 21ft. 8in.       | 820         | 18ft. 2in.       | 484         | 14ft. 7in.       | 140         |
| 21ft. 7in.       | 812         | 18ft. 1in.       | 476         | 14ft. 6in.       | 132         |
| 21ft. 6in.       | 804         | 18ft.            | 468         | 14ft. 5in.       | 124         |
| 21ft. 5in.       | 796         | 17ft. 11in.      | 460         | 14ft. 4in.       | 116         |
| 21ft. 4in.       | 788         | 17ft. 10in.      | 452         | 14ft. 3in.       | 108         |

## RUNNING BROAD JUMP.

| <i>Distance</i> | <i>Pts</i> | <i>Distance</i> | <i>Pts</i> | <i>Distance</i> | <i>Pts</i> |
|-----------------|------------|-----------------|------------|-----------------|------------|
| 21ft. 3in.      | 780        | 17ft. 9in.      | 444        | 14ft. 2in.      | 100        |
| 21ft. 2in.      | 772        | 17ft. 8in.      | 436        | 14ft. 1in.      | 92         |
| 21ft. 1in.      | 764        | 17ft. 7in.      | 428        | 14ft.           | 84         |
| 21ft.           | 756        | 17ft. 6in.      | 420        | 13ft. 11in.     | 76         |
| 20ft. 11in.     | 748        | 17ft. 5in.      | 412        | 13ft. 10in.     | 68         |
| 20ft. 10in.     | 740        | 17ft. 4in.      | 404        | 13ft. 9in.      | 60         |
| 20ft. 9in.      | 732        | 17ft. 3in.      | 396        | 13ft. 8in.      | 52         |
| 20ft. 8in.      | 724        | 17ft. 2in.      | 388        | 13ft. 7in.      | 44         |
| 20ft. 7in.      | 716        | 17ft. 1in.      | 380        | 13ft. 6in.      | 36         |
| 20ft. 6in.      | 708        | 17ft.           | 372        | 13ft. 5in.      | 28         |
| 20ft. 5in.      | 700        | 16ft. 11in.     | 364        | 13ft. 4in.      | 20         |
| 20ft. 4in.      | 692        | 16ft. 10in.     | 356        | 13ft. 3in.      | 12         |
| 20ft. 3in.      | 684        | 16ft. 9in.      | 348        | 13ft. 2in.      | 4          |
| 20ft. 2in.      | 676        | 16ft. 8in.      | 340        | 13ft. 1in.      | 0          |
|                 |            | 16ft. 7in.      | 332        |                 |            |

For jumps shorter than 13ft. 1in., score nothing.

For jumps longer than 23ft. 6½in., score 1,000 points, and 1 additional point for each ¼th of an inch beyond 23ft. 6½in.

For fractional distances between the even inches, score 1 additional point for each ¼th of an inch. For instance, 18ft. 6in., score 516 points; 18ft. 6¾in., 517 points; 18ft. 6¾in., 519 points; 18ft. 6¾in., 522 points, etc.

## POLE VAULT.

| <i>Height.</i> | <i>Pts.</i> | <i>Height.</i> | <i>Pts.</i> | <i>Height.</i> | <i>Pts</i> |
|----------------|-------------|----------------|-------------|----------------|------------|
| 11ft. 9in.     | 1000        | 10ft.          | 664         | 8ft. 2in.      | 312        |
| 11ft. 8in.     | 984         | 9ft. 11in.     | 648         | 8ft. 1in.      | 296        |
| 11ft. 7in.     | 968         | 9ft. 10in.     | 632         | 8ft.           | 280        |
| 11ft. 6in.     | 952         | 9ft. 9in.      | 616         | 7ft. 11in.     | 264        |
| 11ft. 5in.     | 936         | 9ft. 8in.      | 600         | 7ft. 10in.     | 248        |
| 11ft. 4in.     | 920         | 9ft. 7in.      | 584         | 7ft. 9in.      | 232        |
| 11ft. 3in.     | 904         | 9ft. 6in.      | 568         | 7ft. 8in.      | 216        |
| 11ft. 2in.     | 888         | 9ft. 5in.      | 552         | 7ft. 7in.      | 200        |
| 11ft. 1in.     | 872         | 9ft. 4in.      | 536         | 7ft. 6in.      | 184        |
| 11ft.          | 856         | 9ft. 3in.      | 520         | 7ft. 5in.      | 168        |
| 10ft. 11in.    | 840         | 9ft. 2in.      | 504         | 7ft. 4in.      | 152        |
| 10ft. 10in.    | 824         | 9ft. 1in.      | 488         | 7ft. 3in.      | 136        |
| 10ft. 9in.     | 808         | 9ft.           | 472         | 7ft. 2in.      | 120        |
| 10ft. 8in.     | 792         | 8ft. 11in.     | 456         | 7ft. 1in.      | 104        |
| 10ft. 7in.     | 776         | 8ft. 10in.     | 440         | 7ft.           | 88         |
| 10ft. 6in.     | 760         | 8ft. 9in.      | 424         | 6ft. 11in.     | 72         |
| 10ft. 5in.     | 744         | 8ft. 8in.      | 408         | 6ft. 10in.     | 56         |
| 10ft. 4in.     | 728         | 8ft. 7in.      | 392         | 6ft. 9in.      | 40         |
| 10ft. 3in.     | 712         | 8ft. 6in.      | 376         | 6ft. 8in.      | 24         |
| 10ft. 2in.     | 696         | 8ft. 5in.      | 360         | 6ft. 7in.      | 8          |
| 10ft. 1in.     | 680         | 8ft. 4in.      | 344         | 6ft. 6in.      | 0          |
|                |             | 8ft. 3in.      | 328         |                |            |

