

"Good Bye, Fat - Hello Health"

★ Strength

JUNE

25¢

NEYSA McMEIN
on the Ideal Figure

Exercise Cured
His Spinal Curvature



Whismuller
Speed

How to Paddle
Your Own Canoe

STRENGTH MAGAZINE

What Is a Bar-Bell?

A BAR-BELL is simply a long-handled dumb-bell. It has many advantages over a pair of dumb-bells. For instance, it is far easier to handle a 50 lb. bar-bell than two 25 lb. dumb-bells. Again, with a bar-bell you can do certain back and leg exercises where it would be awkward to handle a pair of dumb-bells. The bar-bell became

The Greatest of All Body Builders

when the adjustable feature was added—for then it became possible to employ the progressive method of exercise which has proven to be the only way in which a man of below-average physique can gradually but steadily improve his build, his muscular development, and his stock of organic vitality until he becomes a physical superman—the very pattern of health, strength, and manly beauty.

Look at These Pictures!

and you will get a good idea of the kind of physical development which results from the use of bar-bells. Most of our bar-bell users succeed in getting 42-inch chests, 15-inch upper-arms, 23-inch thighs, and other measurements in proportion; and a large percentage of our pupils do even better than that. It is not an unusual thing for us to take a man of average physique, and by a few months training give him a 45-inch chest, 16½-inch upper-arm, a 24-inch thigh; increase his bodily weight by anywhere from 20 to 30 lbs., and give him a physique which is a combination of the Hercules and Apollo types.

(The pictures will also give you a good idea of the different size combination bar-bells we manufacture, and show you the iron plates which fit inside the spheres, and which are used to graduate the weight of the apparatus.)

By Using a Bar-Bell YOU Can Become a Physical Superman

With every bar-bell we sell, we give courses of training to suit the individual purchaser. Our pupils vary in age from fourteen years to as old as sixty-four. We have seen slender young pupils gain as much as twenty pounds in weight, and six inches in chest measurement in the first six weeks they were under our training. We have taken stout, middle-aged parties and shown them how to regain the fine proportions, the elasticity and the vigor of athletic youth. We get orders from hundreds of business men and office workers, and we show them how it is possible to get the greatest possible results in the shortest possible time. (Possibly forty per cent. of our patrons are indoor men.) One of our greatest delights is taking husky farmers, outdoor workers, and gymnasium devotees, and show them what real strength and development is like. Every case is individual with us and we have handled so many different kinds of health-seekers, shape-seekers, and strength-seekers that it is hardly possible your case would present any new problems for us.

We Give Unlimited Service and an Absolute Guarantee

With us it is not a case of giving you so many "lessons" and then forgetting you. You are our pupil as long as you own the bar-bell you buy from us. You may be in such condition that we can give you the kind of developing work that makes you gain at a rate so rapid that you will be amazed. Or it is possible that you are in such a run-down or absolutely undeveloped state that we will have to start you with the bell adjusted to very moderate weights, put you on a mild progressive schedule, and coax your body to its proper proportions, and teach you how to accumulate a stock of reserve vigor and health. All of which is part of our job, and what you pay us for. All our goods are sold on the same understanding. If within ninety days after enrolling you are not satisfied with the results, you can return your outfit and have your money refunded. For years we have kept a careful record and find that the proportion of returns is 1/2 of 1 per cent. In other words, we satisfy 299 out of every 300 customers. (We never expect to be perfect.)

We Make Adjustable Bar-Bells of All Varieties

Every outfit we make is a combination affair, which can be used as a bar-bell, a dumb-bell, or as a pair of kettle-bells. Every part of each outfit is adjustable in weight. Some types have hollow spheres which can be loaded with iron plates of assorted sizes. Other types load both with lead shot and iron plates. Still others have no covering spheres, but consist just of an assemblage of iron plates and the different handle bars. We make bar-bells of Different Styles—Different Sizes—Different Prices, but every outfit we make can be adjusted to such a moderate weight that it can be easily handled by the weakest and smallest man, and yet can be almost instantly adjusted to a weight that would tax the strength of Samson.

Send at once for our big booklet,

"HEALTH, STRENGTH AND DEVELOPMENT AND HOW TO OBTAIN THEM"

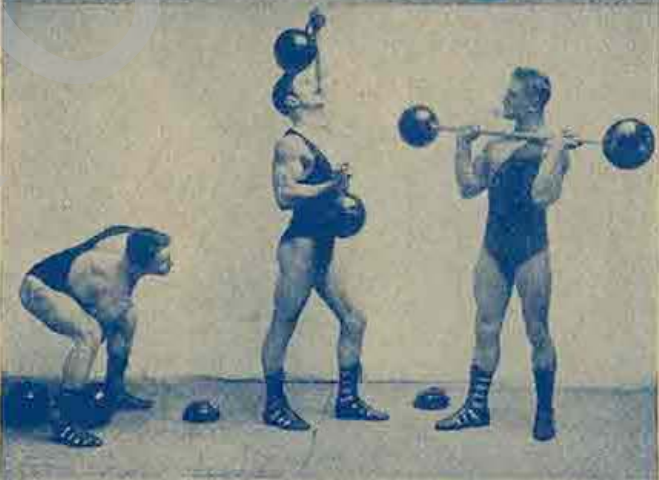
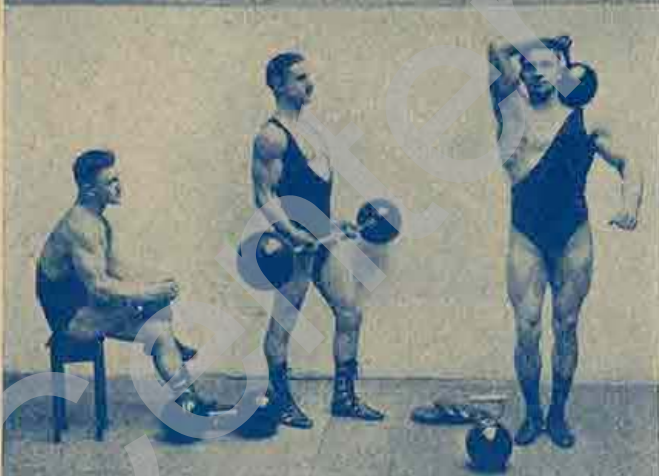
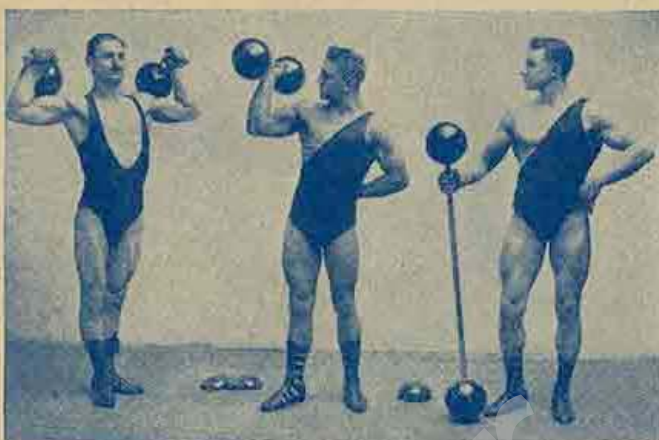
and the special pamphlet

"HOW MUCH SHOULD I MEASURE AND HOW MUCH SHOULD I WEIGH?"

both free on request

THE MILO BAR-BELL CO.

301 Diamond St., Dept. 13, Philadelphia, Pa.



**\$9000 First Year!**

"When I first saw your inspiring message I was a civil service employee. Now I have better than a \$9,000 position with lots of room to grow."

Ellis Sumner Cook,
Oak Park, Ill.



What This Amazing Book Did for These 8 Men

It would be just as easy to tell the same story about 20,000 men—even more—but what this book brought these eight men is typical. If you do not get a big salary increase after reading this message you have no one but yourself to blame. This amazing book is

NOW FREE

**\$1000 in 30 Days**

"After ten years in the railway mail service I decided to make a change. My earnings during the past thirty days were more than \$1,000."

W. Hortle
Oak Park, Ill.

First Month \$1,000

"The very first month I earned \$1,000. I was formerly a farmhand."

Charles Berry,
Winterset, Iowa.

**\$523 in 2 Weeks**

"I have never earned more than \$60 a month. Last week I cleared \$306 and this week \$218."

Geo. W. Kearns,
Oklahoma City.

City Salesman

"I want to tell you that the N. S. T. A. helped me to a good selling position with the Shaw-Walker Company."

Wm. W. Johnstone, Jr.,
St. Minneapolis, Minn.

**\$554.37 in One Week**

"Last week my earnings amounted to \$554.37; this week will go over \$400."

F. Wynn,
Portland, Ore.

\$100 a Week in Only 3 Months

H. D. Miller, of Chicago made \$100 a month as stenographer in July. In September, 3 months later, he was making \$100 a week as a salesman.

\$10,000 a Year

O. H. Malfroot, of Boston, Mass., stepped into a \$10,000 position as a SALES MANAGER—so thorough is this training.

It seems such a simple thing—but the eight men on this page who did this simple thing were shown the way to quickly jump from dead, monotonous routine work and miserable earnings to incomes running anywhere from \$5,000.00 to \$10,000.00 a year.

They Sent for the Book, "Modern Salesmanship," That You Can Now Get—Free

Possibly it is just as hard for you at this moment to see quick success ahead as it was for Ellis Sumner Cook, 58 Superior St., Oak Park, Ill. When he was earning only \$25.00 a week the large sum of \$9,000.00 a year seemed a million miles away. But read what happened after he had read the book we want you to send for. Almost overnight, as far as time is concerned he was making real money. The first year he made \$9,000.00.

There is nothing unusual about Mr. Cook, or about his success. Thousands after reading this book have duplicated what he did—Mr. Cook simply was willing to investigate.

The only question is—do you want to increase your earning power? If so—this book will quickly show you how to do it in an amazingly easy way.

Success Inside Twenty Weeks

There is no long, drawn-out wait after you have sent for this book before you begin to do as the men on this page did. Within twenty weeks you can be ready to forge ahead. This may sound remarkable—but after sixteen years of intensive investigation the National Demonstration Method has been perfected—and this means you can now step into a selling position in one-fourth the time it formerly took to prepare for this greatest of all money-making professions.

Men in every walk of life have made this change—farmers, mechanics, book-keepers, ministers—and even physicians and lawyers have found that Salesmanship paid such large rewards and could be learned so quickly by this new method that they preferred to ignore the years they spent in reading law and studying medicine and have become Master Salesmen.

Simple as A B C

There is nothing remarkable about the success that men enjoy shortly after they take up this result-securing system of Salesmanship training. For there are certain ways to approach different types of prospects, certain ways to stimulate keen interest—certain ways to overcome objections, batter down prejudice, outwit competition and make the prospect act. Learn these secrets and brilliant success awaits you in the selling field.

Make This Free Test At Once

You don't need experience or a college education. And if you are not sure of yourself you can find out at once whether you can make big money as a Star Salesman. Simply send the coupon for this Free Book. Ask yourself the questions it contains. The answers you make will show you definitely whether a big success awaits you in this fascinating field. Then the road is clear before you. This amazing book will be a revelation to you. Send for it at once while this free offer is open.

NATIONAL SALESMEN'S TRAINING ASSOCIATION

Dept. 21-G

53 W. Jackson Blvd., CHICAGO, ILL.



NATIONAL SALESMEN'S TRAINING ASSOCIATION

National Salesmen's Training Ass'n,
53 West Jackson Blvd., Dept. 21-G, Chicago, Ill.
Gentlemen: I will accept a copy of "Modern Salesmanship" with the understanding that it is sent me entirely free.

Name.....
Address.....
City..... State.....
Age..... Occupation.....



Strength

Edited by
Carl Easton Williams

Vol. IX

JUNE, 1924

No. 4



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Published Monthly by THE MILO PUBLISHING Co.
 Entered as Second Class Matter at the Post Office at Philadelphia, Pa.
 November 20th, 1920, under the Act of Congress of March 3, 1879, additional entry applied for in New York, N. Y., and Brooklyn, N. Y., Post Offices
 D. G. REDMOND, Publisher, Publication and Subscription Offices, 301 Diamond St., Philadelphia, Pa.
 Editorial and Advertising Offices, 104 Fifth Avenue, New York City, N. Y.
 R. L. HUNTER, Advertising Manager.
 Chicago Office: 168 North Michigan Blvd., J. A. HISEY, Manager.
 London Agents: The Atlas Publishing & Distributing Company, Ltd., 18 Bride Lane, Fleet Street, London, England.
 Subscriptions, \$2.50 per year. Canada, \$2.75. Foreign, \$3.00.

