

Vol. VI. No. 1

SEPTEMBER, 1921

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How it Feels to be on a Winning Jeam by George B. Whitted

The Boxer's Physique

> Hand - V Balancing

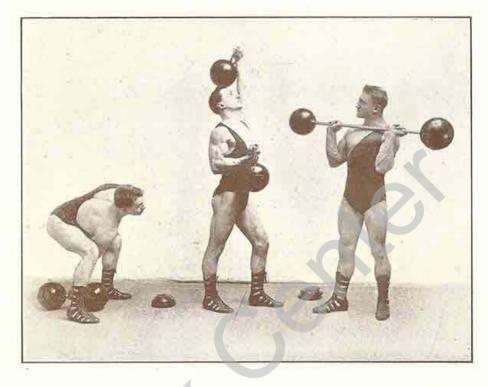
Wrestling

The Super Man of Tennis William Tilden 2<u>n</u>ª

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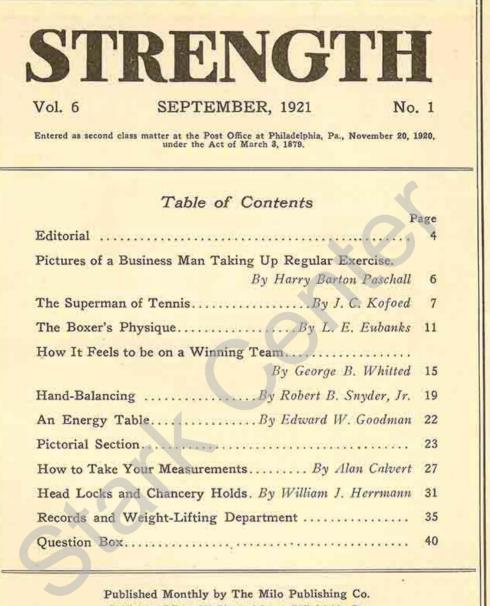
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September, 1921

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I ONEST, I can't exercise in this hot weather. Wait until September rolls around, and then watch me start!" Well, here it is. What are you going to do with it?

September is as good a time of the year to start as any, in fact, better. Most of us get out of doors to a certain extent in summer and get exercise or recreation of one kind or another,. which is, of course, better than none at all. But exercise isn't just something to be indulged in while on vacations. It is something for everyone, and for every day in the year. The real kind of exercise is not something to afford pleasure for a day or a week, but something that will build up a reserve of strength and energy for this year, for next year, and for many years to come.

There is an old maxim which states that you will not miss the water until the well runs dry. It is equally true of your health. You will never appreciate good health until it is something that you lack. Each one of us owes it to himself to replenish that fountain of health with a certain regular period devoted to the building of health and energy through exercise. You may be apparently healthy to-day, and may feel that you do not need to safeguard your health. Many others have thought so, and have paid the penalty when disease epidemics are rife.

You cannot beat Nature. She has given you certain nerves, muscles and organs. In order to function properly, they must be used. If you use them all regularly in your daily work, so much the better for you. If you do not, you must provide for their regular use, or some day when you are "on a hill"—speeding up under the pressure of work, something will snap. Out will go your lights, and you will wonder how it all happened.

H OWEVER, you don't have to wait until it happens to you. You can take your lesson from your friends and acquaintances. Every day we see any number of people who are sadly handicapped by weak, undeveloped bodies, who are not equipped to withstand the mental and physical strain of the struggle of life. How many brilliant careers are wrecked for the want of physical strength to carry them through? And how many men are just plugging along, with the always present menace of a physical breakdown staring them in the face? And it is all so unnecessary. If such people could be made to realize that a little judicious exercise would rejuvenate them and make their lives really worth living, a large percentage of the sickness and disease in the world would be eliminated. Exercise can not be expected to work miracles. But it can do something for each and every one of us. Just give Nature a chance.

There was a time when exercise was something to be laughed at, and if a man did not want to be ridiculed, he must needs take his exercise in secret. But all that is now a thing of the past. Physical fitness is now regarded as a first essential—an absolute necessity for every day life. Physical culturists are no longer regarded as "bug"—as mere faddists whose mode of living was not at all applicable to the needs of the ordinary person. It is no longer a mere hobby to fill in the time—but something that can be applied with advantage to the lives of each and every one of us. Perhaps you have no time to exercise? Perhaps. There is no one so busy that he can not *take* time for this purpose.

B UT is it possible for the man of ordinary physique to develop any considerable degree of health and strength? It is,

Writers love to tell us of the days of old, when men were possessed of physical strength far beyond the powers of our present day athletes. It is universally conceded that the human race is rapidly deteriorating, and that those good old days of muscular manhood are gone forever. It must be remembered, however, that most of these tales of feats of strength are mere legends, which may or may not be true.

And don't lose sight of the fact that athletes of this day and generation are breaking records that have been standing for many years. It may be true that the human race in general is not as physically fit as it was years ago, but this is due only to our changed methods of living. The athletes of ancient Greece and Rome knew nothing of anatomy, nothing of training methods or the whys and wherefores of keeping in physical condition. The results they accomplished, while excellent, were due to haphazard methods.

It has been definitely proven that the athletes of to-day are far superior to those of the days of old. If those men could create records and accomplish feats of great strength in spite of their handicaps, how much more can the athlete of to-day accomplish, with superior training methods and the thousand aids and appliances of modern civilization.

And it has also been proven that the ordinary man of to-day, with a few minutes each day devoted to judicious exercise, can become not only the equal of the race of supermen who are said to have inhabited this world of ours years ago, but can actually be far superior to them in physique.



Exclusive pictures of a business man taking up regular exercise.

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The Superman of Tennis

By J. C. KOFOED

HE Germans were the first to advocate the theory of supermen, andenlarging upon it-decided that the Teutonic was the super race of mankind. Such a label applied to 80,000,000 people is absurd. Plastered on a single man it may very well stick. Napoleon, though dead these hundred years and resting beneath the dome of the Invalides, is still regarded as the super-soldier of all time. The good gray poet, Whitman, holds a

similar status among American bards. And will anyone claim that an equal of Babe Ruth in his particular line has ever appeared, or is likely to appear, on the diamond? So, in such a sense, we may accept the superman theory, as applied to certain rare individuals.

Sir Auckland Geddes, British Ambassador to the United States, spoke on the subject of tennis, and, incidentally, of supermen, at a dinren in the Hotel Biltmore, New York, given in honor of the Davis Cup winners. He said:

"I am quite convinced in my own mind that tennis is the best of all games,

and that the only ones that come near it are fencing and boxing. . . . You have sent many great ambassadors to England, but your tennis team did as much as any ambassador to make the people of the British Empire understand that there was no difficulty that ever would arise between our two countries unless it be based on some misunderstanding. . . . So I want to congratulate you as an association and these wonderful players individually for what you are doing to spread this great game throughout the world." I said that he mentioned supermen—incidentally. He did, in speaking of Big Bill Tilden, star of the Davis Cup winners, who is, beyond question, the superman of the courts.

In only a few sports does one person dominate the field so completely as Tilden does. Dempsey among the boxers, Kelly among scullers, and Suzanne Lenglen among the women tennis experts, are

> about the only ones. There is keener competition in golf; in baseball (where, in all-around ability, Cobb, Speaker and Sisler certainly rank with Ruth); in shooting, fencing, bowling, wrestling and other pastimes. With Tilden at his best, he has no threatening opposition. His throne is on an inaccessible peak.

Bill returned only recently to the United States, his thin

body and drawn face showing the effects of fourteen months of continual battle to retain his crown. He had been in poor condition in England, and his illness gave him a bad spell in France, but in spite of this handicap he came through with colors flying.

© International. William T. Tilden, 2d, the Superman of Tennis.

> The story of his sensational battle with B. I. C. Norton, in the final at Wimbledon, is already history. Twice Norton was within a point of the title; twice the crown tottered on Tilden's head, and each time he kept it from falling. Luck with with him, of course. Luck always is with the fighter —but the one quirk of it was so grotesque that only once before in tennis history has its equal been seen.

> Norton-needing only the single point to make him champion-hit the ball hard to the baseline, and Tilden returned it

with a half-lob, half-drive, that seemed certain to go outside. As a matter of fact, Bill was so sure of it that he strolled up to the net, ready to shake Norton's hand in congratulation of his victory. However, the ball struck on the line, and Bic, who was unprepared, rammed it back sufficiently hard for the ball to land an inch outside, thus saving the match for Tilden.

That is the "break," of course—and you'll notice that the winning player or team usually gets it.

This recitation of the Tilden-Norton match brings up a subject that is not an altogether pleasant one—that of the unsportsmanlike way in which our visiting athletes have been treated in England. Jock Hutchison won the British Open Golf Championship, and had the cup practically thrown at him. In the finals at Wimbledon, Tilden many times caught Norton flatfooted with his short returns, and the crowd began to boo and shout, "Play the game, Tilden." Norton, who is a thoroughbred sportsman, appealed to the referee and finally threatened to retirc unless the spectators ceased to annoy his opponent.

Things like that do annoy Tilden, who, for all his size and strength, is nervously constituted. It hurt him more to wait while the challenge round was being played than it would to play a dozen hard contests. He wanted to be in the thick of things. Nervousness is not an unusual thing among athletes who are highly developed mentally and have keen imaginations.

It is particularly true among those proficient in sports with strict codes of etiquette. The fact that forty thousand people are shricking at the top of their lungs does not annoy a major-league ball player or a boxer. Yet, in tennis—and even more so in golf—a comparatively small noise will throw a player entirely off his mental balance.

But let us get back to the superman of tennis.

Tilden has played the court game for a good many years. It has only been within the last three, however, that he became a national figure. Prior to that he was never rated with the first ten, and, as a matter of fact, was only a celebrity among local clubs. Even there he did not always come out on top. He had more than his share of hard luck, losing out in a number of tournaments because of various accidents. Some people began to whisper that he was "yellow"—imagine that!—big, courageous Bill Tilden was "yellow"!

More than one athlete has had that said of him, and has proved conclusively that the insinuation was slander. They whispered it of Jack Coombs, of Jeffries, of a thousand others who were the salt of the earth. They said of Jack Munroe, the boxing lumberjack, whose daring exploits with the "Princess Pats" is an epic of the war. They said it of Tilden—and he showed them that they lied.

He was rated second to R. Lindley Murray, the cyclonic Californian, in 1918, and his match with the champion that year was a wonder. Tilden developed boils prior to the championships, some of which settled on his foot, and he played through these hard-fought, dazzling sets in real physical agony. It is not easy to imagine how Tilden—with the continual rub of a shoe against those boils—succeeded in going through with the match. But he did, and proved his innate courage.

In the same year he won the clay court championship; was also winner of the All-Comers, and, paired with Vincent Richards, won the National Doubles. For the first time the eyes of the sporting world became fixed on this new meteor.

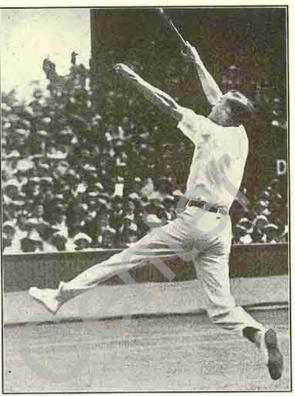
Tilden has an ideal build for tennis. He stands well over the six-foot mark, and weighs about one hundred and sixty-five or seventy pounds. His reach is exceptionally long, which makes it most difficult for an opponent to drive the ball past him. His game is, perhaps, better balanced than that of any previous champion, for he has an infinite variety of strokes, with almost miraculous ability in placing. There is no question of his courage, while his strategy is of the highest order.

Tennis has developed so enormously in popular favor that more star players are developed now than ever before. So Tilden faces greater opposition than did the crack racquet-men of the past. They have set him some great marks to shoot at. W. A. Larned stands head and shoulders above them all, having won the National Championship seven times and been rated among the first ten for nineteen years, R. D. Sears equalled Larned's record in number of championships, and Beals Wright, Robert Little, Bill Clothier and Clarence Hobart were all listed among the ten best players of each year for over a decade. But, on his present form, in my opinion, at least, Tilden outstrips them all.

His style is not so slashing and spectacular as that of Maurice Mc-Laughlin, the wonderful Californian of seven or eight years ago, or even that of R. Norris Williams. McLaughlin outclassed his opponents because of extraordinary speed and endurance. His attack was a whirlwind that swept everything before it, and he lacked defense. Fundamentally, that sort of play is wrong, however, for when the speed of foot has gone, and years of desperate effort have burned up his vitality, the player is through. McLaughlin went out like a guttered candle. For sheer brilliance, Williams is unapproachable, but he suffers from the same malady as all stars of his type. Either he is in the heights or in the depths. His play is never commonplace, and hence must be erratic.

Bill Johnston is Tilden's closest rival. He was National Champion in 1915 and 1919, and runner-up to Tilden last year. A little fellow, who weighs some fifty pounds less than the present title-holder, he is, nevertheless, one of the greatest matchplayers in the game. His battle with Big Bill at Forest Hills in 1920 will never be forgotten by those who saw it. Six sets were played; six sets crammed full of brilliant plays and desperate fighting. Johnston carried the prestige of champion then, but Tilden went into the game with absolute confidence. Just how much that confidence was justified is now tennis history.

As I have said before, Tilden has been overdoing the thing. He played too much tennis in the last year for his own good. The trip to England in June, 1920, with the Davis Cup players, started the round. Bill played in the London championships, captured the classic event at Wimbledon, and helped defeat the French and British



© International.

Tilden in action in his match with Norton. Note the exceptionally long reach.

> teams. He returned to the United States in time to win the National Championship, and then sailed for Australia, where the Davis Cup was regained. This year he won again at Wimbledon and defeated the French champions. These battles were the major engagements of a year. Besides them he engaged in literally hundreds of other games, and traveled probably forty thousand miles.

> In that time he defeated the world's greatest players—Kingscote, Patterson, Laurentz, Schmidzu, Johnston, Wilding. His play was so brilliant that the tennis experts of every land declared him a worthy successor to Brookes, Wilding and the famous Doherty brothers, who took the Davis Cup to Britain in 1903.

> Perhaps a better realization of Tilden's accomplishments could be gained by comparing his efforts with that of other champions. They would be equivalent to Jack Dempsey's roving the world and knocking

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© International.

Tilden is shown here at Wimbledon greeting B. I. C. Norton, the sensational South African tennis player, whom he defeated for the world's championship.

out a dozen formidable opponents in a year's time; to Jock Hutchison's winning the championship of America, England, Australia and France on the links; to Jack Kelly's bunching a half a dozen championships in a twelvemonth.