For any vault below 6ft. 6in., score nothing.  
For any vault above 11ft. 9in. score 1,000

points, and 2 additional points for each  $\frac{1}{8}$ th inch above 11ft. 9in.

For any fractional figures between the even inches, add 2 points for each  $\frac{1}{8}$  of an inch. For instance, 8ft. 10in., score 440 points; 8ft. 10 $\frac{1}{8}$ in. is 442 points; 8ft. 10 $\frac{3}{8}$ in., 446 points; 8ft. 10 $\frac{7}{8}$ in., 452 points, etc.

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 PUTTING THE SHOT.
 

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| <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> |
|------------------|-------------|------------------|-------------|------------------|-------------|
| 47ft.            | 1000        | 40ft.            | 664         | 33ft.            | 328         |
| 46ft. 11in.      | 996         | 39ft. 11in.      | 660         | 32ft. 11in.      | 324         |
| 46ft. 10in.      | 992         | 39ft. 10in.      | 656         | 32ft. 10in.      | 320         |
| 46ft. 9in.       | 988         | 39ft. 9in.       | 652         | 32ft. 9in.       | 316         |
| 46ft. 8in.       | 984         | 39ft. 8in.       | 648         | 32ft. 8in.       | 312         |
| 46ft. 7in.       | 980         | 39ft. 7in.       | 644         | 32ft. 7in.       | 308         |
| 46ft. 6in.       | 976         | 39ft. 6in.       | 640         | 32ft. 6in.       | 304         |
| 46ft. 5in.       | 972         | 39ft. 5in.       | 636         | 32ft. 5in.       | 300         |
| 46ft. 4in.       | 968         | 39ft. 4in.       | 632         | 32ft. 4in.       | 296         |
| 46ft. 3in.       | 964         | 39ft. 3in.       | 628         | 32ft. 3in.       | 292         |
| 46ft. 2in.       | 960         | 39ft. 2in.       | 624         | 32ft. 2in.       | 288         |
| 46ft. 1in.       | 956         | 39ft. 1in.       | 620         | 32ft. 1in.       | 284         |
| 46ft.            | 952         | 39ft.            | 616         | 32ft.            | 280         |
| 45ft. 11in.      | 948         | 38ft. 11in.      | 612         | 31ft. 11in.      | 276         |
| 45ft. 10in.      | 944         | 38ft. 10in.      | 608         | 31ft. 10in.      | 272         |
| 45ft. 9in.       | 940         | 38ft. 9in.       | 604         | 31ft. 9in.       | 268         |
| 45ft. 8in.       | 936         | 38ft. 8in.       | 600         | 31ft. 8in.       | 264         |
| 45ft. 7in.       | 932         | 38ft. 7in.       | 596         | 31ft. 7in.       | 260         |
| 45ft. 6in.       | 928         | 38ft. 6in.       | 592         | 31ft. 6in.       | 256         |
| 45ft. 5in.       | 924         | 38ft. 5in.       | 588         | 31ft. 5in.       | 252         |
| 45ft. 4in.       | 920         | 38ft. 4in.       | 584         | 31ft. 4in.       | 248         |
| 45ft. 3in.       | 916         | 38ft. 3in.       | 580         | 31ft. 3in.       | 244         |
| 45ft. 2in.       | 912         | 38ft. 2in.       | 576         | 31ft. 2in.       | 240         |
| 45ft. 1in.       | 908         | 38ft. 1in.       | 572         | 31ft. 1in.       | 236         |
| 45ft.            | 904         | 38ft.            | 568         | 31ft.            | 232         |
| 44ft. 11in.      | 900         | 37ft. 11in.      | 564         | 30ft. 11in.      | 228         |
| 44ft. 10in.      | 896         | 37ft. 10in.      | 560         | 30ft. 10in.      | 224         |
| 44ft. 9in.       | 892         | 37ft. 9in.       | 556         | 30ft. 9in.       | 220         |
| 44ft. 8in.       | 888         | 37ft. 8in.       | 552         | 30ft. 8in.       | 216         |
| 44ft. 7in.       | 884         | 37ft. 7in.       | 548         | 30ft. 7in.       | 212         |
| 44ft. 6in.       | 880         | 37ft. 6in.       | 544         | 30ft. 6in.       | 208         |
| 44ft. 5in.       | 876         | 37ft. 5in.       | 540         | 30ft. 5in.       | 204         |
| 44ft. 4in.       | 872         | 37ft. 4in.       | 536         | 30ft. 4in.       | 200         |
| 44ft. 3in.       | 868         | 37ft. 3in.       | 532         | 30ft. 3in.       | 196         |
| 44ft. 2in.       | 864         | 37ft. 2in.       | 528         | 30ft. 2in.       | 192         |
| 44ft. 1in.       | 860         | 37ft. 1in.       | 524         | 30ft. 1in.       | 188         |
| 44ft.            | 856         | 37ft.            | 520         | 30ft.            | 184         |
| 43ft. 11in.      | 852         | 36ft. 11in.      | 516         | 29ft. 11in.      | 180         |
| 43ft. 10in.      | 848         | 36ft. 10in.      | 512         | 29ft. 10in.      | 176         |
| 43ft. 9in.       | 844         | 36ft. 9in.       | 508         | 29ft. 9in.       | 172         |
| 43ft. 8in.       | 840         | 36ft. 8in.       | 504         | 29ft. 8in.       | 168         |
| 43ft. 7in.       | 836         | 36ft. 7in.       | 500         | 29ft. 7in.       | 164         |
| 43ft. 6in.       | 832         | 36ft. 6in.       | 496         | 29ft. 6in.       | 160         |
| 43ft. 5in.       | 828         | 36ft. 5in.       | 492         | 29ft. 5in.       | 156         |
| 43ft. 4in.       | 824         | 36ft. 4in.       | 488         | 29ft. 4in.       | 152         |
| 43ft. 3in.       | 820         | 36ft. 3in.       | 484         | 29ft. 3in.       | 148         |
| 43ft. 2in.       | 816         | 36ft. 2in.       | 480         | 29ft. 2in.       | 144         |