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The Man Who is Astounding America!

What is the mysterious power wielded by this man—a power he also shows others how to use? What is this new method which has started thousands of despairing persons on the road to health, happiness and prosperity?

THOUSANDS upon thousands have been turned away from the great theatres and auditoriums in Chicago, San Francisco, Seattle, Denver, Boston, and practically every great city in America where Dr. Bush has been lecturing! These vast halls could not accommodate half of those who heard of his wonderful powers and had heard how he disclosed the secret of his powers to others!

Those who were ill had been shown how to become well and strong by a method to which other mental science movements were as the first step in a mammoth, far-reaching stairway.

The worried and the nervous had been shown how to rise above their mental and nervous troubles in a single evening and how to attack and solve their problems with a keener mind unhampered by despair.

An Astounding New Power

But that wasn't all. As wonderful as it is to have the secret of mental and physical health in one's grasp—there is a still greater force at work in the universe. This force can be harnessed in such a way as to bring us the MATERIAL

things we want—money, power, influence, no matter what it is. And Dr. Bush has harnessed this force; has proved its value in his own case; and has proved time and again that he can show others how to use this power.

Long before the lectures were over the reports began to come in showing how quickly his audiences had been taught to use this wonderful power. Reports so amazing that they were instantly investigated by Newspapers,

Scientific Bodies, Medical Men, and Societies for Psychological Research—and found absolutely true.

"By your method of visualization I secured the funds to build my home," writes one of Dr. Bush's Chicago listeners. Mrs. Mary Roberts of Denver writes, "My salary was increased 40% in one week by following your psychological method and my powers of salesmanship were DOUBLED."

His Teaching Now in Book Form

Dr. Bush's sole idea in giving these lectures is the same idea that actuated him in his earlier days before he had discovered this amazing new force. Then as an earnest and brilliant young minister of the Gospel he had refused honors and financial returns in order to apply his efforts where they would do good to the greatest number. His lectures are given for the same reason—to teach this new force to every one who will learn. And to reach still more people he has incorporated his lectures in an absorbingly interesting book, "Applied Psychology," which will be sent, on FREE TRIAL, to any earnest seeker after knowledge. Luther Burbank says, "'Applied Psychology' appears to me the most practical and useful work which has been published on these and similar subjects."

When You Need This Book

Are you nervous or depressed? Do you feel old? Have you lost your grip? Have you a worrying disposition? Have you a personality that fails to attract others? Are you timid? Are you misunderstood? Do others seem inclined to give you always the worst of everything? Do you lack the aggressiveness necessary to bring you position and power? Are you in ill health? Have you any chronic disease? Is anyone in your family or among your friends so affected? Are your children wilful and disobedient?



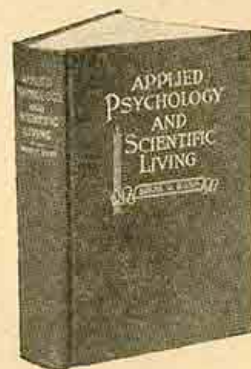
DR. DAVID V. BUSH
Editor of "Mind Power Plus"

Examine it FREE

But no description can begin to give you even an idea of the startling truths explained and proved in this wonderful 540-page book. The very first page will be a revelation to you just as Dr. Bush's lectures have been a revelation to keen, thinking, analytical minds in every city. One enthusiast says, "It can be understood by everyone. And if everyone would read it and then use this new force, humanity would advance 5000 years overnight."

But you be the sole judge of this wonderful value. Mail the coupon. This remarkable book will be sent at once. Read it for 5 days. Practice this new force yourself. At the end of that time if you find it the most inspiring, the most valuable means to obtain health, wealth and happiness send us only \$3.50—

which, as you will realize, pays only for the cost of printing advertising and distributing the 540-page book. Otherwise return the book itself within 5 days and you will not owe a penny. But begin to enjoy the benefit of this new force at once. Mail the coupon today.



DAVID V. BUSH, Dept. 306
225 N. Michigan Ave. Chicago, Ill.

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225 N. Michigan Ave., Chicago, Ill.

Please send me a copy of "Applied Psychology and Scientific Living" for approval. I agree to remit \$3.50 or return the book in five days.

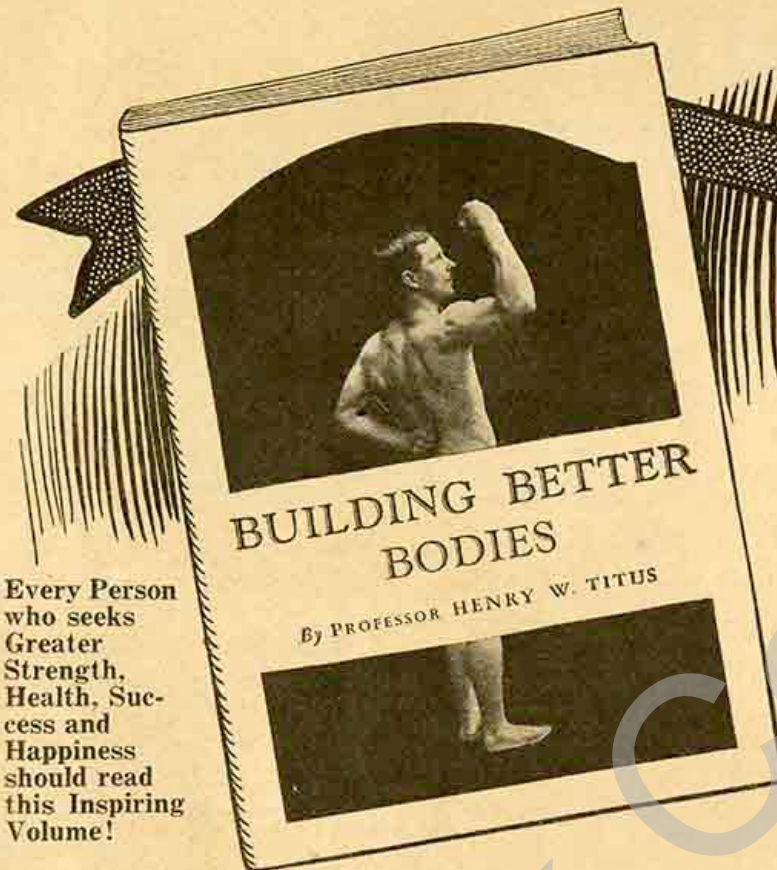
Name.....

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City..... State.....

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How to Use Suggestion for Health, Success and Happiness
The Greatest Law in the Universe, just lately discovered and how to use it
What the World Owes You and How to Get It

Send for this NEW book



Every Person who seeks Greater Strength, Health, Success and Happiness should read this Inspiring Volume!

The Most Helpful and Instructive Book of Its Kind You Ever Read!

HERE is my newest and best contribution to the many books which have been published on body building. It is the most complete work of its kind, written so that everyone can understand it and profusely illustrated with numerous photographs of many of the world's greatest strong men whom I have developed to record holders. It is unique in many ways and I would like to have every person in the world read it, for I know that everyone who does will be greatly benefited. No matter who you are, where you are or what physical condition you may be in, you can learn many valuable things by reading this book. To miss reading this volume is to pass up an opportunity that you do not get very often. All of the astonishing and vital things I have discovered about body building during my 25 years of experience as a Physical Culture Instructor are set down in this one complete handy volume. It is the most helpful and instructive book of its kind you ever read!

Accept a Copy With My Compliments

I could charge almost any price for this book and it would be worth it. However, I want everybody to share in the marvelous benefits that can be derived from reading it, so I am going to send a copy FREE to everyone who sends in the coupon and only 10 cents to cover mailing costs. Only a limited number have been printed, so

send the coupon NOW to be sure of receiving your copy before the supply has been exhausted. Never before, to my knowledge, has such a book been given away by anyone. If you are going on a vacation, *be sure by all means* to take this book with you. It will prove an inspiration to every red blooded man or boy. It tells you how to get the most out of life, how to make your body what it was intended to be—a symmetrical, robust, broad shouldered, live, healthy body that carries the strength and punch to see you through life and its hardships on your two feet, instead of on your back in a hospital. It also explains how I have developed by means of the TITUS PROGRESSIVE AND AUTOMATIC EXERCISER many of the strongest men in the world.

I Will Make a Real Man Out of YOU

I don't care how weak or puny you are now. It makes no difference how thin or stooped you are when I take hold of you. If you will follow my directions you can develop your body to amazing proportions in a very short time, and have a lot of fun while you are doing it. I have thousands of photographs of some of the most pitiful looking weaklings you ever saw. I also have photographs of these same human derelicts after they finished with my course, and if you could see them you would not believe your eyes. Hollow chests have been filled in with good sound flesh. Stooped shoulders have been transformed into erect, broad, manly ones. Thin legs and arms have been made to bulge with sinew and muscle. In fact, whole bodies have been rebuilt almost beyond recognition. But I do not stop there. Just as your body develops so do your vital organs improve under my instruction. I

Written by Prof. H. W. TITUS, the man who has personally developed the largest number of the world's greatest strong men

stimulate your Circulation, steady your Nerves, Build up and give Tone to your Whole System, impart Snap and Vigor that you never thought possible.

I Show You Everything Before I Ask for One Penny

Marvelous as my system may seem to you, it is not mysterious or difficult to follow. The whole trick is in the apparatus I use. My PROGRESSIVE AND AUTOMATIC EXERCISER is the most ingenious device of its kind ever invented. It is the same system which is used and endorsed by such famous strong men as Rolandow, the Great Barnes, Arthur Saxon, William D. Waring, August W. Johnson and many other record holders. It is the same apparatus that thousands of my satisfied pupils have used. It is the same apparatus that I use to keep myself fit. I show you in my book actual photos of my Progressive and Automatic Exerciser in use. I leave nothing to your imagination. You do not have to buy a "cat in a bag." You owe it to yourself to see what you are going to get before you spend your hard earned money. Don't spend a cent until you do see.

Let the Man Who Has Personally Trained the Greatest Number of Real Strong Men Train You

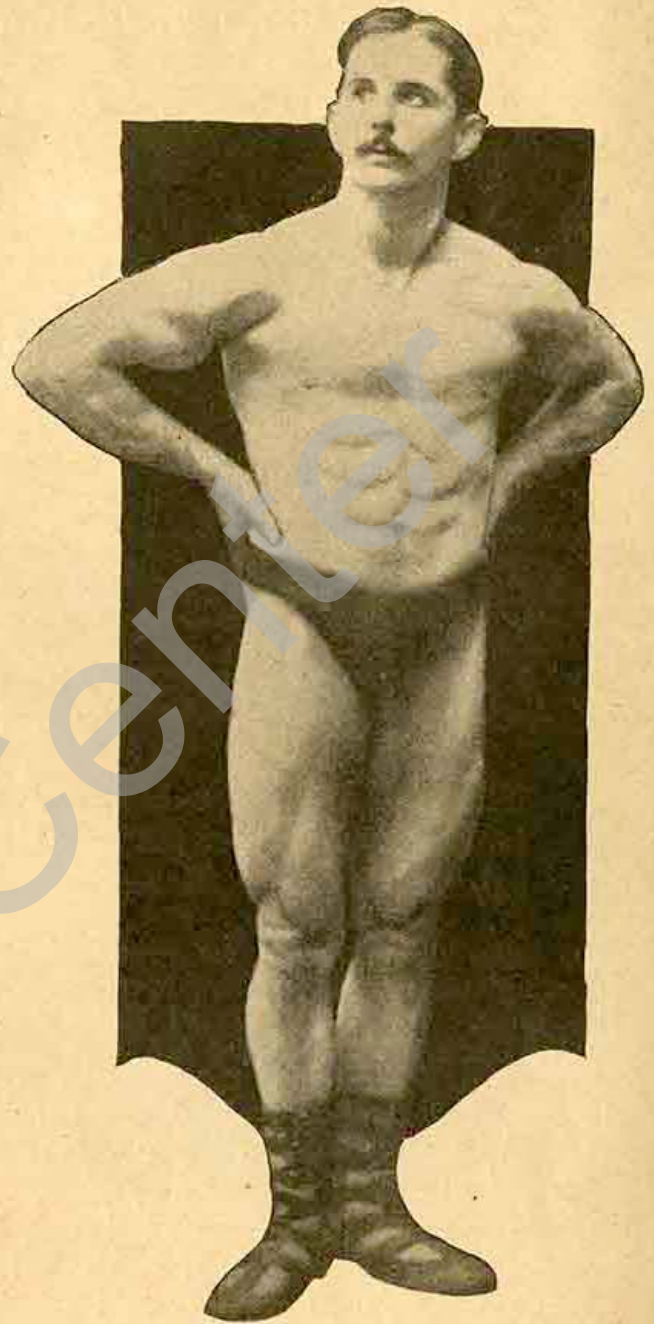
In selecting your Physical Culture Instructor, you can do no better than follow the same course that so many of the world's greatest strong men have used. I have personally trained more of the well-known record holders than anyone else. You have but to see their photographs and read their endorsements of my System in my book to prove that all I say is true. These men think well enough of my System and my Apparatus not only to use it themselves, but they also recommend them to anyone seeking real strength. They will tell you that the Titus Progressive and Automatic Exerciser is the best apparatus that they have ever seen. They will tell you that it is a complete home gymnasium, and that it provides exercises for every portion of the body. Listen to competent advice before you decide. Don't take my word for it. Read what others say.