And the strain was not only in playing. Wherever they went the Davis Cup winners were tendered dinners and receptions. Tilden made scores of speeches. The strain of keeping up with his social duties while playing the hardest matches in the world drew Big Bill down very fine. He came home last month ready for a long rest.

It is, as I have said before, generally admitted that Tilden is the best tennis player in the world to-day—one of the finest this sport has ever known. Big, strong, fast, with a fundamentally sound game that precludes the possibility of his "blowing" like McLaughlin did, the Philadelphian should be good for a number of years at the top of the world. Yet, somehow or other, I can't quite believe that fifteen years hence will find him still breasting opposition among the top-notchers. Yet Norman Brookes, who is forty-three years old, was unbeatable in 1907, and plays almost as well to-day. Bill Larned was rated with the "first ten" for nineteen years.

I do not mean to intimate that either Brookes or Larned are greater players than William T. Tilden, 2d. As a matter of fact, I think our Bill at his best could beat any player that ever lived. But, unless he keeps from overdoing things and controls those nerves of his, Tilden won't be playing a double decade from now.

Every athlete has something to conquer. It may be appetite, laziness, any one of a hundred things. With Tilden it is a proneness to let small items bother him; to fidget and worry when he is waiting for the fight. Every sport proves that the veteran—the man who "stays up" for many years—is the one whose nerves are solidly under control.

Take the twenty-year men in baseball-Anson, Lajoie, Wagner,

Cy Young. Catch any nerves in their bodies? Huh! I should say not so. Or in Fitzsimmons, John L. or Battling Nelson? Gotch or Zbyszko? Brookes or Larned? Not so you could notice.

I don't mean to intimate that Bill Tilden is really nervous as that expression is understood. He is a perfectly normal young man, but he still has to gain the ultra-poise that distinguished Norman Brookes. And, speaking of Brookes, Tilden had this to say of his match with the veteran:

"I thought I could tire the old man out, but there wasn't any tire in him. From corner to corner, up to the net and back, he never faltered, and he ran out nine games in a row. I had only one thing to do—drive with all my might and trust to the ball going in. Luck was with me. Nothing went out, and I struck a winning stride that just wouldn't be stopped."

Fine-but think of Brookes, at forty-(Continued on page 42)

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The Boxer's Physique

By L. E. EUBANKS

IMMY BRITT, one of the best lightweights of pugilistic history, when asked whether or not he would like to reenter the ring, replied in the negative, then added: "But my love will never grow cold toward boxing. No sport like it to develop and cultivate a feeling of assurance and self-control. It gives you an aggressive spirit properly leashed. A boxer is alert at all times, ready to cope with any situation. The more you know about boxing the less liable you are to fight. One-half of the disgraceful fist fights in this world are caused by reason of one man or both being afraid that if they do not fight a charge of cowardice would be established. When a man can box he doesn't feel that it is necessary to vindicate his courage. In twelve years of experience and travels to all parts of the world, while I have had plenty of provocation, I'm proud to say that I have never struck a man yet outside of the ring. I've been able to avoid hitting anyone because I knew I could walk away without accusing myself or having the fear that someone would say I lacked gameness.

"This is the spirit that the knowledge of boxing will instill into the minds of the American youth. Let boxing go hand in hand with the A B C's. All schools should be equipped with gymnasiums, and they should be supervised by an athletic director whose duty it should be to impart a thorough knowledge of boxing, wrestling and athletics. A healthy body makes a keener mind. The time taken away from the A B C's for the development of the body would be more than made up, because of the sharpening of the wits, which naturally follows a healthy exercise like boxing."

Boxing is useful, or at least it may be. At any rate, the feeling that one can acquit oneself creditably in case of necessity—the aplomb that results from an acquaintance with the gloves, is comforting, and hence useful. This reminds me of the reply of the "bad man," who was asked why he carried a gun year after year when it had never been needed. He answered: "No, it ain't yit; but when I do need it, I may need it most awful damn bad."

Secondly, I think there is no exercise better than boxing for persons desiring to improve their self-control. For nervous, hot-headed people it is the training par excellence. One *must* be cool; in attack or defense every movement must be timed; you must not only ascertain your opponent's weakness and strength, but remember your own faults and strive to hide them. The best boxers keep their eyes fixed on those of the adversary, and this is more important than some realize. I have seen matches won and lost before a blow was landed; when the eyes met the decisive round was fought.

This power of winning with the eyes and general facial expression is natural in some men, but generally it is developed. What we are concerned with is this: It cannot exist without nerve, calmness and determination. As a pupil comes to appreciate these qualities he very naturally struggles for self-mastery, and in this effort lies the great value of the sport.

Closely associated with the power to control the temper and expression, which must be regarded as a mental quality, comes the ability to measure distance in delivering a blow. In this truly great sport these desiderata develop collaterally—mental poise and muscular control.

Observe that all this, upon which success in the manly art so greatly depends, comes principally from mental discipline. We must remember this fact, that boxing is just as much a matter of brain as of brawn, in discussing the sport's physical aspects. If a man lacks the mental attributes—coolness, courage, accuracy, grit, etc.—no possible degree of purely physical excellence could make him a champion.

We have had great boxers of every conceivable physical type—another good argument that muscle is only half the battle. Contrast Robert Fitzsimmons with Jess Willard; the latter is over half a foot taller than Fitz was and about 100 pounds heavier, yet "Ruby Robert" was boss of the heavies when really only a middleweight; he won the championship from James J. Corbett in their memorable battle at Carson City, Nev., weighing but 158 pounds, the middleweight limit, and he scaled even less when he won the middleweight title from (the original) Jack Dempsey—154, I believe.

Now, Fitz lacked less than an inch of being six feet tall; so a natural question arises as to how he carried the necessary strength to fight such men as Jeffries, Sharkey, Corbett and Maier. It is a matter of having carried what weight he did have in the right place. General bulk counts for less in boxing than it does in some other sports, because of the necessity for great agility. While it is true that a big man like Carl Morris offers a tremendous resistance to a body blow, it is true also that a fast man like Jack Dempsey, who evades that blow entirely or minimizes its force by a quick fade-away, suffers even less than the big man whose bulk successfully meets the impact.

I would not say that Fitzsimmons had an ideal build for the ring; but his fighting ability with such remarkable proportions shows that "location" has a lot to do with a boxer's development. Let us glance at Bob's measurements: Height, 5 feet $11\frac{1}{2}$ inches; weight, 158 pounds, stripped; neck, 16 inches; chest, 43; waist, 31; biceps, $13\frac{1}{2}$; forearm, $11\frac{1}{2}$; wrist, $7\frac{1}{2}$; thigh, 21; calf, 14.

I do not need to tell you that the chest is the conspicuous point in this list. As this particular chest was not all external muscle and had a good proportionate "inside measurement," its size indicated breathing power and endurance—which Bob really had in a wonderful degree.

But that, in itself, would not account for his hitting power. Fitz has been called by some the hardest hitter of them all, yet his arm was no larger than that of the average untrained man his height! It was his shoulders; they corresponded to his chest and were nearly big enough for a 200pounder. Jeffries, at 215 pounds, had no more *muscular* deltoids than Fitz, though they were somewhat fuller with fatty tissue. He beat Fitz only $1\frac{1}{2}$ inches in the chest. Fitzsimmons had an extremely powerful upper back (partly from his years of blacksmithing), and this backed up his shoulders. Behind them both he had the nervous energy, "pep," power to concentrate his forces into the effort of punching. Without this quality big muscles on a boxer would be more of a hindrance than a help.

It is interesting to compare Fitzsimmons and Jack Johnson. They are alike in having top-heavy builds, yet very much unalike in the way that "north-end" weight is distributed. The legs are comparatively small in both cases, but with Bob the arms also are small, while the colored marvel has tremendous upper limbs. Yct, with his 171/2-inch biceps, it is very doubtful that Johnson could strike as hard a blow as lanky Bob could in his prime with that freckled old thirteen and a half! I do not know how it happened, but Johnson has arms too big for his shoulders, and his chest is even farther out of proportion, being three inches or so smaller than Bob's.

Boxing, in itself, is a poor developer of muscle. I was amused at the statement of one sporting news writer who said, during Johnson's training for the Jeffries battle, that the big negro had developed those huge arms by boxing. Glove work should develop the arms and shoulders greatly if quantity of work were the only requisite. But in spite of contrary views, the intensity of contraction is the important matter. To develop exceptional strength and bulk, muscle must contract nearly to its utmost, and relaxation must not follow too soon. Again, in striking a blow the forearm is seldom flexed with much force upon the upper arm. In these facts we have, briefly stated, the explanation for the comparatively puny arms of boxers. Compare the glove artists with the mat artists, wrestlers, and the value of slow, powerful contractions is at once evident. An interesting contest was once arranged in England, where wrestling is more popular than it is here. A good man was selected from the ring and a suitable opponent from the mat. The wrestler won quickly and easily, because of greater strength. I am not saying this would always be the case.

Some lovers of boxing refuse to be reasonable on this point and insist that possession of big muscles by some of our bestknown fighters proves that this sport does develop muscle. I love boxing; I practiced it ten years, and have known many

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Finely built, yes; but not particularly so

for boxing. He was too heavy for a middle-

weight and too short for a heavyweight.

He lacked height and reach-ranginess,

we might say. Trained as a weight-lifter,

Sharkey would have been a wonder, but he

was greatly handicapped in contests with

boxers intimately; but I am sure no exceptional muscular bulk was ever acquired from it alone. Honest investigation will always show that a well-muscled pugilist either "got that way" before he took up boxing or pursued collaterally some other sport which brought out the muscle. Of course, a good many exercises that are

real developers might be included in a boxer's training. Rope - skipping is fine for the legs, and wrestling is great dope for upper limbs and chest: the boxer who regularly makes these a part of training his cannot by any means justly say that he owes his development solely to boxing.

John L. Sullivan was a weight-lifter and wrestler before he took up boxing-and he was far better built for those sports than for the squared cir-Teffries cle. was a boilermaker, Fitszimmons a blacksmith, and Sharkey a sailor and



THE CRANK

From The Rubiyat of Health-by Omar Rave On.

There lives near me a spineless coot for whom I do not care a hoot, whose face is wan and lined with care, with sunken checks and graying hair—who has one hoof within the grave; anaemia claims him for her slave. He has no use for exercise—he says that hard work is unwise. He always seeks an easy chair with windows closed to keep out air—and there he sits and raves about his woes—lumbago and the gout. (I'd like to punch him in the snout!) I've tried to drag him out with me to take a tramp or climb a tree—But, no—he claims that if he'd try to do such things he'd surely die! And so he sits at home and croaks: "You would be athletes are jokes—some day when you go out to swim, you'll take a cramp and then cash in. If you would heed my sage advice, you'd surely think about it twice before you'd wear your in'ards out by stretching them in wrestling bouts." And when he utters words like these I yearn to take him o'er my knees and hand to him a biff or two—as his Ma prob'ly used t' do. (He calls me "crank"—it's up to you—which one is the crank of us two?)

laborer. They all owed their strength to natural endowment and hard work. Tom Sharkey, who fought Jeffries at his best twenty-five rounds (the last twenty with two ribs broken), was one of the finestbuilt men that ever drew on a glove. In his prime, Tom Sharkey ran about like this: Height, 5 feet 8½ inches; weight, 185 pounds; neck, 17½ inches; chest, 45; waist, 33; biceps, 16; forearm, 14½; wrist, 7¾; thigh, 23½; calf, 17. Giant Killer." Joe was only 5 feet 1 inch tall, but he fought many husky six-footers. The Lord only knows what he would have done to 'em had he possessed a reach to go with his other fighting qualities!

I think the ideal boxing physique should be a trifle top-heavy; not as much, perhaps, as that of Fitzsimmons, but enough to be noticeable—about like Jack Dempsey, to whom I shall refer again later. Johnny Wilson, present middleweight champion,

men like Jeffries and Fitzsimmons. The former, with his five inches' advantage in height, literally lay on Tom in the clinches, and Fitz, with his superior reach, made a chopping-block of the game and husky sailor.

> Remember Joe Wolcott? He was another wonder of "the good old days." who had to meet men eight or ten inches taller than he. Joe's only hope was to work his way in close and slam away at the "pantry" while the other fellow's arms were fanning around above head. That he dropped a good many is shown by his record and by his so-"The briquet,

has a better build for boxing than some of the sport critics seem willing to concede. His legs are just a little too light for his "upper works," but he has proved them sufficiently strong. It must be remembered that no great contractile power of the leg muscles is ever needed in the ring; the kind of strength they have to have is endurance. That endurance is entirely compatible with small girths is easily proved by the measurements of many track athletes, particularly the Marathon runners. Relatively beefy legs are of no use in the ring; they cannot help their possessor, and they may have the opposite effect. Practically all our very fast men have been comparatively light below the waist.

I have discussed the desirability of strong, and relatively large chest, back and shoulder muscles. The neck's girth is usually found proportionate to that of the chest, though with pugilists "all signs fail" when it comes to neck. One thing you can almost bet on is that boxers of any class will have good necks; it seems to matter very little how small they are elsewhere. Joe Gans, at 135 pounds, had a 15½-inch neck; and "Kid" (William) Parker (a Denver sensation of several years back who, under proper management, would have been a champion), measured 16, with a bodily weight of 133 pounds.

I have been asked many times how this comes, what they do to acquire such "bull necks." Astonishing as it may seem, most of them do very little-that is, purposely, specifically. If a boxer does much catchas-catch-can wrestling in his training this affects the neck, as everyone informed on the sport knows. Again, if he practices head blows in the bag punching, or butts a heavy sand bag (as some of the old-timers used to do), his neck will show results. Further, a few careful, systematic boxers who are also all-round physical culturists, like Freddie Welsh, take special exercises for the neck. But in most cases the explanation is natural, constitutional strength. The great majority of the boxers who go to the top in their work are men of exceptional natural, organic, all-round hardiness, and this condition is nearly always accompanied by a rather large neck. Probably "stopping blows" with the head, ducking, dodging, etc., have some little development effect, though I should term this practically negligible.

A boxer's waist should be small, decidedly smaller than a wrestler's or weight-lifter's of the same height. But it must be well muscled, particularly in front, over the stomach. Sharkey had a strong but extremely small waist—small for his chest and arms. Willard's waist is nearly as big as his chest, and his fat-laden stomach has been a target for nearly every man he has fought. Jeffries' waist was not large, in proportion to his chest—about 34 and 44. Fitzsimmons showed a difference of about twelve inches.