## PUTTING THE SHOT.

| <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> |
|------------------|-------------|------------------|-------------|------------------|-------------|
| 43ft. 1in.       | 812         | 36ft. 1in.       | 476         | 29ft. 1in.       | 140         |
| 43ft.            | 808         | 36ft.            | 472         | 29ft.            | 136         |
| 42ft. 11in.      | 804         | 35ft. 11in.      | 468         | 28ft. 11in.      | 132         |
| 42ft. 10in.      | 800         | 35ft. 10in.      | 464         | 28ft. 10in.      | 128         |
| 42ft. 9in.       | 796         | 35ft. 9in.       | 460         | 28ft. 9in.       | 124         |
| 42ft. 8in.       | 792         | 35ft. 8in.       | 456         | 28ft. 8in.       | 120         |
| 42ft. 7in.       | 788         | 35ft. 7in.       | 452         | 28ft. 7in.       | 116         |
| 42ft. 6in.       | 784         | 35ft. 6in.       | 448         | 28ft. 6in.       | 112         |
| 42ft. 5in.       | 780         | 35ft. 5in.       | 444         | 28ft. 5in.       | 108         |
| 42ft. 4in.       | 776         | 35ft. 4in.       | 440         | 28ft. 4in.       | 104         |
| 42ft. 3in.       | 772         | 35ft. 3in.       | 436         | 28ft. 3in.       | 100         |
| 42ft. 2in.       | 768         | 35ft. 2in.       | 432         | 28ft. 2in.       | 96          |
| 42ft. 1in.       | 764         | 35ft. 1in.       | 428         | 28ft. 1in.       | 92          |
| 42ft.            | 760         | 35ft.            | 424         | 28ft.            | 88          |
| 41ft. 11in.      | 756         | 34ft. 11in.      | 420         | 27ft. 11in.      | 84          |
| 41ft. 10in.      | 752         | 34ft. 10in.      | 416         | 27ft. 10in.      | 80          |
| 41ft. 9in.       | 748         | 34ft. 9in.       | 412         | 27ft. 9in.       | 76          |
| 41ft. 8in.       | 744         | 34ft. 8in.       | 408         | 27ft. 8in.       | 72          |
| 41ft. 7in.       | 740         | 34ft. 7in.       | 404         | 27ft. 7in.       | 68          |
| 41ft. 6in.       | 736         | 34ft. 6in.       | 400         | 27ft. 6in.       | 64          |
| 41ft. 5in.       | 732         | 34ft. 5in.       | 396         | 27ft. 5in.       | 60          |
| 41ft. 4in.       | 728         | 34ft. 4in.       | 392         | 27ft. 4in.       | 56          |
| 41ft. 3in.       | 724         | 34ft. 3in.       | 388         | 27ft. 3in.       | 52          |
| 41ft. 2in.       | 720         | 34ft. 2in.       | 384         | 27ft. 2in.       | 48          |
| 41ft. 1in.       | 716         | 34ft. 1in.       | 380         | 27ft. 1in.       | 44          |
| 41ft.            | 712         | 34ft.            | 376         | 27ft.            | 40          |
| 40ft. 11in.      | 708         | 33ft. 11in.      | 372         | 26ft. 11in.      | 36          |
| 40ft. 10in.      | 704         | 33ft. 10in.      | 368         | 26ft. 10in.      | 32          |
| 40ft. 9in.       | 700         | 33ft. 9in.       | 364         | 26ft. 9in.       | 28          |
| 40ft. 8in.       | 696         | 33ft. 8in.       | 360         | 26ft. 8in.       | 24          |
| 40ft. 7in.       | 692         | 33ft. 7in.       | 356         | 26ft. 7in.       | 20          |
| 40ft. 6in.       | 688         | 33ft. 6in.       | 352         | 26ft. 6in.       | 16          |
| 40ft. 5in.       | 684         | 33ft. 5in.       | 348         | 26ft. 5in.       | 12          |
| 40ft. 4in.       | 680         | 33ft. 4in.       | 344         | 26ft. 4in.       | 8           |
| 40ft. 3in.       | 676         | 33ft. 3in.       | 340         | 26ft. 3in.       | 4           |
| 40ft. 2in.       | 672         | 33ft. 2in.       | 336         | 26ft. 2in.       | 0           |
| 40ft. 1in.       | 668         | 33ft. 1in.       | 332         |                  |             |

For any put shorter than 26 feet 2 inches, score nothing.

For any put longer than 47 feet score 1,000, and 1 additional point for each  $\frac{1}{4}$  inch beyond 47 feet.

For fractional distances between the even inches add 1 point for each  $\frac{1}{4}$  inch. For instance, 34 feet 4 inches, score 392 points; 34 feet  $4\frac{1}{4}$  inches, 393 points; 34 feet  $4\frac{3}{4}$  inches, 395 points, etc.

## THROWING THE HAMMER.

| <i>Dist.</i>             | <i>Points.</i> | <i>Dist.</i> | <i>Points.</i> | <i>Dist.</i> | <i>Points.</i> |
|--------------------------|----------------|--------------|----------------|--------------|----------------|
| 145ft. $\frac{3}{4}$ in. | 1090           | 117ft.       | 663            | 89ft.        | 327            |
| 145ft.                   | 999            | 116ft.       | 651            | 88ft.        | 315            |
| 144ft.                   | 987            | 115ft.       | 639            | 87ft.        | 303            |
| 143ft.                   | 975            | 114ft.       | 627            | 86ft.        | 291            |