Get My Big New Book NOW

Right now before you forget it send for my startling big NEW book, "Building Better Bodies." It may change the whole course of your life. At least it will tell you many things that you should know about body development. Even if you do not become my pupil, you will find my book a valuable guide to better health and greater strength. It is dedicated to the millions of men, young and old, who are, or should be, interested in better bodies, better health, greater strength and greater achievement. You will find it easy and interesting to read and the many handsome photographs of strong men which it contains will prove an inspiration to you.

Send Today, NOW. Use the coupon and by return mail I will send you, without the slightest obligation, a book that you will prize as long as you live. Remember there are only a limited number of these books. To avoid disappointment, use the coupon AT ONCE.

Prof. Henry W. Titus
105 E. 13th St., Dept. 29, New York City



PROF. H. W. TITUS
As He Is Today

Pronounced by the medical faculty and professional athletes as the most symmetrically developed man in America. The holder of weight lifting records, winner of boxing and wrestling matches, even with men heavier than myself, and all round athlete. Originator and patentee of the Titus Progressive and Automatic Exerciser and the Titus System of Physical Culture.

PROF. HENRY W. TITUS

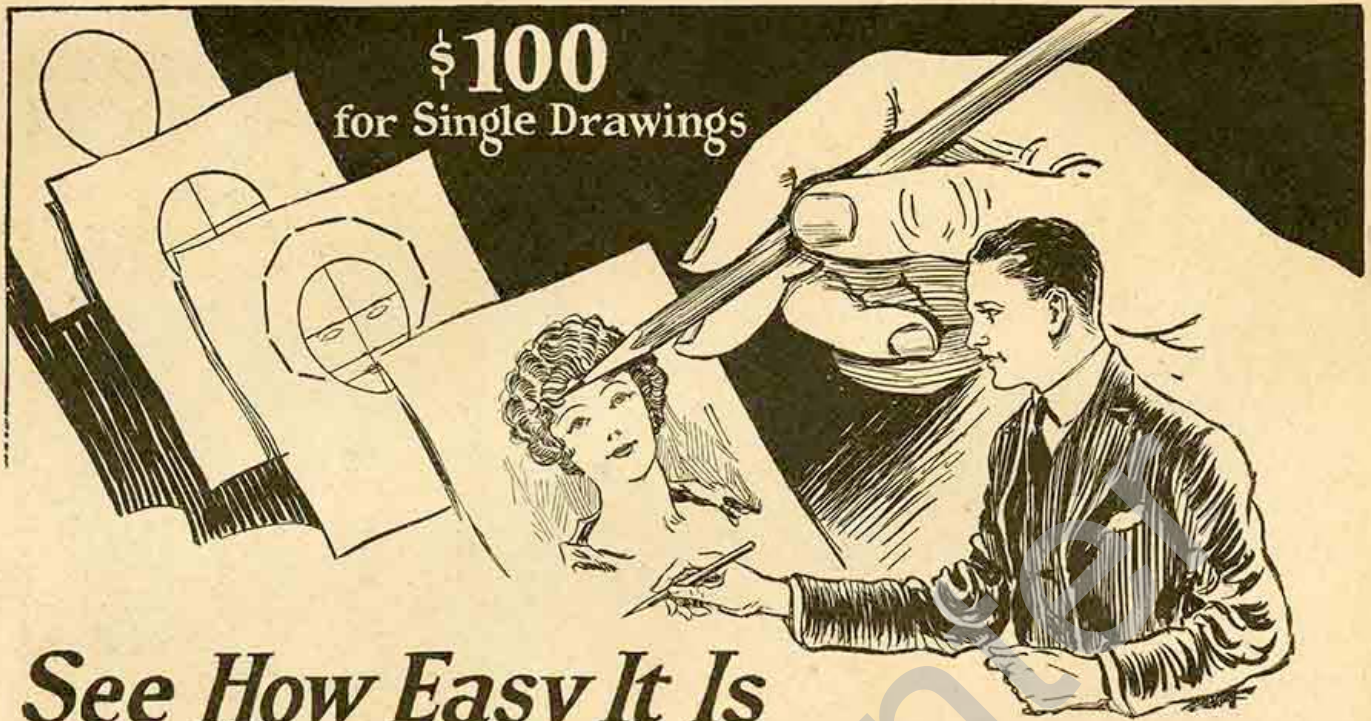
Dept. 29, 105 East 13th Street, New York City

Dear Sir:—I enclose 10 cents, for which please send me at once your book, "Building Better Bodies." It is understood that there is no obligation on my part whatsoever.

Name.....

Street No.....

City..... State.....



See How Easy It Is To Learn Drawing This New Way

Through a remarkable new method *anyone* can now quickly learn to draw—right at home in spare time. No special talent needed! Become an Artist this new easy way.

YOU have always longed for it—this fascinating ability to draw. Now it can easily be yours. Illustrating, Rapid Sketching, Decorative Designing, Advertising Art, Cartooning—you can easily learn all of this right in your own home. Hundreds of our students never had a drawing pencil in their hands before starting, yet are high salaried artists today.

Big Money in Commercial Art

Trained Artists earn \$50, \$75, \$100 and even over \$200 a week! Single drawings often bring over \$100. And now, with just a few hours' pleasant study each week, *you* can quickly learn to make drawings that have a real commercial value.

Hundreds of trained artists are needed today all over the country. Magazines, Department Stores, Advertising Agencies, Publishers, Manufacturers—these are just a few of the fields which are in urgent need of artists. Get into this attractive, big money field now.

It's Fun Learning Art This New Way

It's all just like a pleasant game when you learn to draw with this new method. You study right at home, yet every bit of your work receives the individual attention and criticism of a *real artist*. It's almost as though you had a famous artist standing at your elbow while you work. With this training you progress with amazing

rapidity. Starting with straight lines and curves, you quickly learn action, perspective and all the more advanced secrets of drawing. Almost before you realize it you are making drawings that *sell*.

Send for FREE BOOK

You may be considering the study of art merely for the joy you can get from it; or you may want to turn your ability into the big money which is to be found in Commercial Art. In any case—if you feel that you want to learn to draw, send for our new Free Book on art, which tells all about the wonderful opportunities for happiness and profit in art and describes this startling new method which makes it so easy for you to learn to draw. Mail coupon for this Free Book and for our special Free Offer.

WASHINGTON SCHOOL OF ART

Room 676, 1115-15th St., N.W., Washington, D.C.



Washington School of Art

Room 676, 1115-15th, St., N. W., Washington, D. C.

Please send me your Free Book on art which tells about your new method. Also details of your Special Free Offer.

Please Write Plainly

Name.....

Mrs., Miss or Mr.

Address.....

City..... State.....

Age if under 16 years.....

CLEM, the Kansas Colossus... A Credit to STRONGFORTISM

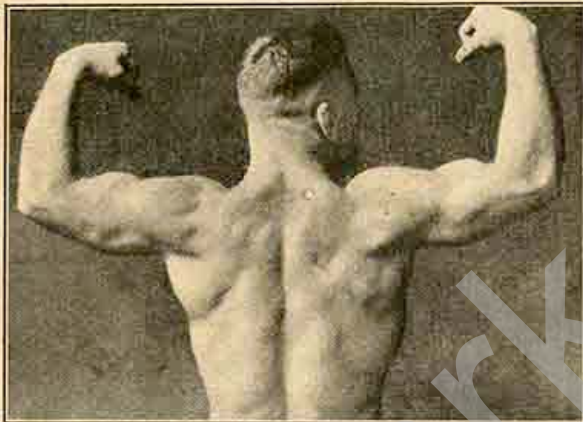
BACK in Kansas, where folks know a cyclone when they see one, everyone knows and admires **Gus Clem**, prominent physical director, boxer and wrestler extraordinary, and all-round champion of the best and cleanest in sports and life.

Among Clem's numerous pupils in physical and health promotion, perhaps the most prominent is Dr. C. Mart Montee, Mayor of Pittsburg (Kan.), and widely mentioned as a strong possibility for Governor of his state. Mayor Montee knows that campaigning is a strenuous matter. He relies on Clem to keep him fit and in fighting form through the **Strongfort** System of Physical Training.

Intelligence in Physical Development made Clem what he is today. . . the intelligence to appreciate and apply **Strongfortism** faithfully. "Clem was a so-called weakling," says the *Pittsburg Sun*, "when **STRONGFORT** took charge of his physical welfare in Ishpeming,

Michigan, when Clem was 16 years old. **STRONGFORT** developed Clem into excellent physical condition and started him in the wrestling and boxing game."

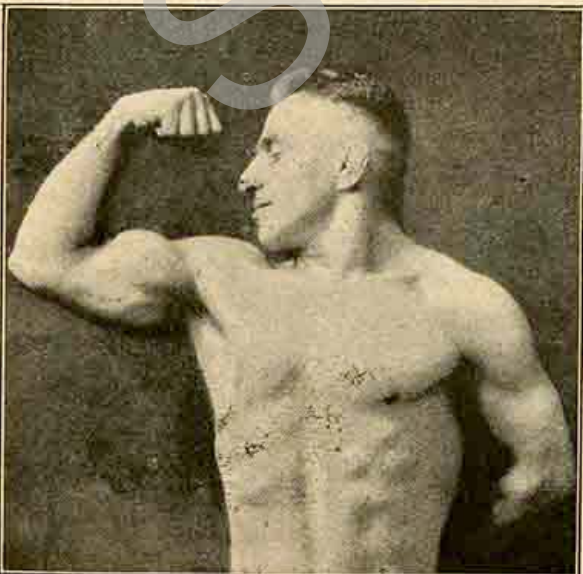
"The tie between the two men is particularly strong," says the *Pittsburg Daily Headlight*, "for it was under the tutelage of **Strongfort** that Clem developed from a frail boy into the sturdy wrestler that he is today. No other man has shown more men the way from physical weakness to strength than has **Mr. Strongfort**, and his interest in the matter is much deeper than a selfish professional one. **Mr. Strongfort** is a conspicuous example of a leader practicing what he preaches. His physique has been pronounced perfect by the greatest artists and experts on anatomy. Perfect health and development are **Mr. Strongfort's** objectives and he has obtained them for himself and tens of thousands of others; but his feats of herculean strength have also won him world-wide fame."



In these Photographs of **GUS CLEM** observe how perfectly symmetry mates with tremendous muscular prowess.

All Names and Photographs Used in Strongfort Advertising Are of Bona Fide Pupils or Graduates in Strongfortism

NO SUBSTITUTE FOR STRONGFORTISM



Photos by Rembrandt Studio, Pittsburg, Kan.

PROOF POSITIVE

The accompanying photographs of **Gus Clem** present startling evidence of the near-miracles of physical improvement that can be brought about in the most commonplace body . . . in yours! . . . if only judgment be used in the selection of the best physical director procurable. A wrong selection is invariably disastrous.



GUS CLEM

A **STRONGFORTIST** who has acquired great fame throughout the Mid-West as a Boxer, Wrestler and Physical Director.

Dear Mr. Strongfort:—
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CLIP LIKE CLEM DID—

800,000 People Will Die This Year of Preventable Disease

BARRING accidents and suicides, only a small percentage of these 800,000 people should die. Every year more than ten thousand people die of bronchitis, sixty-four thousand die of pneumonia, seventy-five thousand die of kidney trouble, fifty thousand die of respiratory disease, one hundred and six thousand die of tuberculosis, approximately eighty-five thousand die of influenza, and more than ten thousand die of intestinal trouble.