The arms must, of course, be strong, but not altogether in the way popular opinion has it. In most blows the upper arm, especially the much-discussed biceps, has but little to do with the force. The driving power comes from the shoulder and body, as I have said. The elbow joint is of great importance, the muscles around it must be strong enough to resist any strain resulting from the jerk caused by missing one's man entirely. The forearm, particularly the wrist, must be strong and tough. I think a boxer's wrist should receive a good deal of attention; I used to have some of my pupils punch a heavy sand-bag to give the wrist and hand the necessary resistance. If one begins it gently and never strikes carelessly, this is a grand exercise for the fellow who desires to slug his opponent's body. Some boxers of the old school used a "pickling" solution on their hands when preparing for a fight; in the days of bareknuckle contests this was often a good plan, but it is not necessary under present rules and conditions.

And don't forget the feet. A person who has never boxed can have but a vague conception of their part in ring work. Personally, I have been hurt a number of times while boxing, but the injury that just about put me on the shelf, as far as foot-work goes, was a bad strain in the instep of my right foot. I did everything for it, but to this day, after ten years, that foot grows very, very lame if I do much "fancy stuff" on my toes—either in boxing or rope-skipping. The muscles and joints of a boxer's feet get a lot of exercise in road work and in boxing itself, but any tendency to a par-

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How It Feels to Be On a Winning Team

By GEORGE B. WHITTED

Outfield Star of the Pittsburg Pirates

S OME players are mighty lucky when it comes to getting with pennantwinning teams. Others—some of the greatest stars baseball has seen at that have gone through many honorable years without playing on a winning team. Napoleon Lajoie was like that, and they tell me that the big Frenchman was, with the possible exception of Eddie Collins, the greatest second baseman the game has ever

seen. The same fate has followed Walter Johnson. And, switching to my own league, there was Nap Rucker, a consistently brilliant left-hander; the bulwark of the Brooklyn team for years. Nap did not get on a pennant-winner until his old arm had burned itself out, and he was useless, so far as winning games was con-

cerned. And Sherwood Magee, a wonderful batsman, only nosed onto a league when he was so old and slow that he had to sit on the bench.

Magee was a member of the Phillies in 1914, when I was playing the outfield for the World's Champion Boston

Braves. It was in the last days of Red Dooin's régime, and all the club veterans had their eyes on the managerial berth. Magee and Hans Lobert, the star third baseman, were leading candidates for the job, and each was supported by a clique of teammates. When the Philadelphia owners decided on Pat Moran, thirdstring catcher and a coach of pitchers, for the job there naturally was a lot of prospective trouble in the wind.

Pat knew that. He knew that his only chance of success rested in trading his veterans for new players. So he sent Lobert to New York in exchange for Pitcher Al Demaree, Catcher Jack Adams and Third Baseman Milton Stock. His next deal was to trade Sherwood Magee to Boston for Oscar Dugey and myself.

At the time that deal was anything but popular with Dugey and me. We were with a champion team, and fully expected to rake in the Big-Series coin again. But

> to say in such matters, so to Philadelphia we went. There was a funny little incident connected with that thade. Stallings, then manager of the Braves and dubbed by baseball writers "The Miracle Man of Baseball," came to me the night before the transfer was announced and told me that I was going to Philadelphia.

> > "Moran wants another

a ballplayer has nothing

player," he said, "and I haven't quite decided who it's going to be. Have you anyone in particular to suggest?"

"Why not Dugey?" Oscar was our utility infielder and one of

the brainest youngsters in the game, though his arm was weak, and he never could hit very much.

"Right enough," agreed Stallings. "Du-

Oscar and I were rooming together, and that night when I was asleep he came tearing into the room and woke me up.

"They're trading us to the Phillies," he yawped, "and Stallings told me that you suggested that I be sent along with you. Let me tell you something, Possum. If the Braves win the pennant this year while



George B. Whitted.

we're down in Philadelphia I'm coming down to your place for the whole winter and never pay a cent of board.."

"And what will you do if the Phils win?" I asked.

"They wont."

"But if they do?"

"Well, I'll buy you the best pair of shoes money can get," said Dugey; "but you can expect a permanent boarder next winter, I'm telling you."

The funniest part of it is that the reconstructed Phillies *did* win the pennant, and Dugey hought me a fifteen-dollar pair of kicks.

I've been pretty lucky that way. When I broke into the big league with St. Louis that club wasn't much of a winner. As a matter of fact, they haven't won any pennants since. Then they traded me to Boston, and the Braves promptly copped the gonfalon. Next year I was shipped to the Phillies and Moran's men won. Now I'm with the Pirates, and we are making a great fight for the 1920 flag. Not at all bad, I'd say.

There is an entirely different spirit on a winning team than on a loser. A club that is in the ruck without much chance to climb out loses interest in the game. They are bound to. There is no incentive to fight very hard. On a team that is in the thick of the pennant fight

everything is different. The boys are all out there giving the best they've got. They don't grumble over morning practice. Anything that will help give them an edge over the other clubs is welcomed.

We have a

great fighting bunch out in Pittsburgh. Manager Gibson is popular, and we all work our heads off for him. A lot of fans kicked when he traded Nicholson, Barbare and Southworth for Rabbit Maranville, but the advent of the Rabbit on our club has made us. I was a teammate of his in 1914, and he played wonderful ball then, but it didn't measure up to the sort he is playing these days. He has a veteran in Cutshaw on his left, but young "Cotton" Tierney on his right is a youngster, playing his first year in the major leagues, and Tierney has learned a world of stuff by playing with Maranville.

You've all seen the Rabbit in action. He is a good-natured fighter—and, Lord! what a wonderful ballplayer. Naturally, when the Braves fell into the second division of late years his playing was not the scintillating sort he is capable of. No matter how hard a man tries, he can't keep to the top notch of his ability with a loser. But, with a winning, fighting ball club like Pittsburgh, Maranville has again taken his place as the greatest shortstop in baseball. There is a vital, bristling atmosphere on a pennant contender that just naturally brings out the best that is in a man; that is, in a ballplayer with the real battling heart.

I'll admit that there are exceptions to this. There is, I have been told, a pitcher

George B. Whitted.

in the American League who always pitched wonderful ball with a tail-end team. He would be out there in the box working his head off, twirling the finest sort of ball against every team. A pennant contender bought him at a high price, expecting that he would be better than ever with that sort of a team behind him. The reverse was the case. He never developed into a winner at all.

The explanation was perfectly logical. With the tail-ender he had nothing to lose and everything to gain. If he won a ball game he received the credit of having triumphed over odds. If he lost—well, what could you expect with that gang behind him? When he went with the pennant contenders conditions were reversed. He was expected to win—and his nerve didn't hold out. Maranville, and most ballplayers, for that matter, do their best under winning conditions. They think more of the club than their personal record, and, consequently, do far better work.

To have a winning club a manager must have men who love the game; who think more of it than they do of their pay checks on the first and the fifteenth. Personally, baseball has been my first and last love. I would rather get in a tight game than do anything else in the world. Why, in 1915, after we had played the last game of the World Series, I came back to the Phillies Park to pack up my belongings and go home. But that old diamond looked so good to me that I had to get out and knock the ball around with some youngsters who were out there.

There are always a lot of rumors going 'round about pennant winners. Newspapermen have to get news, and when it is scarce rumors are seized on and exploited. For instance, there was a lot of talk this spring about a feud between Manager Tris Speaker, of the World's Champion Indians, and his star catcher, Steve O'Neill. It was said that they had come to blows; that O'Neill wouldn't catch another game for Cleveland. That was all tommyrot.

Of course, life on a club that is battling for the league lead is not a bed of roses. There is a tension that puts a man's nerves on edge. Get twenty-four high-strung, athletic young men together, and no one in

the world can take them through a season without some squabbles. Frank Chance, who led the Chicago Cubs to pennants in 1906-07-08-10, turned from a cheerful young man into a sour, gray-haired grouch in that period of time. It is known that Tinker and Evers, one of the greatest keystone combinations the game ever saw, were anything but friends, and there were other feuds to be smoothed over. Chance had the burden of keeping his men in good humor and top-notch physical condition; he had to map out the plan of campaign for every day's battle, and bear the brunt of opprobrium whenever the club lost; and, in addition, he had to play first base and be the active field leader. It was enough to turn his hair gray in less than four years.

Manager Gibson, of our present Pittsburgh Club, has not quite the troubles to bear with that Chance had. In the first place, he is a bench manager, and so is relieved of the duty of playing. Secondly, he has a club that is well mixed as to age and youth. Charley Grimm, our first baseman, and Third-sacker Tierney are youngsters; Maranville and Cutshaw are steady old veterans. Barnhardt, Yellowhorse, Morrison, Glazner, Mokan, Wilson, Rohwer, are all playing their first season in fast company. A club of this sort is usually a good deal easier to handle than one composed of veteran stars such as Chance had, Naturally, the older fellows think that they know as much as the manager, and do not like to take orders from him, while a club such as ours is more tractable.

Gibson is a brainy man. He had his training with the fighting old Pirates of a decade ago—Fred Clarke, Hans Wagner and that crowd. As a catcher he was rated second only to Johnny Kling, and a man who is as good as that can use his head for something more than a hat-rack.

The last time Pittsburgh won a pennant was in 1909, and the only men still remaining in the major leagues are Gibson, Babe Adams, our start right-hander, and Jack Miller, utility man with the Phillies. The Babe is a wonderful fellow to have on a team. He is thirty-eight years old, has been pitching professional ball for seventeen years, and still is one of the best in the National League. He has the even temper and modesty that goes so far in keeping up a club's morale. Besides, he has the utmost confidence in himself, and the confidence of the team as well.

Did you ever notice how much better a ball team plays behind one pitcher than another? It was the way when I was with the Phillies. Whenever Grover Alexander went in the box the defense stiffened up perceptibly, and the hitting usually began. I remember that on three straight occasions inside of ten days I won games for Grover by driving in runs, once with a home run in the twelfth inning. We always felt that Alexander's presence in the box gave us an edge on the opposition—and that confidence did a lot to win for us.

It is a peculiar fact that too much success for a team inevitably beats it. Take the old Athletics, for example. They were, beyond question, the finest ball club ever gathered together. Every man was a star in his position, and the pitching staff was a magnificent aggregation. They should have walked away with the American League pennant of 1912, but overconfidence beat them. They felt that they were the class of the league—as, indeed, they were—and by their carelessness allowed the Red Sox to lead them to the wire.

I was a member of the Boston Braves, that recording-breaking team, in last place on the Fourth of July, 1914, and a pennant winner at the end of the season. We played the Athletics in the World Series. Not one critic in a thousand conceded us an outside chance to win, and we walked away with four straight games, a feat never performed before or since. Our club, with the exception of Johnny Evers, was a young one, and the blazing spirit of the Crab and our manager, George Stallings, kept us on our toes. Stallings was a driver-and we worked for him. Every day we went out on the field, imbued with the ardor of schoolboys. We worked on the theory that it was a good thing to try unceasingly. If we lost we were not much worse off; if we won were that much better off. It was that spirit that cut through the opposition and landed us on top.

On the other hand, the Athletics had been such consistent winners that they had become blasé. Their work did not have the pep, the sparkle, the love of the game itself that does more than anything else to bring victory. They had it in 1909-11 and 13. Emphatically they did not have it in 1914.

Gibson has been lucky this year in picking up some mighty good young ballplayers who have done excellent work in their first year of major league ball. Lefty Glazner, John Morrison and Moses Yellowhorse are more than promising pitchers. They stepped into a winning stride at once and backed up the campaign-hardened regulars, Cooper, Adams and Hamilton. When Bill Haeffner, the young catcher who made such a promising start in 1920, refused to come to terms with the club, Gibson promptly stepped out and corralled Mike Wilson. Wilson is a Philadelphia boy, who played with Northeast High School and made a bigger reputation at football in college and professional ranks than he did on the diamond, where he is, undoubtedly, a corker. Mike was a "leatherneck" during the war, and carries the Marine fighting spirit with him in the big league. Some of the boys have dubbed him "Scrapiron," because of his aggressiveness. Then there is "Cotton" Tierney, the best-looking infielder who has broken in since Maranville's day, and Barnhardt, a mighty good infielder, too, Mokan and Rohwer, a pair of slashing outfielders, complete the list of Gibson's successful rookies. When I injured my ankle earlier in the season, Mokan stepped in and rapped out three hits, including a double and a triple in his first big league engagement, You can't beat that sort of fighting spirit, and yo ucannot blame us for having confidence in Gigson when he gets a raft of potential stars like that in a single season.

On a ball club that is losing consistently you find little spirit and less interest. Few of the men turn out for morning practice, and there is an undeniable effort for a man to think of his own average rather than the club's. It is perfectly natural, as George Smith, the Phillies' pitcher, pointed out.

Smith, though twirling some good ball, lost twelve of his first thirteen starts in 1921. On of the players commiserated with him after losing a tough 3 to 2 battle.

"Well, nobody can blame you, George," he said; "you pitched a darned good game." (Continued on page 42) September, 1921

Hand-Balancing By ROBERT B. SNYDER, Jr.

Editor's Note:-This is the second of a series of articles on Hand-Balancing. It will be continued in the next issue.

HE next feat to accomplish is the "Elbow Stand," or "Tiger's Bend." Now that you are able to push up to a hand stand and are able to make several repetitions of the "dip," instead of

starting to push up to a full-arm balance after having gone down and touched the chin in the "dip," just let your elbows drop as shown in Fig. 8 and you have the "Elbow Stand." To rise again to full-arm balance if you are not unusually strong in the deltoids and triceps, you will have to throw the body quickly forward onto the hands and all in one continuous movement attain the full-arm balance. Anyone who is ableto do the "Full Mount" on

the rings, parallel bars or horizontal bar, will not have with straight legs) at the Milo Gymnasium, Pittsburg, in November, 1920; my body weight being 1461/2 lbs, in costume.