## THROWING THE HAMMER.

| <i>Dist.</i> | <i>Points.</i> | <i>Dist.</i> | <i>Points</i> | <i>Dist.</i> | <i>Points.</i> |
|--------------|----------------|--------------|---------------|--------------|----------------|
| 142ft.       | 963            | 113ft.       | 615           | 85ft.        | 279            |
| 141ft.       | 951            | 112ft.       | 603           | 84ft.        | 267            |
| 140ft.       | 939            | 111ft.       | 591           | 83ft.        | 255            |
| 139ft.       | 927            | 110ft.       | 579           | 82ft.        | 243            |
| 138ft.       | 915            | 109ft.       | 567           | 81ft.        | 231            |
| 137ft.       | 903            | 108ft.       | 555           | 80ft.        | 219            |
| 136ft.       | 891            | 107ft.       | 543           | 79ft.        | 207            |
| 135ft.       | 879            | 106ft.       | 531           | 78ft.        | 195            |
| 134ft.       | 867            | 105ft.       | 519           | 77ft.        | 183            |
| 133ft.       | 855            | 104ft.       | 507           | 76ft.        | 171            |
| 132ft.       | 843            | 103ft.       | 495           | 75ft.        | 159            |
| 131ft.       | 831            | 102ft.       | 483           | 74ft.        | 147            |
| 130ft.       | 819            | 101ft.       | 471           | 73ft.        | 135            |
| 129ft.       | 807            | 100ft.       | 459           | 72ft.        | 123            |
| 128ft.       | 795            | 99ft.        | 447           | 71ft.        | 111            |
| 127ft.       | 783            | 98ft.        | 435           | 70ft.        | 99             |
| 126ft.       | 771            | 97ft.        | 423           | 69ft.        | 87             |
| 125ft.       | 759            | 96ft.        | 411           | 68ft.        | 75             |
| 124ft.       | 747            | 95ft.        | 399           | 67ft.        | 63             |
| 123ft.       | 735            | 94ft.        | 387           | 66ft.        | 51             |
| 122ft.       | 723            | 93ft.        | 375           | 65ft.        | 39             |
| 121ft.       | 711            | 92ft.        | 363           | 64ft.        | 27             |
| 120ft.       | 699            | 91ft.        | 351           | 63ft.        | 15             |
| 119ft.       | 687            | 90ft.        | 339           | 62ft.        | 3              |
| 118ft.       | 675            | .            | .             | 61ft.        | 0              |

For throws shorter than 61 feet, score nothing.

For throws longer than 145 feet 1 inch, score 1,000, and 1 additional point for each inch beyond 145 feet 1 inch.

For fractional distances between the even feet, add 1 point for each inch. For instance, 97 feet scores 423 points; 97 feet 3 inches, 426 points; 97 feet 7 inches, 430 points; 97 feet 11 inches, 434 points, etc.

## THROWING 56-LB. WEIGHT.

| <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> |
|------------------|-------------|------------------|-------------|------------------|-------------|
| 35ft. 10in.      | 1000        | 28ft. 10in.      | 664         | 21ft. 11in.      | 332         |
| 35ft. 9in.       | 996         | 28ft. 9in.       | 660         | 21ft. 10in.      | 328         |
| 35ft. 8in.       | 992         | 28ft. 8in.       | 656         | 21ft. 9in.       | 324         |
| 35ft. 7in.       | 988         | 28ft. 7in.       | 652         | 21ft. 8in.       | 320         |
| 35ft. 6in.       | 984         | 28ft. 6in.       | 648         | 21ft. 7in.       | 316         |
| 35ft. 5in.       | 980         | 28ft. 5in.       | 644         | 21ft. 6in.       | 312         |
| 35ft. 4in.       | 976         | 28ft. 4in.       | 640         | 21ft. 5in.       | 308         |
| 35ft. 3in.       | 972         | 28ft. 3in.       | 636         | 21ft. 4in.       | 304         |
| 35ft. 2in.       | 968         | 28ft. 2in.       | 632         | 21ft. 3in.       | 300         |
| 35ft. 1in.       | 964         | 28ft. 1in.       | 628         | 21ft. 2in.       | 296         |
| 35ft.            | 960         | 28ft.            | 624         | 21ft. 1in.       | 292         |
| 34ft. 11in.      | 956         | 27ft. 11in.      | 620         | 21ft.            | 288         |
| 34ft. 10in.      | 952         | 27ft. 10in.      | 616         | 20ft. 11in.      | 284         |
| 34ft. 9in.       | 948         | 27ft. 9in.       | 612         | 20ft. 10in.      | 280         |
| 34ft. 8in.       | 944         | 27ft. 8in.       | 608         | 20ft. 9in.       | 276         |
| 34ft. 7in.       | 940         | 27ft. 7in.       | 604         | 20ft. 8in.       | 272         |
| 34ft. 6in.       | 936         | 27ft. 6in.       | 600         | 20ft. 7in.       | 268         |