It is a fact that only about one person out of three enjoys good health. And those who are physically a little "off" right now will more than likely be the ones to succumb to preventable diseases this year. And they are the ones who should not die.

That occasional headache, that tired, exhausted feeling, loss of appetite, the casual cold—all these are danger signals you should heed. Nature is warning you of impending sickness. Seemingly trivial symptoms tell of serious troubles taking root in your body. And yet, ninety-nine people out of every hundred will absolutely ignore these danger signals. As long as they are not flat on their backs, they will fool themselves into believing that they are all right.



BERNARR MACFADDEN

World famous Physical Culturist—guiding health seekers successfully for more than 30 years has qualified him for preparing the wonderful Encyclopedia of Physical Culture—the most comprehensive, valuable general treatise on health ever given to the world.

The Average Person Pays Thousands of Dollars in Doctor's Bills

Nature is merciless. If you do not understand her laws and her methods of preventing and curing sickness, you suffer. She knows no excuses—she accepts no apologies. Animals instinctively know what to eat and how to exercise to avoid sickness. And even if through close confinement or when wrongly fed they become ill, they quickly recover their health when allowed to eat and exercise as their intuition guides them.

How To—

possess exhilarating health every day in the year
know your own body
eat for health
diet for the cure of disease
know the art of food preparation
build a powerful physique
correct physical imperfections
become a physical director
avoid unhappy marriages
avoid disease
fast as a curative measure
cure by hydropathy (heal by the use of water)
apply all methods of drugless healing
give first aid in emergencies
apply home treatment for disease
recognize diseases by manifestations
build nervous energy
treat the common forms of disease
understand the process of reproduction
benefit by the laws of sex and marriage
treat diseases of women
diagnose diseases
have healthy and vigorous children
treat female disorders
treat male disorders
obtain virility and manhood
care for the complexion
manicure; care for the hair and feet
cultivate the mind
These are only a few of the matters explained in the Encyclopedia.

You can rule your health as surely as you rule your actions. The person who does not understand Nature's method of preventing and curing sickness is ill an average of 21½ days each year. In fact, it is estimated that the average person in a lifetime spends \$4,100 on doctor and hospital bills, loss of time from business, medicine and other expenses due to illness. Thousands of people are living half-powered lives because they are ignorant of the laws of Nature. Many of these people will fill an early grave, when they might easily have lived to enjoy a ripe old age.

Nature's Methods and Secrets of Perfect Health Revealed

Bernarr Macfadden is the world's outstanding exponent of physical culture. He has had more than thirty years' experience in guiding thousands of physical wrecks to glorious health and vigor. Out of that experience he built his Encyclopedia of Physical Culture.

This marvelous work tells you how to build rugged health, vitality and strength. It is for every member of the family. No matter how young the person may be or how old, the great "natural methods" which this Encyclopedia teaches will be of inestimable benefit. It gives invaluable information on fasting, diet, exercise and hydropathy for health and beauty building. A thorough and extensive treatment is given of the laws of sex, the attainment of virile manhood and womanhood, and happy, successful parenthood, together with details for the diagnosis and treatment of all sexual diseases. Handsomely illustrated charts on anatomy and physiology are scattered throughout the book.

At 70 He Brought Himself Back to 50

Sanford Bennett was seventy years old before he learned Nature's secrets, yet in spite of his advanced age, he was able by applying the principles laid down in Mr. Macfadden's great work to restore the energy, vitality and vigor of fifty. Recently he wrote, "For the first time in the history of the world, what I regard as a complete presentation of the true curative measures in relation to all kinds of disease is to be found in this set of five most remarkable books."

What would it be worth to you to be able to instantly identify in its earliest stages any sickness that might overtake you or any member of your family? What would it mean to you to have glorious health, almost complete freedom from sickness or disease, no doctor bills to meet, no hospital bills to pay, no days of suffering and worry, no lost salary? What would it mean to you to be able to give proper treatment while any illness is in its earliest and most easily controllable stage and so effect a prompt cure?

Neither Dull nor Technical

Macfadden's Encyclopedia of Physical Culture is neither dull nor technical. You can easily understand every page and every word. It is comprehensive and complete in every sense. It is the crowning effort of Mr. Macfadden's lifetime of experience and its worth cannot be overestimated. You haven't any idea how valuable it can be to you or how many dollars it will help you save each year. It may even be the means of saving your life. Be sure and read the complete contents of this wonderful set of books on the following page.

READ THE DETAILS OF OUR AMAZING OFFER ON NEXT PAGE

An Amazing 5 Days' Free Offer!

There is now no excuse for any man or woman to be ignorant of Nature's laws regarding health. Bernarr Macfadden has authorized us to send to anyone requesting it, on a 5 days' free examination, any one of the five beautiful volumes of his Encyclopedia of Physical Culture. And the request does not in any way carry an obligation to buy.

Mr. Macfadden believes this work is the crowning achievement of his lifetime of experience in guiding thousands to renewed health. He believes there is a need for this tremendously helpful work in every home.

One man writes (name furnished upon request): "This will acknowledge receipt of the five volumes of Bernarr Macfadden's Encyclopedia of Physical Culture which I ordered from you. I cannot express the wonderful value of these great books and feel they will lead me to a successful married life; as I have recently married. They are a plain, sensible and priceless guide to a perfect physical life."

Calls the Encyclopedia His Best Doctor

Thousands of letters like this literally pour in on Mr. Macfadden from thankful owners of his marvelous work. The sick have been restored to health—the well have been able to retain their health—the mother has been able to protect her own health and the health of her children.

Another grateful owner has written: "Permit me to thank you for the great work by Mr. Macfadden—The Encyclopedia of Physical Culture—which I got from you some time last month. I have read much of it already, and consider it to be one of the best books on health ever published. I wish to thank Mr. Macfadden for his great work. The Encyclopedia is going to be my best doctor now and always." (Name furnished upon request.)

If you are not enjoying the perfect health which is your birthright, you haven't employed the methods provided by Nature to keep you well. These methods and secrets of perfect health are now unfolded to you in these five marvelous books.

Send No Money — Not One Cent

You can have any one of these five books for your own personal examination for five full days FREE. We don't want you to send one cent now—we do not want one single penny from you unless you feel positive that these five books will be of wonderful help to you in building and sustaining

your health. By making your personal examination of the book sent for your free inspection, you do not place yourself under any obligation of any kind. All you learn from the book sent you, you are freely welcome to, even if you should decide that you do not want to buy the books.

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But, remember the five days' examination is free and if after your careful examination of the volume you select, you decide that you do not want the entire five volumes of the Encyclopedia, if you feel that you can afford to be without them, simply return the volume sent and you will not owe us one cent nor be under any obligation.

For all who decide to purchase the Encyclopedia, we will include a full year's subscription to PHYSICAL CULTURE—whether the cash or deferred payment plan of purchase is chosen.

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- Vol. IV—Diagnosis and detailed treatment for individual diseases alphabetically listed.
- Vol. V—Sex hygiene, physiology, motherhood, pregnancy, maternity, baby care, disorders of men and women.

We will send you any one volume you may select for five days' free examination. All you need to do to get the volume is to fill in and mail the coupon to us—or a letter will do—and we will immediately send the chosen volume to you. Remember this examination carries no obligation—if you are not entirely satisfied, you simply return the volume.

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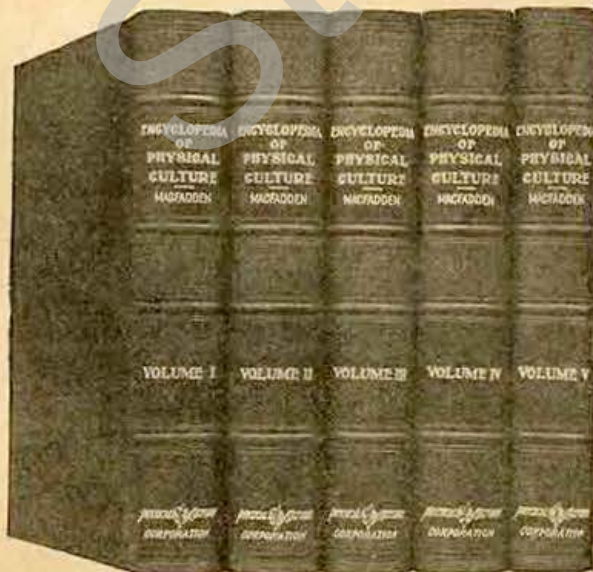
Send me for inspection Volume _____ of the Encyclopedia of Physical Culture. I agree to return the volume in five days or pay \$31.50 cash for the entire Encyclopedia or \$35 on the easy terms mentioned in this offer. My examination of this offer includes a year's subscription to Physical Culture Magazine.

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This set of five volumes contains a complete education in Physical Culture and Natural Curative Methods—the equivalent of twenty comprehensive books on the following phases of health and vitality building.

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The Most Amazingly Successful Health Book Published in Recent Years

OUTWITTING OUR NERVES

By JOSEPHINE A. JACKSON, M. D.
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HERE is a truly scientific book about "nerves" written in a popular style. It is an absorbing account of the interplay of forces back of nervous symptoms and character traits; a book for the sick and for the well; for those who have broken nervously and those who would prevent a nervous breakdown. It is a book for the busy physician, for the parents, the teacher and social worker; for the man who would use his emotions as an asset and get the most out of his physical powers.

In place of vain platitudes about worry and will-power one is shown the real reasons for worry and the blues. There are chapters on the Subconscious Mind, The Real Trouble, The Way Out, That Tired Feeling, Dietary Taboos, The Bugaboo of Constipation, Insomnia, Woman's Handicap, and others equally vital. Some of these chapters will revolutionize the habits of a life-time.

Do You Think

- That you don't get half enough sleep?
- That you are terribly overworked?
- That you must coddle your stomach?
- That you must use purgatives?
- That you have "diseased" nerves?
- That you are a nervous wreck?

It shows the causes which lie back of worry, fear, delusions, and why these are a common source of diseases as various as the varying constitutions of human beings. In simple language it gives an account of the latest discovery of science in the realm of the human mind and its relations to the ills of the body, revealing *unconscious conflicts* as the cause of disasters, both mental and physical, and *the raising of these conflicts to consciousness* as the cure.

This volume is the more welcome since it clears up a mass of misconception about the much-discussed abstruse principles of

psychoanalysis. Here is a simple, comprehensive presentation of the Freudian principles, backed up by nearly threescore illustrations from Dr. Jackson's own cases, with a description of the methods used in her remarkably successful handling of nervous disorders.

There are three perfectly safe statements that can be made about "Outwitting Our Nerves": (1) That it is worth many times its price to any reader; (2) That it is well worth having regardless of what health books one may already have; (3) That it is a positive delight to read, as well as a profit. Send the coupon at the right with \$2.50, and a copy will be forwarded to you immediately postpaid.

Any of the books mentioned on this page may be had at half price if your order is sent with a one year subscription to Strength Magazine at \$2.50.

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These books are not house publications, but have been selected from the entire field of health literature as being the best works on their respective subjects. Order by number.

Strength Magazine, Book Dept., 301 Diamond St., Philadelphia, Pa. 6-24

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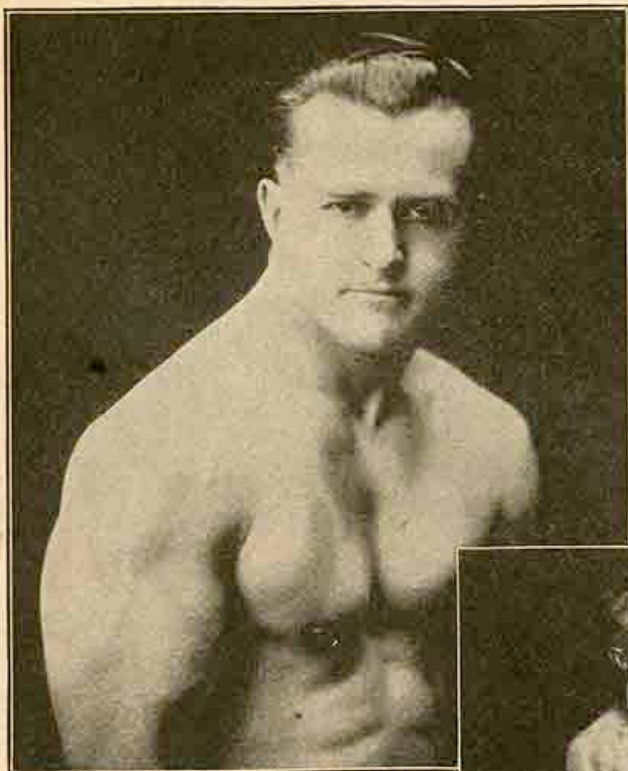
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Earle Liederman Accused!