Now, I want you weight-lifting record aspirants to listen to this. Do you aspire to become one of the few athletes who are able to do the "double body-weight" (lift twice your weight above the head in the two-arm jerk)? If you really do, and want to learn the real secrets of the pushing power of such men as Emil Van Mogrossey, the Hungarian champion who weighed 155 lbs. and pressed with two hands 267 lbs. and jerked over 320 lbs.; Maxick, of London, who pressed 254 lbs. with two hands

and over 320 lbs. in the two-hand jerk, while weighing only 147 lbs.:



Fig. 7

Fig. 9

much trouble with the "Tiger's Bend." This exercise, being more strenuous than the "dip," is a much better aid to those who practice weight-lifting, in aiding them in keeping their deltoids, triceps and wrists in condition. This exercise, in conjunction with my weight-lifting exercises, has enabled me to accomplish 200 pounds in the two hands clean and press (British style

Otto Arco, the Pole, weighing 137 lbs., who pressed 231 lbs. with two hands, twoarm jerk 277³/4 lbs.; if you really want to emulate these men, you must practice the "dips" and the "Elbow Stand." Make repetitions of each of them daily, because the aforesaid men were expert hand-balancers and owed most of their supreme pushing power to the fact that Page 20

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they spent countless hours at this form of exercise.

Perpendicular Hand-Stand.

The perpendicular hand-stand is purely a balancing feat. It is attained by drawing lowed sufficiently, the body roll will give impetus enough to enable you to reach the position of Fig. 14, and still pushing, to Fig. 15; and from there to a full-arm balance. The whole secret of this feat is the arched back.

The One-Hand Stand.

The one-hand stand is the feat de luxe of hand-balancers and



Fig. 11

the feet and head in simultaneously from the full-arm balance until the body is perpendicular to the ground. Fig. 9 is not absolutely straight but will serve to illustrate the feat.

Roll Up.

Stand as in Fig. 10, drop to the knees as shown in Fig. 11, and with back hollowed continue dropping until the position of Fig. 12 is attained; then roll from the knees to the top of the chest. If the back is holFig. 12

is very seldom accomplished in less than five years of practice.

Feats of Hand to Hand Balancing.

Introducing to you our youthful "topmounter," Clark Dofflemyer, who is fourteen years of age and has made truly wonderful progress at hand balancing, having practiced for less than six mouths. He is the champion all-around athlete for his age and weight in Hagerstown, Md., and is absolutely fearless.

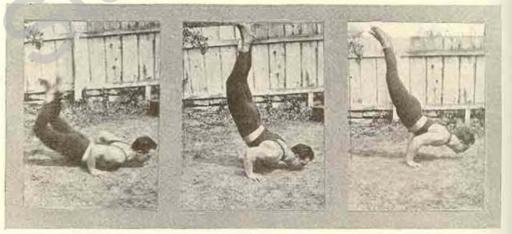


Fig. 18

Fig. 15



Fig. 16

Fig. 17 illustrates a stand on neck on hand stand.

First Feat of Hand-to-Hand.

Stand on under - stander's hands while lying on the back. The top - moun-

Fig. 17

ter presses or throws up to a fullarm balance, as shown in Fig. 18.

Fig. 19 shows hand stand on wrestlers bridge. The under-stands proceeds to the wrestlers bridge, and the top-mounter as in the foregoing feat.

No doubt some of these feats look difficult, and they are, I'll admit, rather difficult, but if the novice starts at the beginning and practices faithfully until he masters the or-

dinary two-hands stand, he will then realize that the feats that follow can also be mastered, for each succeeding feat in the fascinating sport of hand-balancing is more difficult than the one preceding, though the experience and strength gained in mastering the former will enable you to accomplish the latter, and with less trouble than you think.

If the student anticipates taking up the study of artistic hand-to-hand balancing feats with a real enthusiastic partner, whether contemplating doing top or bottom work, the strength gained from the practice of graded bar bell exercises will prove ever so valuable—

STRENGTH

for the top-mounter will derive the strength necessary to push himself to a full-arm balance from whatever position he may find himself locked, and the understander will develop the strength, not only in the upper part of the body but strength in the lower limbs, which is just as essential to him as deltoid development for the catches and throws which he will make with the top-mounter. Not only that, but it will give both the top and bottom man that symmetry of figure that will give them stage presence should they intend doing exhibition work. Anyone who has seen the "Arco

I mean by calling your attention to the capabilities of the hand-balancer who has trained with bar bells and one who has not. Otto Arco, famed in Europe as an exponent of wrestling, weight-lifting, hand-balancing and muscle posing, has performed Brothers" perform will know what miraculous feats with his partner in hand-to-hand work, which I doubt could have been accomplished had he not indulged considerably in

the practice of weight-lifting.

Hand - balancing exercises will take the place of bar bells when the weight-lifter is a way from them, and will enable him to keep in condition. (*To be Continued*)





Page 21

Fig. 19

Page 22

September, 1921

An Energy Table Its Relation to Weight-Lifting By EDWARD W. GOODMAN

HE outlet of strengh is the dispensation of nervous and muscular energy, and the disposition of such energy, as measured by units, is governed by three elements, insofar as weight-lifting is concerned:

1. Time.

2. Amount of weight displaced, and,

3. Actual distance the weight is raised.

Thus, it may be stated that the ultimate effect of any weight-lifting exercise, or feat of strength, upon the system as a whole depends almost entirely upon the amount of energy expended in the raising of a given weight a certain distance and within a definite space of time.

The statistics of engineering mechanics show that:

One horse-power equals 33,000 foot-pound minute units (or the energy required to raise 33,000 pounds 1 foot within one minute); (if the same weight is raised in 1 second, the total result will be 60 horsepower).

One foot-pound minute unit equals the power necessary to lift 1 pound to the height of 1 foot within one minute. If the same weight is raised in 1 second, the total result will be 60 foot-pound minute units.

One foot-pound second unit equals the power required to raise 1 pound a distance of 1 foot within one second. (This is the smallest unit of energy).

Here we have a fairly comprehensive table for the figuring of the amount of energy expended by weight-lifters.

In view of the physical qualifications of weight-lifting athletes, it must be borne in mind at the same time that so far as gross weight is concerned the amount that can be lifted depends not so much upon sheer muscular strength alone as it does upon the position assumed by the athlete in performing his lift.

For example, let us compare the respective performances of a dead-weight lifter with a bar-bell athlete, both of whom it is assumed are equally in fine physical condition.

The back-lifter will get into his position under a platform supported on trestles or "horses," and, resting his hands on a box or chair, will lift with his back and legs, say, 3,000 pounds in one second of time. Now, this tremendous weight is usually moved up but the fraction of an inch; but conceding that it is lifted as much as onequarter of an inch clear of the standards, then the total showing in foot-pound second units of work would be (one-quarter inch equals one forty-eighth of 3,000 pounds)-64 units.. If the weight was raised one foot, the energy expended would equal 3,000 foot-pound second units (provided it was raised in one second); and if it was raised in less time than one second, the final result would be accordingly greater, but the average time would be about one second.

The bar-bell athlete, using, say, 250 pounds in a two-arm jerk, will raise this weight from the floor to arms-length above the head (a distance of approximately seven feet) in two seconds' time, thus expending (one-half of 7 times 250 pounds) 875 foot-pound second units, as against the back-lifter's 64 units, thereby using up almost 13 times as much energy as the backlifter with his 3,000-pound lift!

The demonstration of the expenditure of a single horse-power (or the energy required to raise 33,000 pounds one foot in one minute) may be aptly illustrated by the tossing aloft of a bar bell weighing 55 pounds a distance of 10 feet from the ground within one second.

It can, therefore, be seen that the more energy that is expended within the same period of time the greater effects will naturally be evidence upon the entire system, and the more dynamic will be the cultivation of the muscular and nervous organism by reason thereof.

(Continued on page 45)

H. C. Nokes, of Oxford University, photographed at the recent Oxford-Cambridge Yale-Harvard meet, Nokes is the star weight man of the British team.

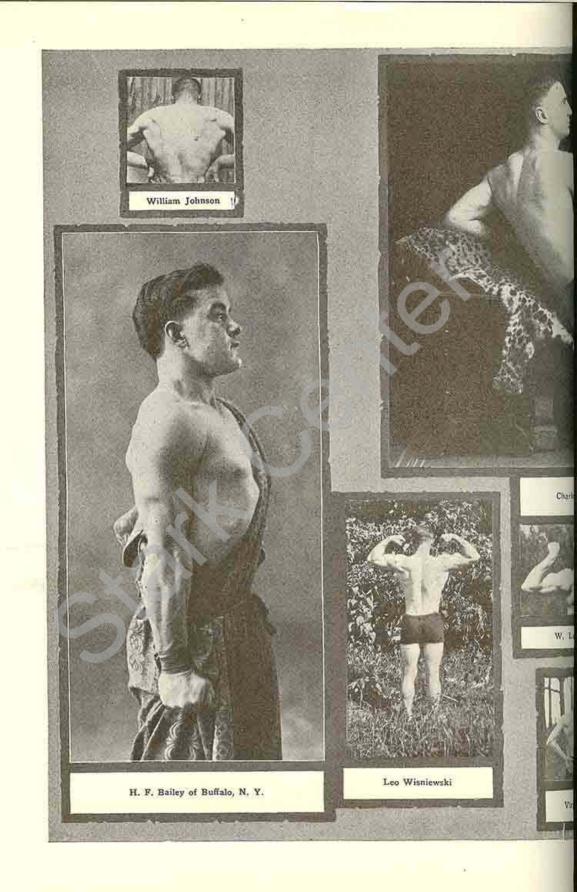
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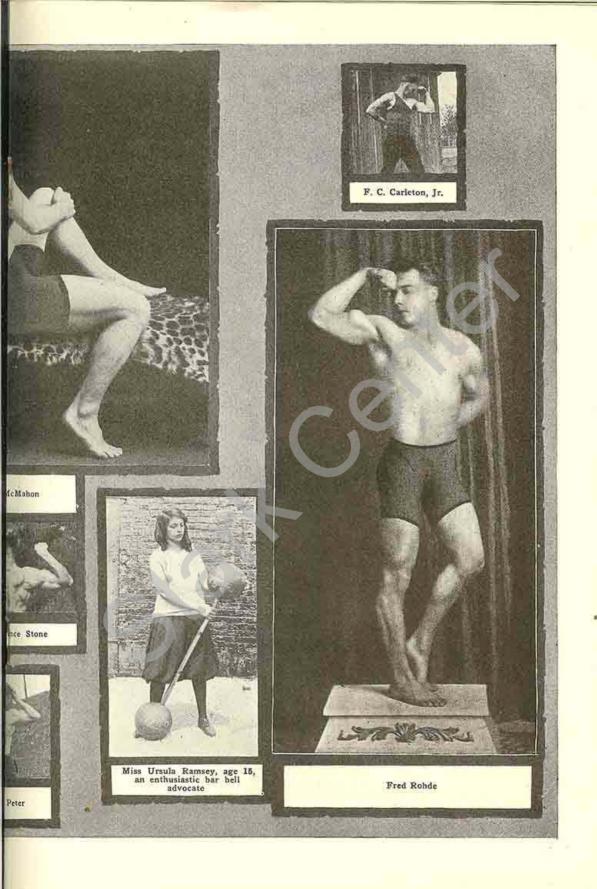
Bud Houser, the California High School boy who defeated Pat McDonald, champion shotputter, with a heave of 46 ft, 113/ in.

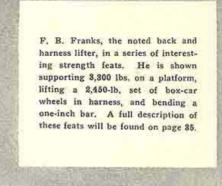
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This remarkable photograph shows Neal Gourdin, the Negro star broad jumper of Harvard University, winning the broad jump event at the recent National A. A. U. meet at Pasadena, Calif., with a leap of 28 ft. 73/4 in.

C International







How to Take Your Measurements

By ALAN CALVERT

VERY physical culturist, be he beginner or finished product, is vitally interested in his bodily measurements. Such measurements enable him, if a beginner, to keep accurate record of his increase in muscular bulk, or if he is reaching his limit, to compare his proportions to those of noted lifters, "Strong Men" and Artists' Models.

But—of what value are such measurements as a basis of comparison, unless we all measure ourselves in the same way, and around exactly the same parts of the body? Or to go further, how can an athlete determine his own improvement unless he knows enough about it to be sure that each time he takes his measurements over identically the same spots?

Many an ambitious youth has become discouraged and given up exercise because he is unable to even approach the published measurements of widely advertised "strong men"—not knowing that some professionals are not only prone to exaggeration, but also take their measurements in odd and peculiar ways that give astounding totals in inches.

Personally, I believe that standard rules for measuring one's self are just as necessary as rules governing lifting or weight throwing or any other form of athletics.

In many lifts the Austrian records are better than the French records, but as the Austrian lifters have more liberal rules there is no real basis of comparison, and the difference does not bother one who is posted; although the average English or American reader unquestionably gets the impression that Austrian lifters are better than their French competitors. Similarly, the average physical culture enthusiast who has never really thought about it, gets a fixed idea that every professional has very much bigger bodily measurements than any or all amateurs.

All of you have seen measurement-charts accompanied with an outline drawing of the human figure, said figure being covered with ruled lines showing where various measurements are to be taken. Such blanks are issued by practically all "systems" and are found in many books on gymnastics and physical training.

Compare half a dozen such drawings and you will probably find that no two are identical; that is, no two have the measuring lines drawn across exactly the same parts of the body. For instance, the figure on one chart may show that you are to measure the thigh half way between knee and crotch, and another may indicate that thigh measurement should be taken at the crotch, and still a third direct you to measure two inches below that point.

If professional teachers and instructors have not agreed on standard places at which to take the measurements, it certainly is not the fault of the amateurs if there is confusion and misunderstanding on the subject. I assuredly do not believe that any one man, or self-selected group of men, should assume the right to lay down rules, but wouldn't it be interesting and helpful if the many thousand readers of *Strength* (all of whom are interested in bodily development) should adopt the same rules, so that an intelligent standard of comparison can be established?

So I will give my own ideas. I do not claim that they are right, but they may have some value because I am really interested in the subject and have personally measured hundreds of men, and have inspected the charts of thousands of others.

The Neck

Stand in military position and measure smallest part of neck, which in most men means passing the tape around the line of the "Adam's Apple." Do not tense the neck muscles, for what we want is the normal neck measurement. If I said largest part of neck, some chaps with big trapezius muscles would be measuring down around where the shoulders taper into the neck.

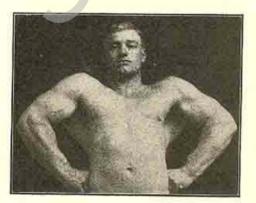
If you hold your head up, your neck will measure more than it will if you allow your head to droop. Few people seem to be aware that the neck muscles can be flexed so that a difference of one to two inches can be shown between normal and flexed positions in a heavily built man. If you draw your head back, shoot out your lower jaw and stiffen all the neck muscles, your neck will swell out amazingly. I know plenty of men who can rip off the top shirtbutton by thus flexing their necks. To get an accurate neck measurement have a friend handle the tape.