## THROWING 56 LB. WEIGHT

| <i>Distance.</i> | <i>Pts.</i> | <i>Distance</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts</i> |
|------------------|-------------|-----------------|-------------|------------------|------------|
| 34ft. 5in.       | 932         | 27ft. 5in.      | 596         | 20ft. 6in.       | 264        |
| 34ft. 4in.       | 928         | 27ft. 4in.      | 592         | 20ft. 5in.       | 260        |
| 34ft. 3in.       | 924         | 27ft. 3in.      | 588         | 20ft. 4in.       | 256        |
| 34ft. 2in.       | 920         | 27ft. 2in.      | 584         | 20ft. 3in.       | 252        |
| 34ft. 1in.       | 916         | 27ft. 1in.      | 580         | 20ft. 2in.       | 248        |
| 34ft.            | 912         | 27ft.           | 576         | 20ft. 1in.       | 244        |
| 33ft. 11in.      | 908         | 26ft. 11in.     | 572         | 20ft.            | 240        |
| 33ft. 10in.      | 904         | 25ft. 10in.     | 568         | 19ft. 11in.      | 236        |
| 33ft. 9in.       | 900         | 26ft. 9in.      | 564         | 19ft. 10in.      | 232        |
| 33ft. 8in.       | 896         | 26ft. 8in.      | 560         | 19ft. 9in.       | 228        |
| 33ft. 7in.       | 892         | 26ft. 7in.      | 556         | 19ft. 8in.       | 224        |
| 33ft. 6in.       | 888         | 26ft. 6in.      | 552         | 19ft. 7in.       | 220        |
| 33ft. 5in.       | 884         | 26ft. 5in.      | 548         | 19ft. 6in.       | 216        |
| 33ft. 4in.       | 880         | 26ft. 4in.      | 544         | 19ft. 5in.       | 212        |
| 33ft. 3in.       | 876         | 26ft. 3in.      | 540         | 19ft. 4in.       | 208        |
| 33ft. 2in.       | 872         | 26ft. 2in.      | 536         | 19ft. 3in.       | 204        |
| 33ft. 1in.       | 868         | 26ft. 1in.      | 532         | 19ft. 2in.       | 200        |
| 33ft.            | 864         | 26ft.           | 528         | 19ft. 1in.       | 196        |
| 32ft. 11in.      | 860         | 25ft. 11in.     | 524         | 19ft.            | 192        |
| 32ft. 10in.      | 856         | 25ft. 10in.     | 520         | 18ft. 11in.      | 188        |
| 32ft. 9in.       | 852         | 25ft. 9in.      | 516         | 18ft. 10in.      | 184        |
| 32ft. 8in.       | 848         | 25ft. 8in.      | 512         | 18ft. 9in.       | 180        |
| 32ft. 7in.       | 844         | 25ft. 7in.      | 508         | 18ft. 8in.       | 176        |
| 32ft. 6in.       | 840         | 25ft. 6in.      | 504         | 18ft. 7in.       | 172        |
| 32ft. 5in.       | 836         | 25ft. 5in.      | 500         | 18ft. 6in.       | 168        |
| 32ft. 4in.       | 832         | 25ft. 4in.      | 496         | 18ft. 5in.       | 164        |
| 32ft. 3in.       | 828         | 25ft. 3in.      | 492         | 18ft. 4in.       | 160        |