EARLE E. LIEDERMAN
The Muscle Builder

April 17, 1924.

Dear Mr. Liederman,

I feel as though I should tell you of the wonderful results I have obtained by following your instructions. I have gained in every muscle of my body and considerable strength as well.

Before taking your course I enrolled with another instructor and although I was enthused with the work at the time, I did not realize how much superior your methods were until I became your pupil and progressed under your guidance.

I am going to have some new pictures taken soon and I will be glad to send you some if you wish them. You are welcome to use the pictures you have of me as long as you want to but I am sure when you get my latest pictures, you will discard the ones you are using, for I am in much better condition now than I was when the last ones were taken.

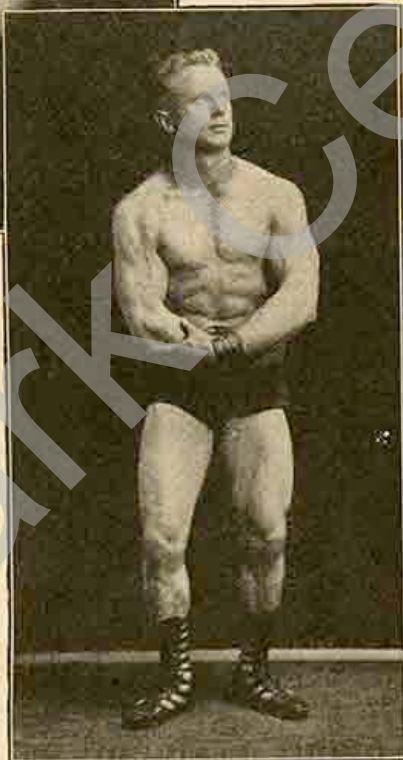
I shall always heartily recommend your system to everyone and I might mention that almost everyone on my boat S.S. "West Virginia" seems to be your pupil, and we sure have a husky crew.

Wishing you continued success in your wonderful work, I am

Your pupil and friend,

John J. Hajnos
April 17, 1924

Photograph of letter
written to
E. E. Liederman
April 17, 1924



JOHN J. HAJNOS
U. S. S. West Virginia
The U. S. Navy Hercules

In my book "Muscular Development" and also in my literature appear several other recent poses of Hajnos among the numerous photographs of my pupils. If you would like a copy, send me your name and address and I will see that you get it by return mail.

Earle E. Liederman
The Muscle Builder

305 Broadway

New York City

IN the May issues of Physical Culture and Strength Magazine a claim was made that John J. Hajnos—the U. S. Navy Hercules, was an exclusive product of an "ism" and that any other system claiming the credit for Mr. Hajnos' development is guilty of gross misrepresentation. The sponsor for these statements offers to pay \$5,000 to any charity designated by the person who can prove that his statements are untrue.

I Challenge Him With \$10,000

I hereby offer to pay \$10,000, not to any charity, but to the founder of the above "ism" himself. If I cannot prove to any disinterested party that John J. Hajnos is a pupil of Earle E. Liederman. The above proof will be given by me in the presence of the above mentioned party and John J. Hajnos himself. Notice, I don't ask anyone to prove I am wrong, *I am ready to prove I am right.*

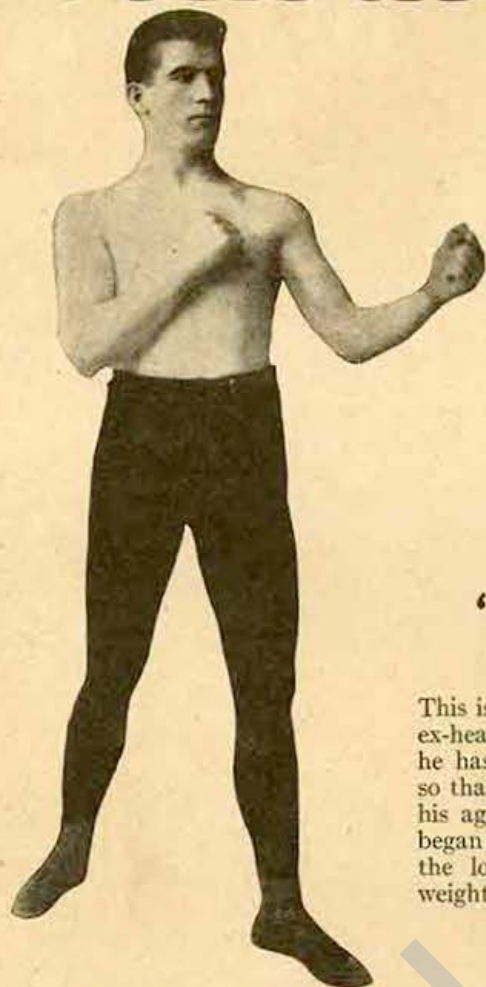
The Truth

Mr. Hajnos did take another course in 1922 and he completed it. But in 1923 Mr. Hajnos came to Earle Liederman, as he was still in need of the benefits which he has since received. I gave Mr. Hajnos instructions over a period of almost six months—22 lessons in all. At the end of this time Mr. Hajnos sent me the photograph which I reproduced in the March issue of Physical Culture, and show herewith.

I Keep My Advertising True

I have always held to the truth in my advertising. I have never made a promise that I cannot and will not fulfill. I have never referred in a slighting way to any other physical instructor either in my conversation or literature. I have played the game square and clean. I am sorry that I have been forced to say the things which I have mentioned above, but my good name has been called in question.

Join the Big-Muscled for Only 15¢



It makes no difference whether your muscles are now soft, weak and flabby or well developed. You can't afford to miss the live-wire articles that every issue of the new magazine "Muscle Builder" is crowded with. Each contributor is a superman in the world of strength. Read their experiences—follow their instructions, and you, too, can quickly build up a high-powered muscular body with plenty of "punch" and good, hard staying power. Start right in today. Get the June issue of "Muscle Builder" at any newsstand or periodical store. The price is only 15c. per copy—or only 3 cents a week on our Special Introductory Offer. Don't fail to secure your copy.

"When I'm SIXTY I'll Meet the Champion"

By James J. Corbett

This is an article by James J. Corbett, ex-heavyweight champion, telling how he has kept fighting fit all of his life so that today he can whip any man of his age in the world. Shows how he began life as a bank clerk, and became the logical contender for the heavyweight crown by developing all of his

muscles to their maximum capacity of size, strength and endurance. What James J. Corbett did thirty years ago is possible for every youth to do today. Read this article in the June issue of "Muscle Builder," and follow the author's example. It's well worth while.

My Legs Were Crushed—But I Became World's Champion Walker

This is an article by Sam Liebgold, who became the world's champion walker after doctors had pronounced his legs helplessly crippled as the result of a highway accident. After persistent exercise he was able, at the age of eight, to easily walk from three to five miles. At seventeen he entered actual walking com-

petition and shortly after became world's champion at the one and three mile distances. This title Liebgold held for 20 years. If muscle building can accomplish such wonders for crushed legs what can it be expected to do for normal parts? Read this astonishing article in the June issue of "Muscle Builder."

How Much Strength Do You Want?

In this interesting article Bernarr Maciadden shows you how to develop muscular power in proportion to your occupation. If you are not strong enough, your work will surely be hard—if your body is sound and your muscu-

lar make-up is vigorous, any work will be easy. You should have a sufficient excess of muscular strength so you can do your work without effort. This article will prove of equal value to office help and heavy labor workers alike.

Don't miss it.



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Muscle

Two-Fisted Bunch a Month!

Learn to Swim in An Hour

This is a remarkable, instructive article on the greatest of all muscle builders—Swimming—by L. de B. Handley, an authority on all aquatic sports. Every one should know how to swim. Even timid persons will find that it is not difficult to overcome their fears and learn to swim after reading this article. Don't miss this opportunity.

Just read over the other features contained in the June issue of "Muscle Builder." Every article will appeal to all two-fisted men. A man is also always better mentally if he is sound and energetic physically. So get "Muscle Builder" every month. You will read it from cover to cover, for it is more than a magazine. It is a complete education in the development of a mighty and muscular physique for you.

Don't fail to take advantage of our special introductory offer, explained below.

Other Features in the June Issue—Don't Miss Them!

The Secret of Making All Your Muscles Alive.

Famous body building secrets by Edwin Cray, M. D.

Wrestle Your Way to Strength.

By Nat Pendelton, who guarantees to overpower Jack Dempsey, in a barehand rough and tumble in less than 10 minutes.

Why Not Have a Powerful Abdomen?

By J. M. Hermic.

I Have the Strongest Jaws in the World.

By Joe Vitole, who can lift 550 pounds with his teeth.

Muscles in the Movies.

Douglas Fairbanks, the muscular movie actor, tells how he keeps in trim and how he built up his muscles for his famous movie stunts.

The Weakling Who Came Through.

The story of the making of a man out of a mollycoddle.

What Do You Mean—The Weaker Sex?

By John Hewins Kern.

In addition to the above articles there are many full pages of "strong man" pictures. Don't miss them!



ONLY \$1.50 for Full Year's Subscription

On this special introductory offer "Muscle Builder" will be sent you every month for a full year for only \$1.50. The regular price is 15 cents a copy. But by filling in and mailing the attached coupon you will make a material saving. So act quickly. Mail the coupon today—NOW!

Builder

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How I Saved My Hair!

The Tragedy of Baldness

By ALBERT WOODRUFF

WHEN the barber told me my hair was getting thin I merely smiled and let it go at that. When my wife said, "Bert, I do believe you are becoming bald," I gave a little laugh and passed it off with a jesting remark. I took the gibes of my friends in the same spirit—and I laughed when the comedian at the theatre made his "cracks" about candidates for the "bald-headed row."

But it wasn't until my business associates commenced to notice that I was rapidly becoming bald and gray that I worried. For while I was just as full of pep and vim as I had ever been—while my business judgment was just as keen as ever, yet I worried for fear my associates might think of me as heading toward the "has been" class. I decided to try to save my hair—if it could be saved.

Then I became a slave to hair tonics. If a tonic was new I bought it on sight. I tried every kind of shampoo that I heard of. I was a victim of the barber's wiles. The money I spent—and all to no purpose. My hair continued to come out just as fast as it ever did before I had tried to stop it. Every time I combed my hair it told the story.

How I Prevented Baldness

One day I read a very interesting advertisement by the celebrated Physical Culturist, Bernarr Macfadden. Now, it so happened that I had seen Mr. Macfadden several times and I knew that he himself had wonderful thick hair. Naturally I was interested—although it was news to me that Mr. Macfadden had made a study of the hair and had written a book on the subject, entitled, "Hair Culture."

In the advertisement Mr. Macfadden said he was amazed to learn how little really authoritative information had been written about

the proper care of the hair and scalp. He said that one need not let the hair grow thin and gray. He said that if the hair is falling out or getting gray a reasonable amount of proper care will restore it, unless one is completely bald. And this same care will keep the hair strong and healthy throughout life. He spoke of simple, natural and effective methods for treating the hair and scalp by following a few laws of nature. Then he casually mentioned that he was startled at the tremendous demand that existed for his comprehensive work. In fact, the first edition of his treatise was very quickly sold and a new edition had to be printed to take care of the orders that were flooding in on each mail.

I made up my mind right then that since Mr. Macfadden had written the book it was sure to be very practical—and the fact that so many had been sold clearly proved to me that the treatise must be filling a popular demand.

So I just jotted my name and address down on the coupon and returned it. When I received the book on five days' free examination



"Only a short while ago my hair was falling out by combfuls, yet today I have fine, thick hair, with not the slightest trace of baldness or dandruff."

If you will examine the book I am quite sure that you will agree with me that it is one of the most valuable—if not the most valuable—and instructive books ever written on Hair Culture.

Albert Woodruff.