The Chest

It is practically impossible to measure your own chest properly, so a friend (preferably an enthusiast like yourself) must be present, and I will tell you why.

The measurement of the chest varies with every movement of the head and arms and every respiration. Stand in a slouching position, and your head is hanging and your chest is flat. Stand squarely on both feet with back flat and chin up, and your chest is noticeably bigger than when you slouch. Again, if you reach both arms above your head, your chest is distended and measures more than when your arms are hanging limp at your sides.

If you hold the tape yourself you have to lean your head forward in order to read the figures. That flattens and contracts your chest. On the other hand, raising your hands and holding the tape in position has a tendency to spread the shoulders and in-



crease the size of the chest, but these two errors do not counterbalance each other.

I believe that tape should touch armpits and be exactly horizontal — this should make tape touch the nipples. You should stand erect, but easily, not stiffly. Don't let your head sag but don't throw out your chest like a pouter pigeon, for we are now trying to get normal chest measurement and normal means normal, *not* strained or artificial.

Breathe quietly and, of course, hold ribs stationary at moment tape is being read.

The above is called the normal muscular chest measurement. If you want what is called the normal respiratory chest, the tape should be passed horizontally around body about two inches below the lower edge of the pectoral muscles.

Expanded Chest

It all depends on what you want. If you desire to know how much you can increase the size of the chest by air pressure from within, you do it by simply inhaling all the air you can without spreading your shoulders or flexing a single muscle. If you measure below the chest muscles you will get a truer index of *lung* expansion than if you measure under armpits.

Enthusiasts on development soon found out that by developing and controlling the muscles of the upper trunk (which move the arms, ribs and shoulder blades), they could make the most astounding temporary difference in chest measurements, without deliberately inhaling or exhaling. Almost any one with good back muscles can slowly blow the air out of his lungs, and at the same time swell out his chest, and show an actual expansion of four or five inches while the air is being expelled. But that is muscular expansion, not lung expansion. Conversely, an expert can fill his lungs with air without distending his ribs to any noticeable extent, simply by depressing his diaphragm.

Again, some weight-lifters of my acquaintance can spread their shoulder-blades so far apart that their backs become, for the instant, several inches broader than before. Look at the accompanying picture I took of Joe Nordquest. When in normal position Joe's back is extraordinarily wide, but when he spreads his shoulder-blades and flexes his back muscles in the position shown, his back becomes about six inches wider than before. You can see how tremendous he becomes at the armpits (just where you measure the chest), and yet he does not inhale deeply. If I told you how much his chest measures in this position you would not believe me.

Some men lay such stress on expansion that they will do anything to show a maximum difference. Actually some chaps exhale violently, flatten their chests and measure around the *lower* ribs—(this, of course, is extreme contracted chest, but *they*, call it normal). Then they inhale deeply, strain the ribs upward and outward, spread their shoulder-blades, harden the big muscles on broad of back and *measure at armpits*. Do you wonder why they are able to claim an expansion of 10 or 12 inches?

Since all these things can be done, why not rule that expanded chest measurement shall be taken as follows:

Tape horizontal and at level of armpits.

Arms hanging limp at sides (not raised). Ribs raised only by pressure of air within.

No spreading of shoulder-blades or flexing of back muscles.

That *ought* to give us something to go by. If you readers don't agree, write in and tell the Editor about it. Ideas from experienced men will be particularly welcome. What we should all do is to agree on some method which the majority is in favor of, and then measure ourselves that way.

The Waist

Your standing position affects your waistgirth just as it does your chest-girth. Stand erect, chin up and chest out and your waist-line is smaller. Slouch, and your waist is distended. Therefore, measure waist at line of navel when standing in military position. Or rather, have a friend measure, for the moment you bend your head so that you can read the tape, you are adding a trifle to your girth.

Lots of men, both athletes and non-athletes, are proud of the fact that their chests are much larger than their waists. So they fall into the same habits as the chest-expansion enthusiasts. Such a man, when measuring his chest, puffs it out to the limit. When measuring his waist, he draws his abdomen in, and this decreases his *normal* belt-line by z or 3 inches.

I have seen some of these "muscle control" artists draw in their abdomen until they seemed to be only a couple of inches through from front to back— you could see they had room for their spines but wondered what became of the rest of their "insides." I know a man with a 42-inch chest (normal) who can contract his waist until it measures 26 inches.

Of course, we want your normal waistso measure as directed above.

The Hips

Stand squarely on both feet, heels together. Feel for points of hip-bones on outside of legs, a fraction of an inch higher than the crotch. Pass the tape over these points and it will also pass over centre of buttocks. You can take this measurement yourself as bending over to read tape cannot alter width of hip-arch.

This is a measurement which many consider unimportant, but is really most important to all.

Wide hips indicate the possibility of great thigh development; just the same as breadth of the bony framework at shoulders shows that the individual can usually acquire a large chest and great arm and upper trunk development.

Shoulder (Not Shoulders)

Another important measurement quite frequently overlooked by those athletes who fail to realize that fine development of the deltoid muscle of the shoulder is more important than biceps development—in fact, that a huge upper arm is useless athletically unless accompanied by an even larger deltoid.

I suggest taking measurement in two ways:

First—Normal: Arm hanging limp at side and tape passed under armpit and then vertically over top of shoulder. Deltoid muscle relaxed.

Second—*Flexed*: Arm stretched horizontally at side-deltoid muscle flexed—tape passing close as possible to armpit and then perpendicularly around the shoulder muscle.

Upper Arm

Which is what most people call the biceps, probably because the measurement is usually taken to show the greatest size of the flexed biceps.

The generally accepted way is to hold the arm out to the side, and doubled up with the clenched fist near the ear and the biceps muscle making a beautiful hump on top of the arm. While a measurement taken in this position does not always show the greatest size of the upper arm it is so customary that it hardly seems worth while to try and change it, providing we all hold our arms in that position when recording our measurements. It is, however, difficult to hold the tape in one hand and at the same time concentrate on flexing the right biceps, so your friend is again necessary-both for this and for the forearm and wrist measurements.

I realize that to the enthusiastic beginner there is nothing quite so soul-satisfying as the large and inspiring mound made by rapidly growing biceps. But as the novice gains experience, he realizes that the triceps muscle at the back of the upper arm is bigger than the biceps and that when the elbow is raised forward and upward he looses more from the stretching and relaxing of the big triceps than he gains from flexing the biceps.

Some lifters have such wonderful triceps that their arms girth almost as much straight as when doubled up. For the man with equally developed biceps and triceps I have found that the greatest size is obtained when upper arm is held close to side and forearm horizontal, palm of hand up. This brings upper arm and forearm at right angles to each other and then if *all* the muscles of the upper arm are fiercely flexed, the tape will show 3 or 4 per cent. more than when the arm is held in the conventional position.

The Forearm

Here is one of the greatest subjects of controversy. Most instructors simply say "measure at largest part" and let it go at that. Now in the beginner, especially when he is slender, the largest part is usually just below the elbow joint; while in the forearm of the well developed expert the largest part of the forearm is about two

inches below the elbow joint. In the first case it is the width of the bones which makes the largest part, but as the muscles develop they increase in size and the "belly" or thickest part of the muscles is considerably below the elbow as in the second case. I believe the easiest and fairest way to measure the forearm is to hold the whole arm straight, with fist clenched and wrist straight; that is, turned neither inwards or outwards. There is a big group of muscles in the inside (or "palm" side) of the fore-arm, and even if the arm is held straight an experienced chap with a good arm can coax the tape to show 1/2 to 3/4 of an inch more by bending his wrist inwards and flexing the muscles just mentioned.

Grab a pair of flying rings and "chin" yourself, keep pains of hand toward each other and as you go upwards watch one of your forearms. When you are half way up you will notice a big muscle making itself very apparent. It starts near the base of the thumb and is fastened to the outside of the upper arm bone.

If your forearm was measured while you were half way up while "chinning" it might show anywhere from one to two inches larger than when measured in the usual position I recommended above.

Many professional lifters have marvelous forearms developed by long practice at "curling" moderately heavy dumbbells. When such a professional tells you that his forearm measures 15 to 16 inches around you can feel pretty sure that when he measured he bent his arm at right angles, bent his wrist inwards and clenched his fist tight; and if you practice the "gooseneck" position shown in accompanying illustration you can in time show forearm measurement 15 per cent. greater than when taken with arm and wrist unbent. But I think you will agree with me that as most people don't know these little points, it is fairer to measure in the simplest position possible.

AMERICAN ATHLETES WIN ALLIED CHAMPIONSHIPS

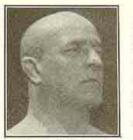
Coblenz, July 29.—The American Athletes are champions of the Rhineland. At the conclusion of the recent athletic carnival the scores stood: United States, 209 points; France, 106; Great Britain, 59; Belgium, 38. STRENGTH

Page 31

Head Locks and Chancery Holds

By WILLIAM J. HERRMANN

Of Herrmann's Physical Training Institute, Boxing, Fencing and Wrestling Academy, Philadelphia, Pa.



Stanislaus Zbyszko

Dear Herrmann:-

The line cuts illustrating these wrestling lessons were especially made from original drawings sketched direct from life by "Strength's" special artist. Einar Johansen, of Norway, the light heavy-weight wrestling champion of America; Charles Olsen, of Sweden, the wellknown professional heavy-weight wrestler; Joe Lustig, of New York, the former middle-weight wrestling champion of America; Cyclone Green, of Philadelphia, the popular light-weight wrestling champion, and William J. Herrmann (himself) have posed for the drawings which illustrate this wrestling course. This aggregation of wrestling stars will also collaborate with William J. Herrmann in presenting these lessons.

June 3rd, 1921.

Advance proof sheets of "Head Locks and Chancery Holds," also proofs of "NELSON'S—How to Take and How to Break Them," are the most thorough and instructive articles on these wrestling holds I've ever seen in print.

STANISLAUS ZBYSZKO, World's Champion Catch-as-catch-can Wrestler.

(Continued from last month.)

Side Chancery and Back Heel.

Still another method of tripping your man while holding a Standing Side Chancery, in order to bring your man down to the mat, is by placing your left heel on the mat, outside and in back of your opponent's left heel. Trip him over your left heel as you push his body weight off towards the left, in order to take him off his balance and weaken the support of his left leg. By instantly following up your advantage in position you can readily trip or back-heel your opponent and bring your man down to the mat for a fall.

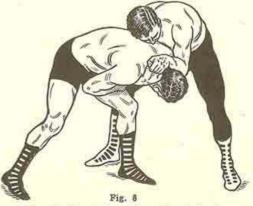
Fig. 20 illustrates this Trip in combination with a Standing Side Chancery Hold.

In the preceding variation of trips used in order to more readily bring your man down to the mat while holding a Standing Side Chancery Hold, be sure you attack your opponent's left leg with your left leg if holding a Standing Side Chancery under your left shoulder, or attack his right leg with your right leg if holding a Standing Side Chancery under your right shoulder.

Don't attempt the use of any trip, stroke, kick-away, ankle clip, crook or back heel in order to bring your man down to the mat, unless your opponent's head is first securely held in a Side Chancery Hold and his head pulled well down, under and across your chest. Keep up strong pressure, don't ease up, relax or cease punishing with your Chancery Hold for an instant.

Side Chancery and Leg Hold.

An effective Side Chancery combination good for a direct positive fall if properly held and applied. Although this hold, if well held, is practically a sure winner, it nevertheless is quite a difficult hold to safely secure on a clever wrestler your equal.



The Original Standing Head Lock.

STRENGTH



Side Chancery and Outside Back Heel.

It can be obtained by "turning in" on your man and getting a Side Chancery Hold under your left arm as though you intend using your Chancery Hold in combination with a Hip Lock, but instead continue your "turn in" further still, in order to enable you to grasp your opponent's right leg with your right arm.

Firmly hold both your Standing Left Chancery and your hold on his right leg with your right arm. Pull in and double up your man, close and tight. Bring his right knee and chin as close together as you possibly can. Hold him tight in spite of all struggles. Bend your knee and lower your body down towards the mat in order to place and hold him fair and square on his shoulders to score a fall in your favor. A difficult hold from which to escape if properly held and applied.

Fig. 21 illustrates this effective Side Chancery and Leg Hold commbination, while Fig. 22 illustrates a fall secured by its use.

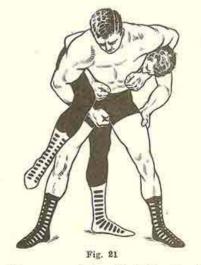
In applying Head Locks or Chancery Holds care must be exercised to avoid the possibility of choking your opponent. If applied on or across your opponent's throat instead of his head, temples, cheek bones and jaw, it is not far removed from a Strangle Hold. As Chancery Holds to a certain extent are more or less related to Strangles, be careful you don't let your Chancery develop into a hold that may possibly disqualify you, as disqualification would lose you the match on a foul.

Any hold that strangles your opponent, be it purposely applied or accidentally developed or developed or applied accidentally on purpose, is a Strangle. As Strangle Holds are barred, and justly so, in all fair wrestling contests, the release of any hold that chokes, throttles or strangles can be demanded by the referee who is the sole arbiter, judge and jury as to when a Head Lock, Chancery or any Hold develops into a Strangle, or as to what constitutes a Strangle Hold in actual competition.

The Original Head Lock

The hold now to be described is the chip, originally referred to as a Head Lock by professionals long before the days Lewis' famous Head Lock was brought prominently before the public. In order to definitely distinguish this particular Head Lock from the Side Chancery Head Lock made famous by Lewis, professionals, as a rule, usually refer to the latter Head Lock by definitely associating Lewis' name directly with it.

In order to avoid confusion between this, the original Head Lock and a development of the Side Chancery Hold usually referred to nowadays as Lewis' Head Lock, refer to the following two illustrations and note their distinguishing characteristics. Illustration on page 33 shows Lewis himself holding the Head Lock he made famous,



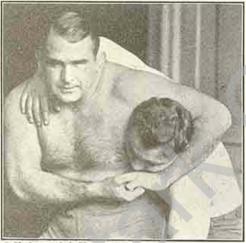
Side Chancery and Leg Hold Combination,

while Fig. 8 illustrates the old original Head Lock now to be described and which still holds its name of Head Lock even to the present day.

Figures 23 and 24 illustrate this, the original Head Lock (not Lewis' Side Chancery Head Lock) applied on your opponent when he is the "under man," on his hands and knees, "on all fours" on the mat.

This hold is described on the supposition that both wrestlers are down on the mat, with you working on your man while he is on your right side on all fours.