| 32ft. 2in.       | 824         | 25ft. 2in.      | 488         | 18ft. 3in.       | 156        |
| 32ft. 1in.       | 820         | 25ft. 1in.      | 484         | 18ft. 2in.       | 152        |
| 32ft.            | 816         | 25ft.           | 480         | 18ft. 1in.       | 148        |
| 31ft. 11in.      | 812         | 24ft. 11in.     | 476         | 18ft.            | 144        |
| 31ft. 10in.      | 808         | 24ft. 10in.     | 472         | 17ft. 11in.      | 140        |
| 31ft. 9in.       | 804         | 24ft. 9in.      | 468         | 17ft. 10in.      | 136        |
| 31ft. 8in.       | 800         | 24ft. 8in.      | 464         | 17ft. 9in.       | 132        |
| 31ft. 7in.       | 796         | 24ft. 7in.      | 460         | 17ft. 8in.       | 128        |
| 31ft. 6in.       | 792         | 24ft. 6in.      | 456         | 17ft. 7in.       | 124        |
| 31ft. 5in.       | 788         | 24ft. 5in.      | 452         | 17ft. 6in.       | 120        |
| 31ft. 4in.       | 784         | 24ft. 4in.      | 448         | 17ft. 5in.       | 116        |
| 31ft. 3in.       | 780         | 24ft. 3in.      | 444         | 17ft. 4in.       | 112        |
| 31ft. 2in.       | 776         | 24ft. 2in.      | 440         | 17ft. 3in.       | 108        |
| 31ft. 1in.       | 772         | 24ft. 1in.      | 436         | 17ft. 2in.       | 104        |
| 31ft.            | 768         | 24ft.           | 432         | 17ft. 1in.       | 100        |
| 30ft. 11in.      | 764         | 23ft. 11in.     | 428         | 17ft.            | 96         |
| 30ft. 10in.      | 760         | 23ft. 10in.     | 424         | 16ft. 11in.      | 92         |
| 30ft. 9in.       | 756         | 23ft. 9in.      | 420         | 16ft. 10in.      | 88         |
| 30ft. 8in.       | 752         | 23ft. 8in.      | 416         | 16ft. 9in.       | 84         |
| 30ft. 7in.       | 748         | 23ft. 7in.      | 412         | 16ft. 8in.       | 80         |
| 30ft. 6in.       | 744         | 23ft. 6in.      | 408         | 16ft. 7in.       | 76         |
| 30ft. 5in.       | 740         | 23ft. 5in.      | 404         | 16ft. 6in.       | 72         |
| 30ft. 4in.       | 736         | 23ft. 4in.      | 400         | 16ft. 5in.       | 68         |
| 30ft. 3in.       | 732         | 23ft. 3in.      | 396         | 16ft. 4in.       | 64         |
| 30ft. 2in.       | 728         | 23ft. 2in.      | 392         | 16ft. 3in.       | 60         |
| 30ft. 1in.       | 724         | 23ft. 1in.      | 388         | 16ft. 2in.       | 56         |
| 30ft.            | 720         | 23ft.           | 384         | 16ft. 1in.       | 52         |
| 29ft. 11in.      | 716         | 22ft. 11in.     | 380         | 16ft.            | 48         |
| 29ft. 10in.      | 712         | 22ft. 10in.     | 376         | 15ft. 11in.      | 44         |
| 29ft. 9in.       | 708         | 22ft. 9in.      | 372         | 15ft. 10in.      | 40         |