Send No Money

If you would like to take Mr. Woodruff's advice we will gladly let you examine "Hair Culture" for yourself, without obligation, and see how easily you can follow the methods that should bring new life, new lustre and luxuriance to your hair. Don't send one cent in advance—just fill in and return the coupon and the book will come to you by return mail. When the postman hands it to you, deposit only \$2.00 with him. Then after you have kept "Hair Culture" for 5 days—after you have tested the methods—if you are not absolutely satisfied return the book to us and your money will be promptly refunded. If, however, you decide to keep this remarkable book, as you surely will, there are no further payments of any kind to be made—the book becomes your property for the one sum of \$2.00 which you deposited with the postman.

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1926 Broadway, New York City

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1926 Broadway, New York City

Without obligation on my part, please send me a copy of Bernarr Macfadden's Book giving me all of Nature's simple methods for preserving and beautifying the hair. I will pay the postman \$2.00 on arrival, but I also have the privilege of returning the book if I desire and you will refund my deposit.

Name.....

Address.....



Women! Keep Your Hair Youthful

If your hair is graying prematurely you have every reason to hope that it can be stopped and that much can be done toward restoring it to its original youthful and becoming color. If it is losing its luxuriant quality and glossy sheen the few simple rules taught by Bernarr Macfadden in his new book **HAIR CULTURE** will enable you to bring about an almost unbelievable improvement. Why spend time and money at the hair dresser's when you can give your hair a better home treatment in only a few minutes a day by this new method? You can easily have hair that is wonderfully silky in texture and your scalp can be cleansed of every trace of dandruff or scurf.

I immediately read it very carefully and that very same night I started to follow the few simple rules. I must confess that within a very short time I noticed a decided improvement in the growth of my hair—it became thicker and more glossy. Then dandruff disappeared. Today, after following the rules laid down in this new method, I have just as fine a head of thick hair as you would see on any man—even a young man of eighteen or twenty has no thicker or glossier hair than mine. In fact, many haven't anywhere near such fine hair. The grayness has all disappeared and my hair has the glowing color of youth. My wife and children also adopted the rules which we discovered in Mr. Macfadden's treatise entitled "Hair Culture" and their hair is the admiration of all their friends.

Bernarr Macfadden's Secrets of Hair Culture

These chapter titles will give you an idea of the scope and value of this remarkable book:



Bernarr Macfadden.
Note his thick luxuriant, healthy hair.

Superfluous Hair. Hair Tonics. Eyebrows and Eyelashes.

- Hair as an attribute to beauty.
- Facts everyone should know about hair.
- Care of healthy hair.
- How to care for baby's scalp.
- Facts about soaps and shampoos.
- The cause of hair troubles.
- Dandruff.
- Dry Hair, Oily Hair, Split Hair.
- Falling hair.
- Baldness.
- Gray hair.
- Hair Dressing.

The Most Important Thing in the World

IS THE WAY YOU FEEL. Health means more than having just enough energy to get through your daily work. Real health means the possession of considerable muscular strength combined with great powers of endurance. It means that your internal organs are in first-class working order. It means that immunity from temporary sickness and chronic disease which shortens life.

The Next Most Important Thing

IS THE WAY YOU LOOK. Your personal appearance counts for a lot in these times. It is nice to look well in a bathing suit; but it is far more important to be able to create an impression when in your street clothes. To have people exclaim, "My, what a *finely built* chap!" after one glance at the broad shoulders, deep chest, trim waist, and beautiful proportions which are noticeable even when you are fully dressed.

Your aim in training should be, NOT HEALTH ALONE, NOT APPEARANCE ALONE, NOT STRENGTH ALONE, but that combination of all three which is the surest sign of real vigor.

I am looking for the man who wants to save time. The man who knows that he needs to improve his physical make-up who has very little time to exercise and who *must have results*.



CHARLES MacMAHON

I Have An Entirely New Training Method

which contains a time-saving element found in no other course of training. The principal muscles are exercised in groups. There are but few exercises in each lesson and after you have mastered these exercises, you drop them and substitute the more advanced exercises in the next lesson. Under my tuition you never have to practice more than a few minutes a day. The effect is so sure and rapid that:

- 1st. Weak beginners, who can't even chin themselves with both arms, soon find that they can easily chin the bar with one arm.
- 2nd. The stout beginners who cannot even reach their ankles can soon learn to bend over and put the palm of their hands on the ground, without bending their knees (and incidentally reducing their waist girth by eight to ten inches).
- 3rd. That scrawny beginners soon find themselves gaining weight and shapeliness as a result of their increased digestive powers.
- 4th. That undeveloped beginners soon find themselves taking pride in their unusually large and clean-cut muscles.
- 5th. That non-athletic beginners soon find that they are in possession of the speed and strength that makes them winners in sports and games.

ABSOLUTELY FREE

You will positively get more valuable information on physical culture FREE from my *sixty-four* page ART BOOK than you will get from any other book of this type. Besides many beautiful half-tone pictures of myself and a great number of my numerous and progressing pupils, there is included in its pages, a thorough description of my methods; several pages on actually how to learn muscle control, with illustrations; action pictures on tumbling and hand balancing; and also pages on what my pupils have to say about my course, reproduced exactly as sent to me and signed in their own handwriting.

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Please mail me a copy of your valuable book, "THE ROYAL ROAD TO HEALTH AND STRENGTH," which you are to send me without charge in accordance with your special offer.



CHARLES MacMAHON
In Muscular Pose

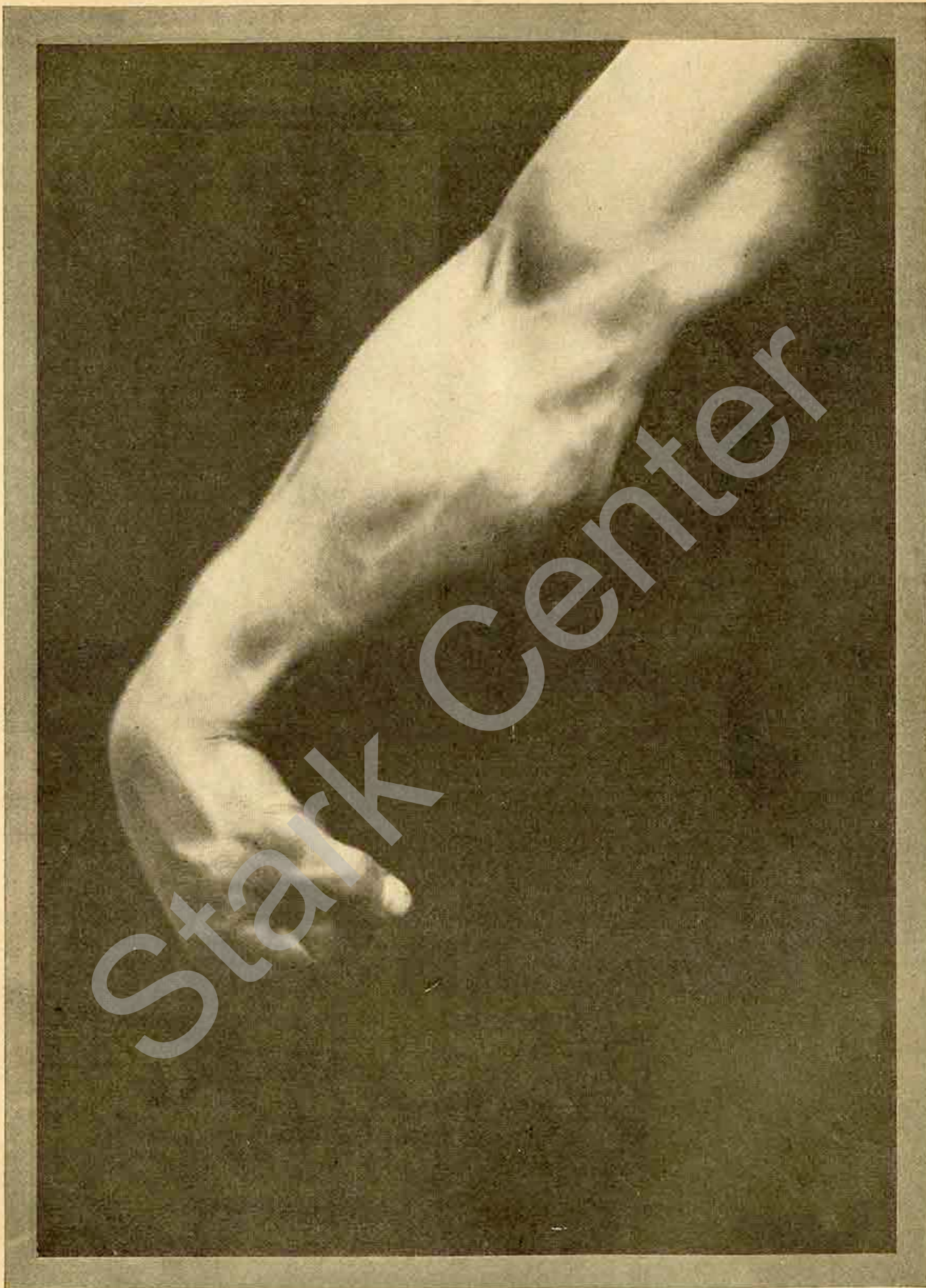
IMPORTANT

My New Leaflet, "Your Muscles, What They Are and What They Do," will be sent with my Book and it is also free. Every person contemplating physical culture should get this Leaflet first. Then you will know what you are doing. Get both of them by return mail.

Name.....

Address.....

City and State.....



Joseph Nordquest's perfect arm. Special reference is made to Mr. Nordquest's arm in the discussion of muscular development in relation to size of bones by Mr. Alan Calvert in the department, "The Mat," on page 66. Mr. Nordquest's arm illustrates the possibilities of development for the large-boned man, his measurements being, wrist $7\frac{3}{8}$ in., forearm $13\frac{3}{4}$ in., upper arm 17 in. when the photograph was taken.

Editorial

This One Thing You Must Do

AFTER an old joke has been in mothballs for twenty-five years it is usually safe to give it an airing. For instance: A poet sent a manuscript to an editor under the title, "Why Do I Live?" The editor returned it, writing, "Because you mailed it instead of bringing it in person."

However, the question is still pertinent. For it seems as natural to man to speculate on the whyness of his wherefore as to indulge in the fond illusions of hope.

What are we here for? What are we getting out of life? What is the biggest thing in life? Is it pleasure, service, parenthood, creative achievement, self-development, or what? Or if the aim of life comprises all of these in various cases and in various degrees, what is the one constant factor?

Some say that motherhood or fatherhood is the supreme purpose. Surely parenthood is one of the big things, but there is more to life than that. Reproduction is a part of life, the scheme of the continuation of life, but obviously and logically it cannot be the whole of life. That would be like saying that one lives for the sake of living.

Others will say that service is the big thing. Perhaps. At least that would seem to be part of it. But if I serve you and you serve me, we will finally have made an even trade of service and both will get along fine. But we will get along fine in respect to what? There is still something in life back of all this.

Is it pleasure? That is sometimes the notion of young people and of those who never do grow up. But the conception of pleasure changes. At seven a boy wants to be a locomotive engineer. At fourteen he wants to be Jack Dempsey. At seventeen he wants to be a champion jazz dancer or saxophone artist. But none of these interests satisfies him long; if he ever really grows up. As for mere pleasure, that is a bubble, with nothing in it, and very sensitive to bursting at the first breath of wind. Happiness? Well, that is another matter, infinitely bigger, broader, deeper than pleasure.

We have never forgotten what an old Scotch-

man, the owner of the gas works out in our home town, said one day when we were about twenty. Said Robert Douglas: "There is no pleasure in the world that compares with the satisfaction of having done a good job. That is the biggest thing in life." "Satisfaction"—you might well put that in your own list of important words. The *satisfaction* of a job well done. The deep joy of achievement. After all, since the biggest part of one's life is spent at work, in creative effort, what could mean more than this type of satisfaction? Even romance, as compared with constructive work, is a small part of life.

And so our inquiry as to the meaning of life turns to the importance of self-expression, creative achievement and self-development as the basis of happiness in its larger aspects. Of course, creative achievement may be a part of our notion of service, and service, like parenthood, is a source of that satisfaction which means happiness.

As between achievement and self-development we come to the matter of balancing the question as to whether the important thing is to be or to do. Of course, it is what you are that enables you to do. On the other hand, some will say, it is what you do that makes you what you are. It is something like the old question as to whether the chicken or the egg comes first. Only it seems to us not quite so difficult. There may be a difference of opinion here, but it seems to us that what you are comes first, for it is that which enables you to do what you can do.