Put your left forearm across back of your opponent's neck as you reach under and across opponent's chest with your right arm. You can either lock your hands by



© Underwood & Underwood Lewis and His Famous Head Lock.

interlacing your fingers or preferably interhook or hook-join your hands by the use of the finger-foil method of locking the hands in order to check any attempt on the part of your opponent to attack your fingers. Push down hard with your left forearm as you pull opponent's head down and under his body with both of your arms. Get your elbows as near each other as possible and clamp his head tight between your hands, wrists, forearms, right shoulder and right side of your body in order to tighten and hold firm this Head Lock on your opponent, as illustrated in Figures 23 and 24.

This hold, if applied when working on your man when he is on your right side, is really a combination of the under half



Fall from Side Chancery and Leg Hold Combination.

of a Three-quarter Nelson and the upper half of a Bar Nelson. Under this supposition, the right arm takes hold like the under half of a Three-quarter Nelson taken with your right arm, while the left hand takes the part played by the left arm in putting a Bar Nelson on your man.

Use your right shoulder to good advantage by placing it under your opponent's chest to further strengthen your Head Lock, besides it helps you to more easily pull your man's head under his chest in order to more readily turn him and enable you to fairly and squarely place his shoulders flat down on the mat for a fall.

This particular Head Lock is sometimes termed a Three - Quarter Nelson. This name, however, is a misnomer. It also at times is referred to as a Partial Nelson. Although strictly speaking, this hold is not a Nelson Hold, the term Partial Nelson is a somewhat more appropriate name. However, the term Head Lock—its original name —is still best and more correct, and referred to as such amongst the majority of presentday professionals just the same as in the palmy wrestling days of old.



The Original Head Lock

September, 1921

to as in the palmy wrestling days of old.

Definitely associating Lewis' name with the Head Lock he made famous, will to a great extent avoid confusing Lewis' Head Lock with that of any other Head Lock when referring to Head Locks in general.

To use the above Head Lock to the best advantage, use it in combination with an Inside Grapevine as described in the following Head Lock and Inside Leg Grapevine Combination.

Head Lock and Inside Leg Grapevine Combination

A hold in which an Inside Leg Grapevine is used in combination with the preceding Head Lock held on your man while on the mat on all fours. Secure your Head Lock as above and combine it with an Inside Leg Grapevine in the following manner:

Clamp an Inside Leg Grapevine on your opponent's left lower leg and ankle with your right leg. Your Grapevine will help you to more closely double up your man. This checks him from lengthening his body or to bridge out and to a great extent prevents him from using any effective block or counter move against you. As you turn your man be sure you keep him well doubled up as much as you can. By using your Leg Grapevine to good advantage, you can work his grape-vined left leg up closer to and nearer his head. This gives you greater command of your opponent's body. Keeping your man doubled up keeps him



Fig. 24

Another View of the Original Head Lock.



Fall Imminent from Original Head Lock and Inside Leg Grape Vine Combination.

in a more helpless position. Bring and keep your opponent's head and left knee as close together as possible. Follow up your advantage by pulling his head and shoulders well under his body in order to better enable you to pin his shoulders down tight to the mat in order to secure a fall in your favor.

The above-described Head Lock and Leg Grapevine Combination will, if properly used and applied, lead to a direct fall without the aid of any other additional assisting hold or holds.

Figures 23 and 24 illustrate this, the original Head Lock, while Fig. 25 illustrates this effective original Head Lock in combination with the Inside Leg Grapevine just described.

The Original Standing Head Lock

This hold, the original Standing Head Lock, is precisely the same Head Lock as just described, with the exception of securing the hold while both wrestlers are up on their feet. Fig. 8 illustrates this hold. Yank your man's head down towards the mat and pull his head under to weaken his position and follow up your advantage is precisely the same manner as in the preceding original Head Lock or Head Lock and Inside Leg Grapevine Combination.

(To be Continued)

Editor's Note: Owing to a printer's error in the August issue the name Eiwas Johnson appeared beneath the picture of Einar Johansen, light - heavyweight wrestling champion of America.

Records and Weight Lifting

To the Editor:

I have had the pleasure of seeing Mr. F. B. Franks, the well known back and harness lifter, in action twice here in Sedalia. On meeting him here I recall having witnessed him in action at Clinton, Mo., about 13 years ago. He then was practically a beginner, and is now a finished lifter. If Mr. Travis can lift no more than he says he can lift, he is going to get an artistic trimming at the hands of Mr. Franks, in my estimation. Franks gave a few sundry stunts before the main events. and I will describe them. He first bent a 1/2" steel bar with teeth, followed successively with a 34" bar, 1" bar, and a 114" bar. A railroad spike, about 1/2" square, drove into a 4 by 4, was finally bent over to one side by the combined efforts of some bystanders and Franks straightened it with his teeth, repeated this three times, then bent the spike back and forth with teeth until it broke in two.

He then let some men break a wagon axle composed of steel and iron mixture (not sure of the composition, but that is what the man said who furnished him the axlc), across the back of his neck. The next stunt was the lifting in harness of a 2,450 lb. set of box car wheels, which he did as though it was a toy lift. He rocked the ends of the wheels up and down like a rocking-horse while supporting the weight. The accompanying snap shows the front end down towards the ground during the rocking. He next did a back lift, using eighteen men, approximate weight 3,300 lbs. including the weight of the platform. Sorry couldn't get better picture, but nearly had a fight getting this one. Had to literally shove the onlookers aside, while they protested very firmly,

As it was they stopped the view some.

He concluded his performance with something I have never before witnessed. I have seen several men do the stunt as follows: With two inclined runs, one on either side of their body, the strong man would let a car run over him. You and I know that the car is on the man only a fraction of a second, and the weight is hardly noticeable. But Mr. Franks deliberately laid on his back in front of a Velie six with no boards of any kind, just naked skin like is seen in the back pose and allowed that Velie to run over his stomach. After an attempt of this kind, I would make a good trade-mark for a pancake flour, quoting Mr. Calvert, or the describer of the Los Angeles strongmen stuff. I hope you can use these pictures to advantage in STRENGTH with an article about this coming championship, which is ever coming. Perhaps it will stimulate Mr. Travis or someone else to start this thing humming some other way than with a loud wail for money first before lifting. I understand Mr. Franks to say he is on his way East to take on Mr. Travis.

I was just thinking over the matter of who is the strongest man and have come to the decision that the man who can lift the greatest amount of weight with his body is the strongest We bar-bell lifters cannot bar the man. back lifters from this just because their way of lifting is different from ours. Neither can they bar us, but I believe that Mr. McFadden is right when he says the strongest man is the one who can lift the greatest number of pounds once. The possibilities of some bell lifters to challenge the outcome of this are many, yet for one to challenge the would-bechampion to lift 300 in the two arm jerk, when the champ can only do neck and back work, would be like asking Jack Dempsey to come into the ring and wrestle with the brawny Zybszko. Isn't it a funny proposition all the way around? It looks as tho we will have to have a double championship.

> Yours very truly, Gordon M. Strain, 504 E. 10th St., Sedalia, Mo.

Editor's Note: The pictures Mr. Strain mentions will be found in the pictorial section of this issue.

To the Editor:

My latest measurements and lifts follow: Height 5' 5" Chest txpanded 43½" Weight 146 lbs. Waist 30½" Upper arm 15½" Thigh 23" Fore arm 13" Calf 14" Neck 15½" Wrist 6½" Chest normal 38"

My latest lifts are: Right arm bent press—223 lbs. Left arm—174 lbs. Right arm jerk—172 lbs. Right arm snatch—139 lbs. Right Arm Military Press-102 ll.s.

Two hands Military Press-191 lbs.

Two hands Continental Press-208 lbs.

Two hands Continental jerk-253 lbs.

The above lifts I am ready to duplicate at any time upon short notice.

Sincerely,

Rob't B. Snyder, Jr. 118 E. Franklin St. Hagerstown, Md.

To the Editor:

It was over a year since I began to practice bar-bell exercises and as I have never written you regarding the progress I have made, I thought perhaps you might be interested to know just what I have done.

When I started training I was almost a nervous wreck, due to my twenty month's service over seas, and consequently was unable to do very much for the first eight or ten months. There were times when I was scarcely able to get around at all, but those times began to come further apart until now I am feeling fine nearly all the time.

Last fall I began my regular work. I have increased the weight very slowly, thinking that in view of the condition I was in at first I would gain more by training for health and development only, and that after those had heen attained I could make an attempt at lifting. I have been using a hundred and fifty pounds for the two arm exercises and ninetyfive pounds with one arm. Have practiced the Bent Press and one arm Jerk some, but haven't made any lifts worth mentioning yet. In another year or so I hope to be making some fairly good lifts.

The photos I am enclosing were taken about a month ago. I believe that I have developed considerably since then. My measurements at present are:

Neck: 16 in,	Waist: 30 in.
Chest: 41 in.	Thigh: 21 in.
Upper arm: 1434 in.	Calf: 141/2 in.
Forearm: 12 in.	Ankle: 83/4 in.
Wrist: 71/2 in.	Height: 5' 71/2".
	Yours,
H	arold H. Bartlett,
7	42 N. Diamond St.
	Jacksonville, Ill.

Thomas Mancus would like to get in touch with weight-lifters in Canton.

Address him at 1106 Liberty Ave., S. E. Canton, Ohio.

To the Editor:

I wish to request if you please, that you have articles or reserve a page or two for "original ideas of exercises for development" of the physique.

I have a box full of clippings of exercises for every part of the body, and I am ever ready to have more.

Each reader, no doubt, has one or two ways that are new and good, that we perhaps do not think of, and if you want to keep your magazine practical, why not give us the benefit of those new points of development?

I clip from *Physical Culture* and *Strength* magazines as well as from other sources. I then keep only those I have tried out and find useful.

I have breathing exercises, spinal exercises (but I find weight-lifting fills this bill), tensing movements (used only occasionally for posing, etc.), flexibility, stretching exercises, bending exercises, stomach exercises, feats, chair and handling body weight exercises, etc.

I am anxious to get all the best weight-lifting exercises and I have two composition books filled with weight-lifting exercises in Pen and Ink,

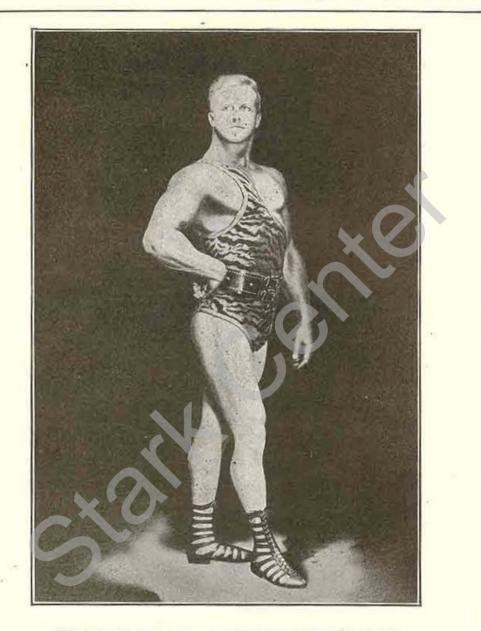
I have been using my first exercises long before I knew of progressive bar bells.

1. Stand close to the back of an ordinary chair with framework. Grasp the two uprights of the frame, one hand on each side, thumbs front (if this description is distinct enough). Now by a motion of the hands alone-moving on the wrist joints-lift the chair seat high as able, but holding your arms straight (rigid, hands gripping hard) and perfectly stationary while performing the movement. Back of chair must not be raised up, but kept in the position at arm's length. NOW WEIGHT TO CHAIR ATTACH AT FRONT. This strongly develops muscles that are too often neglected.

Tie the weight on with a rope, and make it progressive. Use dumbbells or anything you can attach, of which you know the exact weight.

This looks easy, but many will surprise themselves when attaching weight. I would advise every pupil to practice bending nails, (if this far advanced) or starting with 1/5deck of cards progress until $\frac{1}{2}$ deck of cards can be torn. Then progress to a whole deck. Proceed thus until 2 or 3 decks are child's play.

This exercise 1 and the card tearing can be done outside of the regular training program.



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Personal consultation by appointment only On your rest days (if you practice once in 48 hours) it takes little energy to do these exercises, and I find I can do them ten to twentyfive times a day as I find time. The longer the nail, the easier to bend it. (Buy different sizes!)

2. Pump-Handle Exercise.

Push down with arm.

Have a long handle (pipe, broomstick, etc.) and under the middle of it have some support —the back of a chair for instance, or any thing upon which you can fashion an imitation of a pump handle. Now at one end you push down with one arm, and at the other end you attach a weight (you can tie it on, or any way your ingenuity tells you). Start with moderate weights and progress. For LATIS-SIMUS DORSI, etc.

3. President Harding cured his heart trouble by stair climbing. Why not use this exercise progressively? I do.

Hold your heavy bar bell, dumbbell, kettle bell, or any heavy weight most convenient. Walk up, then down the flight, one step at a time. Next two steps at a time as often as you need to for development. I go up three steps at one time, and progress weights daily. Fine for lungs.

4. Strong Pectoral Exercise.

Lie supine on floor, extend one arm (or both) at right angles to your body, on a level with the shoulders, at side, keeping the arm (or arms) straight or nearly so, raise up to "above chest" and return to position.

Note: Your arms must be on the bed or floor at the start. You must hold a dumbbell in the hand, knuckles on floor. Progress your weights from one practice period to the other.

Now I have unusual exercises, and while I find them great, you may not find them to your purpose.

Restpectfully, Ellis Walbert, 111 N. 11th St. Allentown, Pa.

To the Editor:

I am sending you three photos of myself and will send you some better ones later on. I am going to send you my measurements and also my lifts. I am far from being proud of my records, but just want to give you an idea of what I have done sinct I started your course. I was going to send you my record later but I sprained my wrist so I suppose it will put me back for a few weeks. I wish you would give me some advice about that matter. My lifts are as follows:

One arm Jerk-1071/2 lbs.

One Arm Military-671/2 lbs. One arm bent press-100 lbs. One arm snatch-85 lbs. One arm swing-821/2 lbs. Two arm snatch-120 lbs. Two arm press-1221/2 lbs. Two arm jerk-150 lbs. Side press-871/2 lbs. Wrestler's Bridge-1361/4 lbs. Two hands anyhow-144 lbs. My present measurements: Neck: 161/2 in. Upper arm: 131/4 in. Forearm: 121/2 in. Wrist: 7 in. Chest normal: 38 in. Chest expanded: 401/2 in. Waist: 271/2 in. Thigh: 191/2 in. Calf: 131/2 in. Ankle: 93/4 in. Weight: 127 lbs.