## THROWING 56 LB. WEIGHT.

| <i>Distance.</i> | <i>Pts.</i> | <i>Distance</i> | <i>Pts.</i> | <i>Distance.</i> | <i>Pts.</i> |
|------------------|-------------|-----------------|-------------|------------------|-------------|
| 29ft. 8in.       | 704         | 22ft. 8in.      | 368         | 15ft. 9in.       | 36          |
| 29ft. 7in.       | 700         | 22ft. 7in.      | 364         | 15ft. 8in.       | 32          |
| 29ft. 6in.       | 696         | 22ft. 6in.      | 360         | 15ft. 7in.       | 28          |
| 29ft. 5in.       | 692         | 22ft. 5in.      | 356         | 15ft. 6in.       | 24          |
| 29ft. 4in.       | 688         | 22ft. 4in.      | 352         | 15ft. 5in.       | 20          |
| 29ft. 3in.       | 684         | 22ft. 3in.      | 348         | 15ft. 4in.       | 16          |
| 29ft. 2in.       | 680         | 22ft. 2in.      | 344         | 15ft. 3in.       | 12          |
| 29ft. 1in.       | 676         | 22ft. 1in.      | 340         | 15ft. 2in.       | 8           |
| 29ft.            | 672         | 22ft.           | 336         | 15ft. 1in.       | 4           |
| 28ft. 11in.      | 668         |                 |             | 15ft.            | 0           |

For any performance shorter than 15ft., score nothing.

For any performance longer than 35ft. 10in., score 1,000, and 1 additional point for each quarter inch beyond 35ft. 10in.

For any fractional performance between the even inches, add 1 additional point for each quarter inch. For instance, 27ft. scores 576 points; 27ft.  $\frac{1}{4}$ in., 577 points; 27ft.  $\frac{3}{4}$ in., 579 points, etc.