And so it seems, finally, that the supreme thing in life from the individual standpoint is self-development. Whether you start with the idea of service, or parenthood, or happiness, you inevitably come back to this as the one big thing.

You have got one first big job on your hands, irrespective of everything else. That job is to make a first-class human being. The material is in yourself. You have got to make a *man* or a *woman* out of yourself. And don't forget that the first big ingredient is strength—physical, mental and moral strength.

This one thing you must do.



P. & A.

How Weismuller Gets His Speed

Mechanical Secrets by Which the World's Greatest Swimmer Puts Competitors Behind Him

By Clarence A. Bush

HOW does he do it? All over the world in these pre-Olympic days they are asking that question about Johnny Weismuller. Amazed by the great string of world's records, to be improved and elongated last winter during the indoor championship campaign, compiled by this Illinois Athletic Club marvel, swimming associations in seven countries have tried to get Weismuller to show them how.

He turned down Australia, once the world's leader in the sport, and South Africa. However, last spring he accepted England's invitation, and looked with conditional favor on bids from France, Sweden, Belgium and Austria.

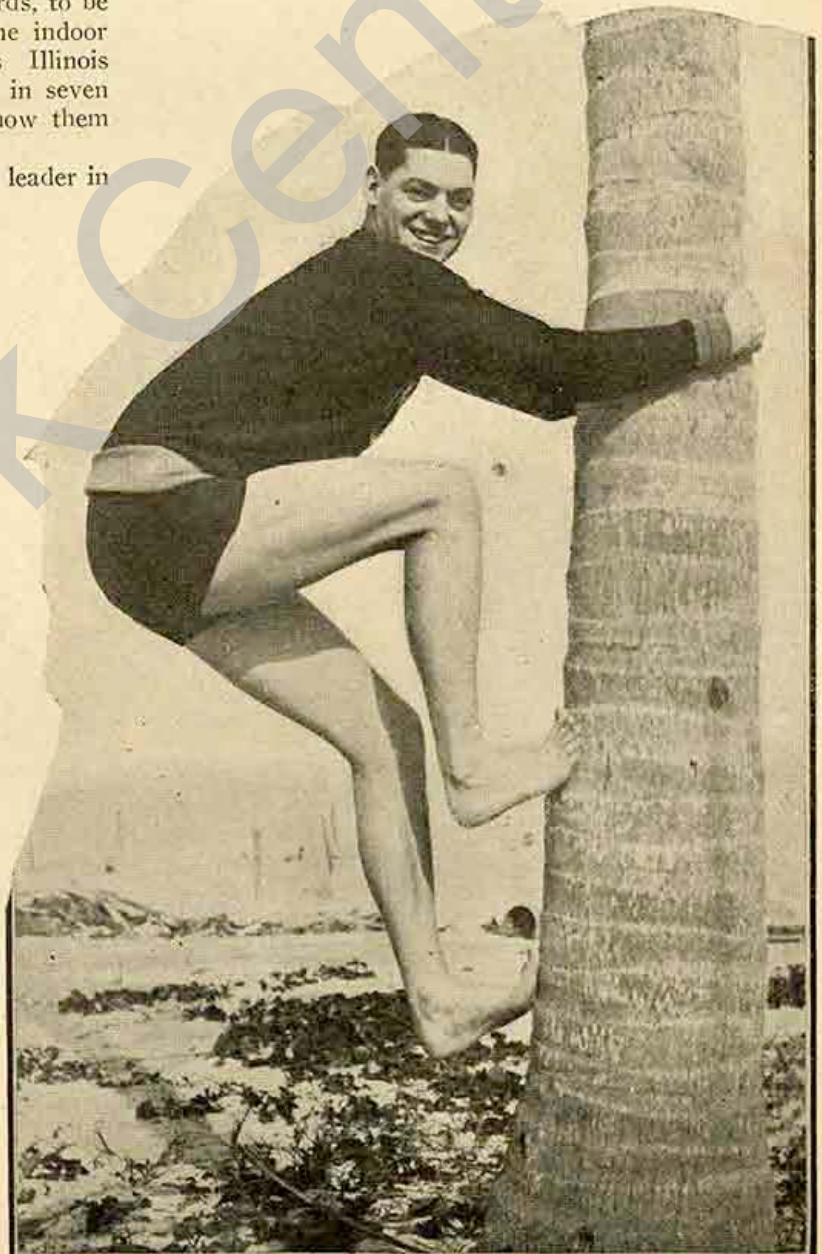
Then the Amateur Athletic Union of the United States stepped on foreign trips by American athletes. As a result, if our prospective rivals at the Olympic Games in Paris are to learn the mechanical secrets of Weismuller's speed, they must read about them.

Too short a time remains for rivals of the United States to do much in mastering these secrets. For the first time, therefore, William Bachrach, the noted coach who has developed the greatest swimmers of the past decade, the greatest of these being Weismuller, has been persuaded to reveal the science of the perfected American crawl stroke as exploited by the world's greatest swimmer.

Two men seeing Weismuller swim will make totally different observations, if one is an uninitiated layman and the other is an expert who knows what to look for. Both, however, are likely to miss some vital things that Bachrach can point out and explain for them.

What you observe about Weismuller is extremely important because in his case swimming, that art of moving or pro-

PELLING the body progressively, slipping or gliding smoothly and quietly through the water by natural



Fotograms.

Apart from illustrating the playful and delightfully human side of this marvelous champion, this picture presents an interesting study of Weismuller's physique.

means, as by the strokes of hands and feet, by movements of the fins, flippers or tail, has been refined down to such a scientific basis that world's record breaking is declared to be more a matter of form than of muscle.

Here is what the untrained observer sees:

From a starting position lying flat on the water, face down and both arms extended forward, the left arm is brought downward and backward, sweeping under the body with the elbow bending until the forearm reaches an angle of forty-five degrees. The pull ends at the hip, where the muscles relax as the arm is brought out of the water.

During recovery, as the arm is brought to the forward position, the forearm and wrist are kept relaxed. The arm is not allowed to touch the water until at full reach in the advanced position, and then it takes to the water with a clean catch.

The action of the right arm is similar. As the left leaves the water at the hip, the right starts its downward pull from the forward position. The hands are kept at all times equidistant. The motion is a continuous rotation, there being no interval between one revolution of the stroke and the next.

You notice that Weismuller for the most part keeps his face buried in the water, the surface breaking just a little over his eyebrows. Every time his left arm comes up, however, he snaps his face to the left, using the neck as a pivot, and brings his mouth clear for a wide gulp. Then he snaps his face back into the water. This movement is accomplished in a very brief space of time and without changing the alignment of the head with the body. It in no wise changes the balance of his body, which he holds on an even keel.

Observing a cluster of bubbles coming up around his head when his face is buried in the water you rightly surmise that he is exhaling his breath. He exhales through the nose.

What have his feet been doing? For all you can see, it is just a straight up and down thrash at a fairly rapid rate. The legs, ankles and toes are extended at full length and close together. At the widest stage of the thrash the approximate distance between the top and bottom foot is from sixteen to eighteen inches.

His legs are kept almost straight except for a little play at the knees, apparently playing for relaxation. The motive power comes from the hip by the use of the thigh muscles. You observe an undulating foot with a hinge action to the ankle.

You have noticed a number of points. While the value of some of them appear obvious, the expert at your elbow can call your attention to others and point out the values you have failed to observe through not knowing what to look for.

For instance, in the arm action Weismuller bends his arm at the elbow. Why? Because no human being would have the strength to bring it through the water



This illustrates Weismuller's "hydroplane" position in the water, an important factor in swimming speed. The photo below shows the champion's pigeon-toed leg thrash in the crawl stroke.



Photo by Atlas Educational Film Co.

at the proper speed if it were kept at full length. There would be too much leverage to handle. Bending the elbow not only reduces the leverage, but divides the power burden between the elbow and shoulder. Also, it offers the most surface of the forearm to the water.

Why does not Weismuller thrash his arms around at greater speed, perhaps doubling the number of revolutions? Because he would then not be propelling himself to much greater advantage, for his arms would cut holes through the water. He starts the stroke slowly and gradually increases the pace as his hand gets a "purchase" on the water.

He carries his arm forward out of the water because that avoids resistance that would be caused by pushing it forward under the water. For the same reason, to avoid resistance, he makes a full reach before allowing his arm to descend upon the water in front of his head.

Why does he breathe on every stroke? That is something Bachrach will have to tell you. Most sprinting swimmers breathe only every third or fourth stroke, some less frequently. In swimming 40 yards in a 60-foot tank, for instance, they take perhaps one breath going down and two coming back. They figure it is a waste of time to breathe oftener.

"In the first place," says Bachrach, "Weismuller wastes no time breathing every stroke. He takes a quicker bite. He works the head turning into the rhythm of his stroke, whereas the boy who breathes less frequently breaks his stroke to do it. The less-frequent

breather must take a longer draft when he gets a chance, which throws off his rhythm and delays him.

"Then I figured out that a swimmer to keep strong in the water must have plenty of air, and must have it in as near the natural form as possible. Weismuller grabs a quick bite through his mouth and then exhales slowly through the nose.

"The natural process is to keep up continuous breathing, that is, the moment inhaling ceases, exhaling starts, and so on. Air is either coming or going at all times. If you breathe less frequently than every stroke, you must hold your breath. It is unnatural and therefore a punishment. Your lungs cannot burn carbon

dioxide, which is all that is left of the air after the instant the lungs are filled and have extracted the oxygen. Weismuller gets plenty of oxygen, and that keeps him strong."

Another

thing about this breathing. The man who breathes less frequently usually twists his body to bring his head up. This throws him off of the even keel he should maintain to avoid unnecessary resistance.

How about the legs? If you should try the simple up and down thrash you think Weismuller is doing, without using your arms, you would not make very speedy progress. You might soon find yourself almost motionless as far as advancement was concerned. There must be some trick to it, you would surmise, and correctly.

You would find it almost impossible to keep your feet below the surface of the water, and Weismuller's feet are always below.

Under Bachrach's instruction Weismuller has developed propelling power in his legs to a greater efficiency than any other swimmer. The secret is extremely complicated.

First, they are kept below the water because there is no traction in air or in the surface of the water. The best traction is secured deep in the water.

Second, the feet are used as though they were extremely pigeon-toed. They seem to catch hold of the water better that way. Then, if they went straight up and down in their pigeon-toed position, the big toe of the right foot would jam with the heel of the left, and the same would happen to the left toe and right heel. Instead of thrashing the feet straight up and down he weaves the toes in and out, sideways, pivoting on the ankle.

Third, the foot undulates at the ankle. This hinge action enables him to get a push on the top surface of the foot going down and on the sole of the foot coming up. If he held the foot rigid the down stroke would find the top surface of the foot hooking against progress.



Showing Weismuller's pigeon-toed leg thrash in the crawl back stroke. He has large hands and feet, which make most effective "paddles."



The above photograph shows Weismuller's recovery of left arm and finish of stroke of right arm in the crawl back stroke. The photograph at the left shows him an instant later, with recovery of the right arm. Read carefully the author's description of Weismuller's unique method of breathing, which is of great importance.



Fourth, there is a push to the backward thrust of the leg as the knee straightens in its slight play.

The undulation of the ankle is up and down. This, combined with the front and back action of the leg and the weaving in and out of the toes and heels, produces a combined action not unlike that of the whirling propeller blades of a ship.

Some one has called the trick a pedalling motion. Bachrach insists that it is a whip-lash motion. Weismuller, he says, uses each leg as a whip, the foot as a lash, and gets a tremendous snap to the whole thing by the proper coördination of the various parts. This lash has the driving power, he says.

Nothing has been said about the position of the body as a whole, chiefly because that is one of the most important secrets.

He starts from a position horizontal, flat on the surface of the water. By the time he gets up a little speed his head is higher and his feet are lower. He is swimming at an angle to the surface of the water. As he approaches record speed he achieves a greater angle than any other swimmer.

Weismuller at top speed almost lifts his head and chest out of the water.

This accomplishes two things. It reduces resistance to the water on the hydroplane principle. It

throws his feet deeper in the water where he gets better traction. He holds his head high to arch his back. He arches his back to throw his feet still lower in the water. At his greatest speed his heels are eighteen inches or more lower than the top of his head.