> Yours truly, Jos. Dion, 21 Eastern Ave. Northampton, Mass.

To the Editor:

As I know you are never too busy to read a letter from any of your pupils, I take liberty to ask you regarding some records in certain lifts in which I am interested.

Take for instance, the two hand curl, knuckles up. What is the approximate record in this feat?

I weigh 150 lbs. in summer and about 165 lbs. in the winter. I am 24 years of age and training still.

In the foregoing exercise I am using 80 lbs. and expect to go to 150 lbs. Is this possible for a man of my weight. With knuckles down I am using 90 lbs., and in the Bent Press I use 140 lbs. and in the shoulder bridge 240 lbs. In the Military Press two hand can do 140 lbs. while sitting in a chair.

Present measurements: Weight: 150 lbs. Height: 5' 10½". Neck: 16 in. Chest normal: 41 in. Waist: 32 in. Upper arm flexed: 14½ in. Forearm straight: 12½ in. Wrist: 7¾ in. Thighs: 22 in. Calves: 14½ in. Ankle: 9 in.

Yours truly,

John H. Meints, 821 Walter St. Kalamazoo, Mich. September, 1921

Energy What You Must Possess

if you really want to realize REAL LIFE AND MANHOOD. An alert mind, united with perfectly natural (without pills) internal functional activity—health —together with a sturdy physique strength are the chief assets to successful people who really live, enjoy and appreciate all the good things that life offers. Every bit of the above is now within your easy reach—because I have successfully demonstrated that even a weakling CAN attain health and success if he is persistent enough to reach his desired chief aim! Here is the synopsis of my life: Thousands of Baltimoreans will gladly testify that up to my seventeenth year I was skinny, sickly, nervous, with but little chance to live much longer, to say nothing about a successful life, BUT I did not succumb to my pitiable future and to-day, 12 years later, I am the only advertising Physical Culturist with "nerve enough" to challenge the world's best for strength. This shows what a man can do if he really wants to live and succeed. Day after day people of good character ACKNOWL-EDGE THE SUPERIORITY OF MY TRAINING METHODS, as they perceive my honest abilities as a physical specimen and teacher. THEREFORE, YOU, as well as every reader should take it for granted that

Matysek REAL Way to Strength

because he is the creator of the most beneficial Physical Culture course in existence. Prof. Matysek will train you with the most effective and yet harmless exerciser—the *FIVEPLEX* that makes real men. Rounded shoulders, flat chests, weak legs, indigestion, nervous disorders, poor circulation, lack of concentration, insomnia and bodily ailments FLY AWAY under his expert eye. No wonder! He gives PERSONAL ATTENTION. This is why he will REJUVENATE you and



Simply wishing will not derelop you. Now is the time for all good men to become REAL men through practleing my methods.

DOUBLE YOUR STRENGTH

in half the time than the many "experts" who do not exhibit their inefficient exercising device. Look at the accompanying picture. This man will show you the SHORTEST, SUREST, and SAFEST PATH to HEALTH, STRENGTH and DEVELOPMENT. If you are SKINNY, with your cooperation he

GUARANTEES INCREASES

4 in, to chest, 2 in, to thighs, 2 in, to arms, but most pupils exceed this scale. To the normal man he produces such a high degree of development that satisfies his highest aims! No matter what you are now, your progress will be so generous that you will boost his methods. His honest reputation proves that he is no quack.

ADMIRATION

always follows the robust man. Pity trails behind the weakling. BE A PRIDE TO YOUR SEX. I CAN HELP YOU! My exhaustively produced 48-page booklet, together containing 26 fine pictures of myself, many full-page size, explains all details of my UP-TO-DATE well-proven methods. The book, which YOU CAN HAVE FREE, will give you the "foundation" and start you on the TRUE COURSE that will work wonders with you in mind, body and your affairs. Right—NOW—write for it. Enclose 10c. to help cover postage and wrapping. To be up to date you must read this book. It's free. In addition to this "revealing" book, you will be given an opportunity to avail yourself of my expert advice ABSOLUTELY FREE because I take pleasure in assisting my fellow human beings and because it would be a sin if I kept my unduplicated discoveries—now only a Modern Triumph—to myself.

PROF. MATYSEK, 523 N. Charles St., Baltimore, Md.

The Question Box

A. F.—The record for chinning the bar with two hands is held by Anton Lewis, who chinned 78 times at Brockton, Mass., April, 1913. The record for chinning with one arm is held by A. Cutler, Louisville, Ky., Scpt. 18, 1878; and for one finger by P. O'Dea, Madison, Wis., May 7, 1898. The record for dipping on parallel bars is not available.

No special exercises are necessary to increase the height. Exercise all parts of the body regularly, and the height increase will take care of itself.

S. I.—Eugene Sandow (whose right name was Meuller) was born in Konigsberg, Germany, April 2, 1867. As a boy Sandow was healthy and well formed, but was not exceptionally strong, nor did either of his parents possess any more than normal strength. Up to his fifteenth year he was of slight build and delicate constitution. He had, however, a pronounced fondness for athletics and was soon able to excel in all games and pastimes.

His measurements were: Height 5' $8\frac{1}{2}$ "; weight, 185 lbs.; normal chest, 46"; waist, 34"; upper arm, $17\frac{1}{1}$ "; flexed forearm, $14\frac{1}{4}$ "; thigh, $24\frac{1}{2}$ "; calf, $16\frac{3}{4}$ ". Sandow's best lift in the one arm bent press was 271 lbs.

T. M.—Robert Snyder's present measurements and lifts will be found in the Records and Weight-Lifting Department.

M. F.—The two most effective exercises for developing the back muscles are as follows: Place a moderate weight bar bell on floor in front of you, and grasp it with the over-grip. Raise the bell until the handle bar touches the chest, but do not raise the back—keep it bent and at right angles to the legs. Lower arms and repeat movement five times.

Second exercise: Assume same position as in first exercise. Instead of raising bell with the arms, keep the arms perfectly straight and raise the body to an erect position, lifting the bell with the muscles of the back.

M. S. C.—The most effective exercise for developing the hand, wrist and forcarm is the two-arm curl, using both the front grip, with

palms up; and the reverse grip with palms down. Also the snatch, swing, two hands deadweight lift from the ground to develop the wrist especially. Take a round stick, attach a cord to the middle, tie a weight to the lower end of the cord and wind it up by twisting the stick with the hands.

Strong, healthy nerves are absolutely necessary if you would keep physically fit. The condition of the nerves is dependent on the nutrition furnished them by the blood. To have healthy nerves, therefore, it is absolutely necessary to keep the blood pure and rich in nutrition. Muscular, organic and mental nerve force, like strength, can be developed by effort. Exercise all parts of the body regularly, eat good wholesome food, and get plenty of sleep. Avoid tensing and stretching exercises that place undue strain on the nervous system.

L. L.—No one knows just what musclebound does mean. The popular supposition was that heavy work would make one musclebound, that if you develop big muscles that you would lose the quality of flexibility; and that large powerful muscles were slow in action. Virtually, that the muscles would become so big and unwieldy that you would be unable to move them effectively. This theory has long since been disproved. Muscles do not lose speed by development, but actually become faster.

Of course, it stands to reason that if you want to train for speed alone, you must sacrifice a certain amount of strength, and that if you train for strength you will not be as fast as the man who concentrates on speed alone. But of the two qualities, strength will stay with you over a greater number of years, and the vitally and energy generated by heavy exercises will be of more value to you in years to come than any amount of speed you can develop.

The nearest you can approach to being muscle-bound is to develop one muscle or group of muscles out of proportion to the other muscles of the body. Practice regularly exercises that bring into play all the muscles of the body, and there will be no danger of this. September, 1921

What Kind of a Man Will You Be at Fifty?

Will You Be Old and Worn-On Your Last Legs, or Will You Be Strong, Vigorous and Robust? The Answer Is Entirely Up to You

You can begin right now to build the foundation of a healthy body which you can retain throughout your life, simply by following an easy, pleasant course of exercises.



Prof. H. W. TITUS At 20 Years of Age

I offer in evidence as proof of this statement, the two photographs of myself taken 30 years apart. I have many such convincing photographs of my pupils which I could show you if space permitted.

For more than 30 years I have kept my body in perfect condition, simply by following an easy course of exercises which I worked out many years ago. So that every one could attain the same physical development and good health that I possess, I perfected the TITUS PRO-GRESSIVE AND AUTOMATIC EXER-CISER and a scientific course of instruction which will enable anyone to gain both health and strength in abundance. Everyone wants to be strong and healthy, and everyone would be if he or she knew how easy it is to build up a well developed body. If you are thin and weak, if you are nervous and run down, here is a practical home exerciser and course of instruction that will make you look and feel like a new person in a remarkably short time. A few minutes of easy, pleasant exercise each day will make your body fairly tingle with renewed vigor and strength and send the blood racing through your veins in a most refreshing and invigorating At 50 Years of Age easy, pleasant exercise each day will make your



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Prof. H. W. TITUS, 56-58 Cooper Square Dept. 200 J NEW YORK, N. Y.

September, 1921

The Superman of Tennis

(Continued from page 10)

three, facing the American whirlwind and actually winning nine games in a row before Tilden's terrific assault forced him to defeat. That is Tilden's way. He has the champion's knack of retrieving an almost certain defeat and turning it into a glorious victory. It is one of the big factors that makes him the wonderful player he is.

Let us sum up these factors. Of the ten ranking players he is physically the biggest, with the exception of Willis Davis, who tops him by an inch and ten solid pounds. And though sheer brawn is less vital in tennis than any other sport, length of reach and leg is not to be despised. Then, Tilden has remarkable endurance. He can keep up a dizzy pace for an indefinite period and have his opponent played out while he is comparatively fresh. I have already spoken of his strategy and the infinite variety of his strokes. He has no real weakness, though he is uncertain at times overhead.

His rivals in the "Big Ten" are not quite

so well rounded. Johnston is weak on service; Williams is erratic; Kumage lacks Tilden's variety; Davis takes too little interest in the game, and Griffin is not always in condition. Washburn's baseline game could be improved; Garland lacks dash and fire; Niles is one of those steady players, within the first ten for years, but never actually getting near the top; while the same might be said of Wallace Johnson.

Big Bill has demonstrated in tournament play that he is better than any of the foreign champions—Kingscote, of England; Gobert, of France; Brookes, of Australia, or Schmidzu, of Japan. In short, he is the Alexander the Great, the Jack Dempsey, the Suzanne Lenglen of men's tennis. He is the undisputed champion of the world. There is no one in sight to seriously challenge his supremacy.

And, in such a sense, we may concede that the Germans were partly right in their superman theory, for William T. Tilden, 2d, is the superman of the courts.

How It Feels to Be On a Winning Team

(Continued from page 18)

"That's all right," answered the Columbia alumnus, "but the big boss won't remember that when I'm signing a contract for next season. He'll point to the number of games I lost; that's all."

Of course, a man thinks of his average, because it is the mark of success in his profession; but the player who subordinates teamwork to the fattening of that average is not a good one to have on a team fighting for a pennant. There always have been players who were "hit crazy," but no one ever heard of such a chap staying long with a winning team.

John McGraw has won more pennants than any other manager in the National League, and McGraw is the man were are battling with this year. Most managers allow their players some leeway on the field, and give direct orders only in a pinch. Mac directs every play. He says, in effect: "Do as I say, and if the play goes wrong I'll take the blame."

Everybody has heard the story of how he fined Sammy Strang \$25 for hitting a home run off Doc Scanlon years ago when that player had been ordered to wait the pitcher out. That is the right system, of course. A manager must be implicitly obeyed, or his authority degenerates into a joke. With our club, Gibson believes in the baseball knowledge of veterans like Maranville, Cutshaw, Carey, myself and others. He allows us the leeway that Mc-Graw does not countenance in his players. It is a difference in system and a matter of opinion as to which system is better.

We haven't won the pennant yet, but we are a winning club, and we are fighting for every game. So I can answer that question:

How does it feel to be on a winning team?

Great!

What to Do For Nerves

HE causes of insanity are so generally overlooked or disregarded that we have gone far toward qualifying for admission to the asylum ourselves, thinks Dr. Charles I. Hastings, medical officer of health of the city of Toronto, Canada. In his monthly Health Bulletin Dr. Hastings reminds us that the United States has been dubbed the "Home of Neurasthenia," and he believes that Canada is rapidly measuring up as a good second. How long, he asks, are we going to continue this profligacy of our nerve energy? Dr. Daniel Clark said that "the man who continues to run a 20-horsepower engine at a 40-horsepower pressure is destined to pay the penalty sooner or later." Irritability should be accepted as a danger signal. "Most of our readers," the doctor goes on, "would be amazed beyond measure if they knew the number of men in prominent positions who have been forced to sojourn in sanatoria for months in their efforts to re-establish." He continues:

"The tendency of the age is to transfer the burden of the breadwinners for the masses of the people from the muscles to the nerves. The successful farmer of today is the man that is farming with his brain even more than his muscle. The introduction of machinery into all branches of industry makes life more monotonous. Take, for instance, the manufacture of the automobile. In many of the factories you will find the men all lined up, every one with a fixed duty to perform when the piece of machinery in passing through reaches him, striking his blow when the time comes. The man is simply a human machine working with a monotony that is most irritating and nerve-racking. In fact, in practically every vocation stimuli are reaching the brain much more frequently, making more demands on our nerves, hence the lamentable increase in our nervous breakdown. No one will question the advisability of the introduction of machinery into all industrics, but are we making proper provision for nerve relaxation and nerve rest?

"Are we not adding insult to injury by crowding our peoples in the cities instead of having them live in garden suburbs? The latter can only be accomplished by an efficient transportation service.

"The man who disregards his nerves until



When a man like you must fight

You probably haven't had a real fight since you were very small. Settling a dispute with your fists is the last thing you'd think of. And yet, a time may come when you will have to fight.

you will have to fight. Suppose you saw a rowdy in the act of insulting a woman. Could you look the other way? No, sir, you'd want to step right up and teach him the lesson he de-served. But could you? A quartel might lead to the challenge, "Come outside and fight." Could you do it and hold your own? Or suppose you were attacked in a de-erted street after dark. You'd have to fight! Your very life might depend upon being able to disarm the thug and cripple him with a powerful blow or jiu-jitsu hold. Remember, those two fists of yours are the best weapons -they're always with you, always ready.