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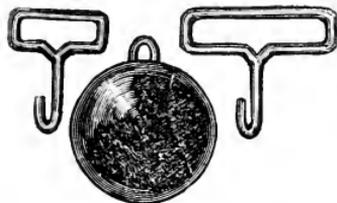


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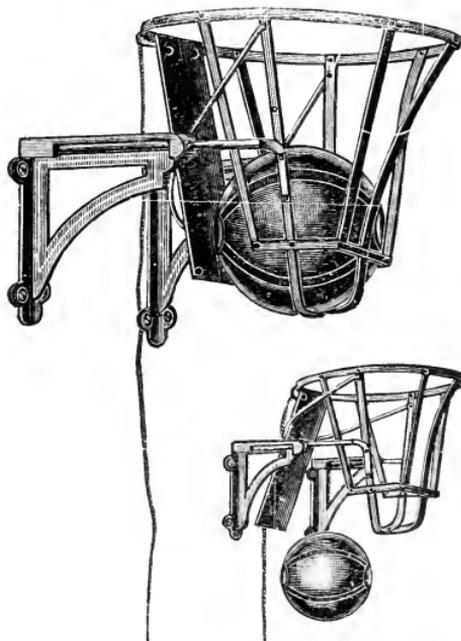
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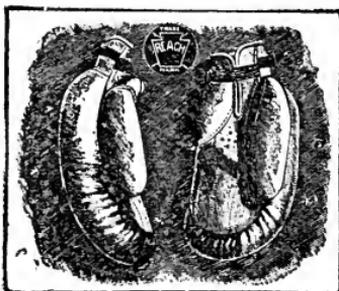
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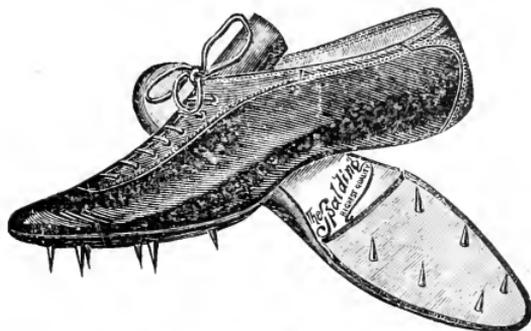
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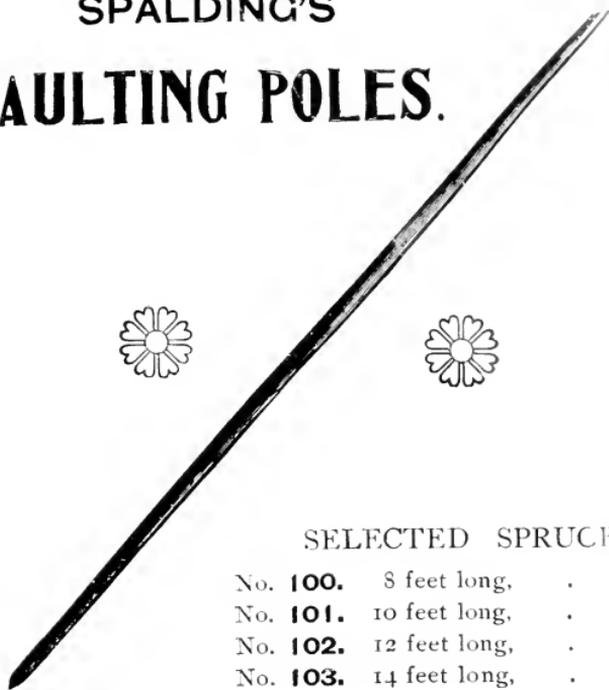
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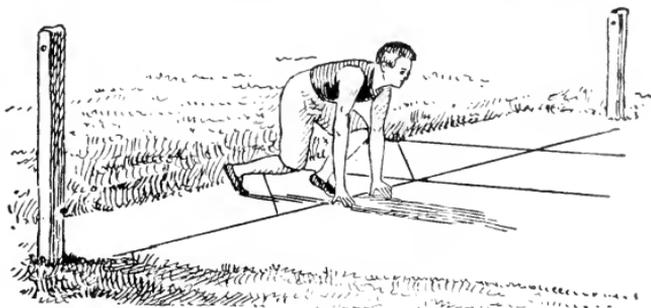
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