Acherical always with you, always ready. Marshall Stillman will teach you boxing and self-defense in your own home. His system is the result of 30 years' study-he's an expert boxer himself and a pupil of Professor Mike Donovan who retired undefeated mid-thereich always with your product and a pupil of the second secon

of Professor Mike Donovan who retired undefeated mid-dleweight champion of the world. In his course, the fundamentals (hitting, guarding, ducking, feinting, and footwork) are easily learned, be-cause you start by practising simple movements before a mirror—the breast stroke in awimming, holding out your hand for a coin, etc. Subconaciously you are led into striking heavy blows, guarding, ducking, feinting, etc., just as though you had a real opponent before you. When you've mastered the fundamentals, you're taught every good blow in the ring—when to land it, where to land it, and how to guard against your opponent's counter attack.

attack.

circles. There are 246 illustrations in the course,

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he is a nervous wreck or suffering from a complete nervous breakdown has ofttimes sinned away his day of grace. Of all the ills that flesh is heir to nervousness in any form probably receives the least sympathy. This is no doubt due to the fact that the knowledge of the profession as regards neurology has been somewhat limited until recent years, so that one can understand people not having much sympathy for the man or woman with hypersensitive or exhausted nerves. They are usually referred to as being a bunch of nerves, cranky, irritable, and the expression that 'he or she has no control of their nerves,' or 'don't try to control them,' and that if they would do as other people do they wouldn't be so Consequently, the way of the nervous. neurasthenic is hard. Some one has defined nervous irritability as insanity of the nerves, and it is certainly as deserving of consideration as any other form of insanity. What is required is nerve rest, but the question is, how can that nerve rest best be secured in each individual case? We must remove the cause of the irritability if pos-Those of us who were practising sible. medicine a quarter of a century ago were advised never to put a nervous patient, especially a woman, to bed, for, if we did, we would only make a chronic invalid of her. But, fortunately, Dr. Weir Mitchell exploded this theory and fully demonstrated the value of rest for both nerves and muscles. What we should aim at is intelligent rest and intelligent exercise, but never forced exercise. Relaxation is what is required, not tension. Exercise when taken should always be of a pleasing character and always fall short of fatigue. Then relax by lying down, as sitting down only partially relaxes.

"The way to avoid a nervous breakdown for one who is working at high tension is frequently to break away from routine duties. Do not even read a newspaper from your own town. Cut all wires and burn all bridges behind you.

"One frequently hears those who have gone away for nerve rest boast that they are on the go from morning to night and even get up early to lengthen the day. Your best guide is 'be temperate in all things.' In fact, intemperance in all things is usually the cause of nervous breakdowns. Make a mental note of this, that any man or woman using their brain and nerves can do more, can accomplish more, in eleven months than he or she can in twelve; and after middle life it may be that five months' work with one month's relaxation will be the best procedure. We have probably few more fitting applications of the proverb that 'a stitch in time saves nine' than in the conservation of nerve energy. Take no chances, Keep your nerves fit."

The Boxer's Physique

(Continued from page 14)

ticular weakness should be attended to with special exercises or—if necessary—a surgeon's services.

I had intended before closing to say a few words about Jack Dempsey, our present champion. He is the most perfectly-built man for boxing that I have ever seen or heard of. To be honest, his physique impressed me more than his boxing.

Jack's measurements are about as follows: Height, 6 feet 1 inch; fighting weight, 185 pounds; neck, 17 inches; chest, 42; waist, 32; biceps, 15; forearm, 14; wrist, 734; thigh, 23; calf, 15. Analyze these carefully; taken collectively or individually, they are just about as nearly perfect (for a boxer, remember) as we shall ever see. In ring togs, ready for action, Dempscy is a sight for sore eyes; believe me, he "has everything"-the ranginess, the neat, compact look around the waist and hips, the muscular shoulders, good arms, and strong, lithe legs. Look at that wrist and forearm! In Tack's work they are worth far more than an 18-inch biceps would be. That hand of his goes with the shoulder; it can stand the impact of his terrible blows. Reliable hands have a psychological as well as a physical bearing; for they give a fellow confidence. My hands are small, and were always sensitive, and at times I feared to strike as hard as I could. I have known other boxers with the same weakness.

STRENGTH

An Energy Table

(Continued from page 22)

In the case of the back-lifter, even after he has finished displacing the 3,000 pounds, he will step away from the platform breathing no harder than before. In the case of the bar-bell athlete, his effort and the reresult of the increased expenditure of energy will be particularly noticeable, for, after completing the 250-pound lift, it will be seen that his breathing and heart action are visibly accelerated for several minutes afterwards—proof that the latter's expenditure of energy has been far greater in every respect.

So, it is not always a question of how much is lifted or moved at any one period of time that determines who is the strongest man; the true elements to be considered in conjunction with these statistics are the determination of *weight*, *distance* and *time* combined, which all operate together to indicate at the very outset how much muscular strength and nervous energy is expended as a whole under the table of comparison given herein.

If a weight is very light, the result can be compensated by moving it over a greater distance upwards, or the same distance during a shorter period of time, or by both increasing the distance and shortening the lifting time. Where the weight is tremendously heavy, the ultimate effect is very materially discounted by the limited distance and space of time engaged in moving it upwards, even though it may be positively moved or lifted some actual distance and not supported, as many so-called "lifts" are made.

Thus, each feat or lift or exercise presents its individual problem, which can, however, be easily determined or solved by using the figures suggested above.

Intensive exercise, such as the lifting of moderately heavy weights in the systematic manner involved under intellight training methods, has shown its effect upon the human system by the manner in which weightlifters are developed and the feats that they perform. The man who has trained properly along this direction knows that he is strong not only in his back and legs, but all over. Furthermore, the strength of a true weight-lifting athlete is dynamic—this is a quality which calls forth, if necessary,



W. A. PULLUM 5 Church St., Camberwell, London, England George F. Jowett, Inkerman, Ontario, Canada, Special Representative for the United States and Canada.

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a tremendous surge of latent energy, which energy permeates the entire muscular and nervous system, making its possessor the envy of all and a true criterion for ambitious athletes to follow.

Poundage or dead-weight-lifters, however, as a usual rule, present no such standard for evolving practical work along the lines of physical endeavor unless they, too, have worked with dumbbells and bar bells under intelligent supervision in order to attain (what is known as) "the acme of physical perfection."

The specialist in dead-weight or harness lifting is usually a ponderous creature, slow in his movements and unable to duplicate even the quick, simple movements practiced by a novice in standard lifting. Such a man would be "casy picking" in a boxing match or other athletic event requiring the dynamic cultivation of athletic ability and its ultimate crystallization into strength, quickness and endurance, for, unless he has made a specialty of such other line of sport, his limitations have been generally most rigidly outlined by an erroneous system of training which does not permit of the fullest muscular contraction.

It is a well-known fact among physical instructors that the "best" exercises are those whose movements do not restrict a full contraction of the muscles used. The writer uses the word "best" advisedly, for all exercises are equally good, provided full muscular contraction is accomplished during their performance.

It would, perhaps, be easier to state that the best results obtained from any exercises whatsoever are those resulting when full muscular contraction is insisted upon during their accomplishment. If the exercise, itself, does not permit of this, then it should be discarded for one that does.

In this manner every portion of the muscular group used, of each muscle itself, receives the proper tension and correspondingly increases in size and strength. Therefore, it stands to reason that any system of strength building by the use of moderately heavy dumbbells and bar bells will prove beneficial, provided due attention is paid to each exercise and full contraction of the muscles involved is made. And if tremendous gains in health, strength and vitality can be made by the use of a mediocre system, how much greater will be the results attained where a proven, scientific system of long standing is adopted !

The athlete who performs with standard lifts and who exercises intelligently withdumbbells and bar bells soon acquires, together with a phenomenal development and an almost inexhaustible reservoir of nervous energy, a skill that well befits him for the taking on, in addition, any other line of sport. Such a man can combine boxing with weight-lifting, and should be able to more than hold his own along other lines with little preparation therefor.

Other things being equal, the man who trains intelligently is the one who is bound to win out in the long run. In fact, it is the writer's belief that the entire theory of a muscle-bound condition (which we hear so much about when strong men are mentioned) is wholly due to the fact that the ponderous champions of harness and dead-weight-lifting fame usually neglect the vital portions of their bodies (through lack of systematic training with moderately heavy weights or bar bells), and by lifting enormous weights in poundage lifts, without the exercise or direction of intelligent thought, in cramped positions permitting only a small muscular contraction, they become very slow and clumsy in their movements. Even these men, however, can correct a deficient physical (and mental) attitude by adopting a course of standard weight-lifting and exercising with bar bells and dumbbells under a competent instructor.

The writer acknowledges his indebtedness to Mr. "Al" Treloar, physical instructor of the Los Angeles Athletic Club, for the foregoing compilation of the energy table. Mr. Treloar, who was a headliner for many years in vaudeville, explained one of his feats of lifting a horse and rider with the hip lift and one hand a distance of approximately 6 inches in one second. The weight was about 1,400 pounds, and yet the total energy expended in foot-pound second units for this remarkable feat was only 700, showing that the bar-bell performer disposes of a great deal more actual muscular strength and nervous energy than any other type of lifter. Thus it can be seen that the mechanical power of an athlete's muscles varies greatly, according to the way it is applied, and it is not always the

greatest amount of weight actually lifted which would serve as an authoritative criterion for the determination of who is the strongest man. Distance and time are elemental factors that must be considered as well.

Perhaps that is the very reason why certain lifts with bar bells and dumbbells have always been designated by the weight-lifters' associations of England and continental Europe as the sole measure for arriving at this conclusion. Indeed, it is a well-known fact that dead-weight and harness-lifters are "pet" lifters; that is to say, they generally have a number of poundage lifts which they have practiced to perfection, and some of them invariably set up claims of being the "strongest men in the world." Upon being challenged, however, they always revert to their own lifts, demanding that all other competitors use them also.

The use of standard lifts as a measure for determining the strength of respective competitors obviates this objectionable feature of a genuine sport; and it is to be hoped that the newly proposed weight-lifters' association will adopt rules similar to those used in England and abroad, so that lifting may become standardized for the benefit of that genuine strong man—the man who is strong all over.

What Human Food Did to Monkeys

A Philadelphia doctor has made the experiment of feeding monkeys on the diet with which the majority of men and women feed themselves. The following is an account of his results as quoted in *Good Health* (Battle Creek, Mich.):

"It is a literal fact that the dispositions of the lower animals, at least, can be controlled by their eating. In a series of laboratory diet tests on monkeys, the results were remarkable. For one week the monkeys were fed upon a protein diet heavy with meat and beans. At the end of the first three days the monkeys began to be dull. They swung about the cage very little; life seemed to weigh heavily upon them. In another two days they slumped down, held their heads in their paws, and took very little interest in anything that was happening. **MIZPAH** JOCK No. 44 Gives you a feeling of real comfort and the assurance of perfect protection while exercising or playing games of any kind. All elastic. Perfect fit. Will not chafe. Perfect pouch. Patented opening in May be boiled to cleanse. front. TWO WEEKS TRIAL If not satisfactory return and money will be refunded. Mailed on receipt of price, \$1 State waist measurement THE WALTER F. WARE CO., Dept. J **1036 Spring Street** Philadelphia Hitting and Stopping By JIMMY WILDE Here are two of the paragraphs from this interesting book: The punches which tell, the real winning punches, are much simpler affairs than the terrific swings which draw long "O-o-h's" from the groundlings. The short, snappy affairs, shot in from short range with the full swing of all the body and all the drive of the leg muscles behind them, are the genuine winners. They should never miss, unless they are intended to miss (and I propose to devote a full chapter to the subject of intentional misses), firstly, because a missed punch means a foolish waste of most valuable

energy, and secondly, because a miss, especially a bad miss, means that one has laid oneself open to more or less serious reprisal. This book is offered for the first time this country. We have only a limited

in this country. We have only a limited number of copies and are offering this book, together with one year's subscription to STRENGTH, for one dollar and seventy-five cents (\$1.75).

The Milo Publishing Co. 301 Diamond Street Philadelphia "By the end of the week the cage was filled with a band of melancholy pessimists who took no exercise, were willing to look at nothing offered to them, and regarded the world with sad and dreary eyes. Then their diet was changed. For a week they were fed only vegetables, cereals, and fruit. In three days they had brightened up; in five they frisked about in their old happy fashion. At the end of the week they were a band of optimists.

"Referring now to humans, I find it true that the heavy protein diet which is habitual with so many persons does make for pessimism. Counteracting influences of the type that men, and not monkeys, are subject to may permit a man who feeds for pessimism to remain an optimist, but he is working under a handicap."

Turkey's Oldest Man Returns to Manual Labor

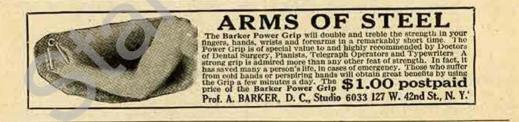
Constantinople, May 2.—Zora, Turkey's oldest man, said to be 147 years of age, has gone back to work as a waterfront hamal (carrier of heavy weights) after a quarrel with the Turkish naval base authorities.

He was recently pensioned in honor of his age and long service and he was preparing to spend his last years in idleness. But, as pensions are not being paid here because of an empty treasury, Zora declared he was still strong enough to work, and is daily proving it. He has threatened to join the Nationalist army in Anatolia, but so far has kept the peace.

Old age makes itself respected in Turkey

by a capacity and willingness to work. A certain Murad, employed as a messenger by the Turkish telegraph office, was offered a pension when he reached his 120th year. He refused it, as it meant knocking off work, but his superiors insisted he must make room for younger people who otherwise could find no work, and would have no chance to get on in life.

Murad finally agreed to quit provided his young son was taken in his place. This seemed fair and he was told to bring the son around. The son presented was a white-haired man more than 70 years old.



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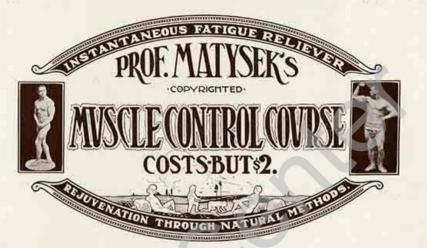
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instructions are "straight from the shoulder" such as only an expert who went thru the mill himself could ever possibly produce. In addition to the above you have the privilege to ask any questions pertaining to your physical training and to these I will gladly write a *per-sonal* reply. This feature alone is a mighty valu-able one as I give you the benefit of my many years of experience and you will find it worth much more than the price paid for the full course.

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