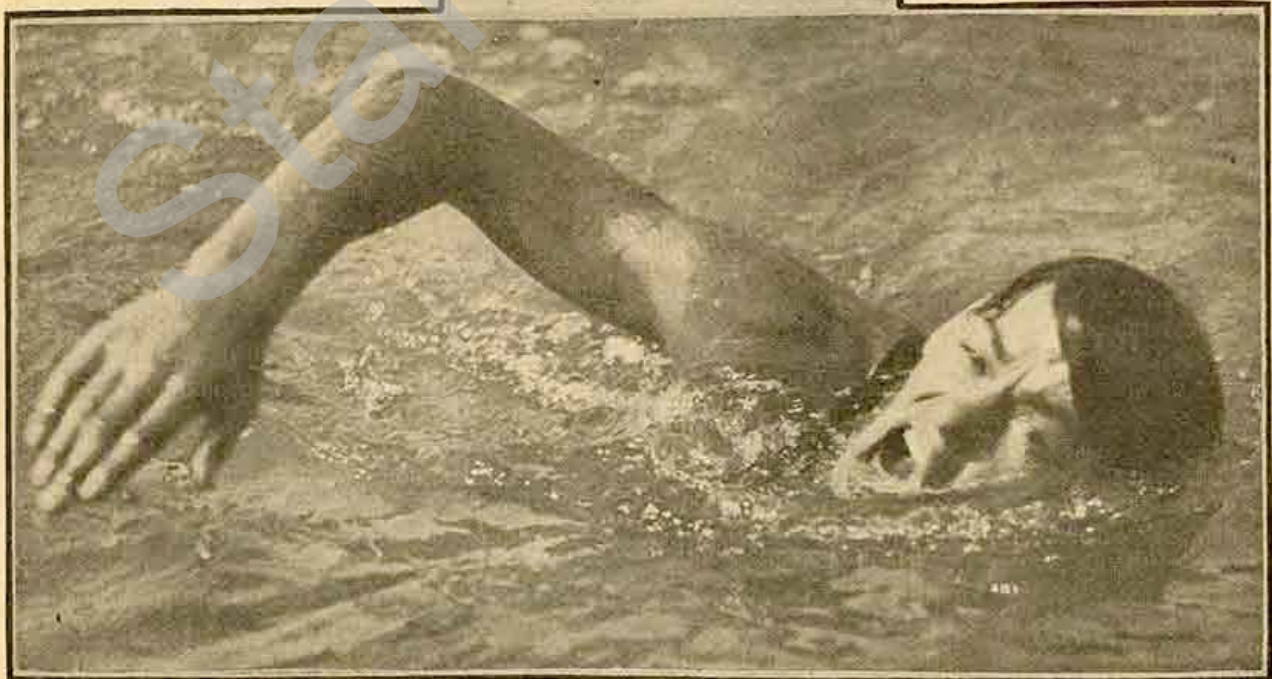
After reaching the velocity that permits this position to be held without sacrifice of more effort than it is worth, Weismuller swims with greater ease than those who may be swimming just below this point of velocity. For others to try to hold the position without the velocity would be too much of a punishment, even if they could hold it. They must swim with the chest and head lower in the water because they cannot attain the proper velocity.

Thus it is truly said that Weismuller makes his records on form rather than muscle. He has many rivals that appear much superior in muscular equipment, but he beats them by his mastery of form.

"Then," said Bachrach, in conclusion, "there are special types specially adapted to swimming. Weismuller, it goes without saying, is an ideal type.

"He is long and rangy. Most boys of his height lose their strength in growing. Tall men are seldom as strong as the average man of middle stature. But Weismuller retained his strength in attaining his long geared limbs.

"He has big hands and big feet, making valuable paddles. Then he has that peculiar
(Continued on page 91).



International.

The champion probably secures a better supply of oxygen than most swimmers because of his system of breathing with every stroke. He is breathing all the time, continuously.

Uncle Sam to Promote Outdoor Life

President Coolidge Desires to Make Recreation Easy and Universal, and Appoints Committee to Formulate a National Policy

By Carl Easton Williams

PERHAPS the best evidence of the quality of vision in our new President was his recent appointment of a committee of Cabinet officers to formulate a national policy on outdoor recreation. The purpose is to find a means of co-ordinating the various agencies of the national and state governments which are concerned with outdoor life to co-operate with civilian organizations and sportsmen's associations which already are active along the same lines, and in general to encourage ways and means by which recreation for the whole people is made easy instead of difficult or impossible to secure.

This new move upon the part of the President is a recognition of a fact of supreme importance to the statesman—the fact that the greatest resource of any nation is its human vitality. Nothing in the way of commerce or coal, iron or oil, mines or manufactures, is worth very much unless the people have health and energy, or unless these various other resources serve in one way or another to promote the health and energy of the people.

The President selected for this committee Secretaries Weeks of the War Department, Work of the Interior Department, Wallace of the Agriculture Department and Hoover of the Commerce Department, together with Assistant Secretary Roosevelt of the Navy Department, who is said originally to have suggested the formation of such a committee.

President Coolidge said, when announcing the appointment of the committee:

"Particularly within the last decade the outdoor

recreation spirit among our people has increased rapidly. During this period there have been put forward projects—Federal, municipal, state and private—to expand and conserve throughout the country our recreational opportunities. It is almost idle to emphasize their value

to the country. The physical vigor, moral strength and clean simplicity of mind of the American people can be immeasurably furthered by the properly developed opportunities for the life in the open, afforded by our forests, mountains and waterways. Life in the open is a great character builder. From such life much of the American spirit of freedom springs. Furthering the opportunities of all for such life ranks in the general class with education.

"Our aim in this country must be to try to put the chance for out-of-door pleasure, with all that it means, within the grasp of the rank and file of our

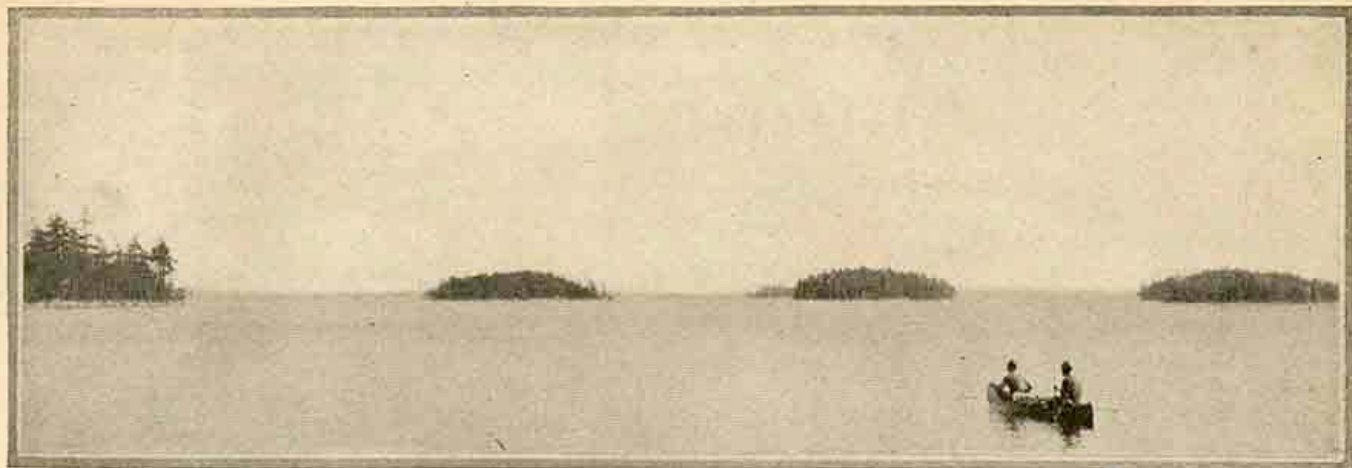
people, the poor man as well as the rich man. Country recreation for as many of our people as possible should be our objective.

"Though all are concerned in this matter, the lead must be and should be taken by the national government. Our national government already is concerned in many phases of it, but in an incoherent manner. In the administration of national parks, national forests, wild-life reserves and unreserved domain the government holds almost unlimited opportunities for this form of public service. The function of the Federal government in the construction of highways, in the study of the propagation and protection of game animals, birds and fish has a very decided bearing (Continued on page 93)



National Photo.

President Calvin Coolidge, whose recognized high standard of statesmanship has been reflected in his new effort to promote our greatest national resource—the vitality of the American people—and who wishes the government to lead in the work of co-ordinating all agencies conducive to this great end.



In the Canadian north woods, far from railroads, where the canoe is still the main means of transportation.

How to Paddle Your Own Canoe

By Elon Jessup

FIRST I am going to tell you about a certain wiry, muscular individual of forty-six who doesn't look a day over thirty, and then I will describe methods of practicing his favorite sport. This man serves as an excellent example of the value of canoeing as a form of physical exercise.

Reginald C. Ratliff is his name. He tips the scales at one hundred and twenty-eight pounds and is almost as solid as a thin steel rail. Ratliff is a New York business man who spends all his spare time during the spring, summer and fall paddling a canoe on the Hud-

son River. It is his hobby and his health insurance.

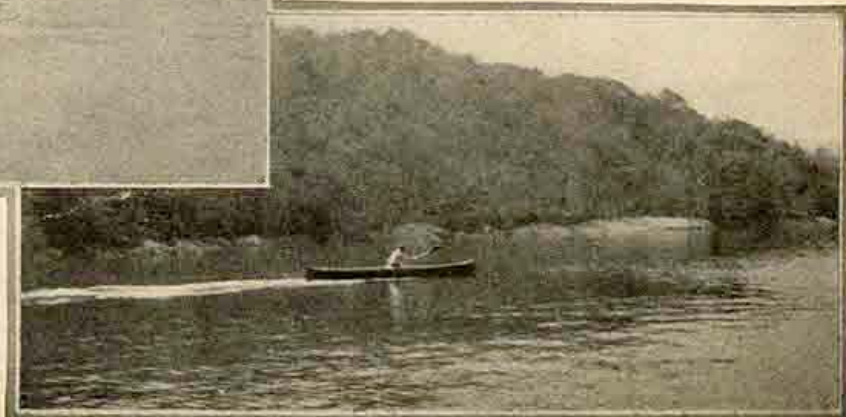
Now, one of the most interesting features of Ratliff's story is that for a period of twenty years he engaged in no forms of sport. As a youth he had been a bicycle rider of some prominence, but a bad fall had put him out of the game. Five years ago he stepped into a canoe for the first time in his life. The following week he bought one, and since then Ratliff and his canoe has been a familiar sight on the Hudson. He regards paddling mainly as an exercise for keeping in fit condition, and with one notable exception has never gone into any of the numerous paddling competitions on the Hudson.

That one exception perhaps argues more for what paddling will do for a man than all the competitions in the world.

The paddling distance from New York to Albany is one hundred and forty miles. Because of winds, tides and high seas the trip is an especially hard paddle. But for a great many years it has been a popular vacation



A couple of snapshots of R. C. Ratliff, whose record-making continuous canoe trip from New York City to Albany, of 145 miles in 35 hours and 44 minutes, at the age of forty-three, is described by the author in this article. The wake of water shows his speed.



trip for New York canoeists. By paddling all day and camping on the shore each night they usually cover the distance in five or six days. That is with two men paddling a canoe.

From time to time during these years there was discussed the possibility of making a through record trip without stopping for sleep. No one cared to attempt it, for all realized what a tremendous strain such an undertaking would represent.

Then out of a clear sky, Ratliff announced that he could paddle the distance *alone* in a canoe, without sleep. Furthermore, he promised to cover the distance within a period of forty-eight hours. Ratliff kept his word. He went over the one hundred and forty mile stretch in forty-seven hours and fifty-five minutes.

That happened three and one half years ago. A year later Dick Vogel, a canoe racing man of international reputation, a man of nearly half Ratliff's age and almost twice his weight, decided to go after Ratliff's record. He succeeded in beating it; in fact, rather badly. Vogel set a new record by making the distance in thirty-six hours and forty-five minutes.

A few months later Ratliff announced that he would try again. During the eight days before the attempt he trained with special rigor, paddled forty-five miles each day, and became as hard as nails. His weight dropped to one hundred and eighteen pounds. Then came the

were eight brief stops of about twenty minutes each for leg stretches and food. Thus, you might say that the grind was practically constant.

At 3:33 P.M. of the second day Ratliff pulled up at the Albany dock, having established a new record of thirty-five hours and forty-four minutes.

Ratliff went to bed at six o'clock that evening and got up at six next morning. His legs were stiff from disuse while paddling, but aside from this fact he felt in prime condition. He told me that in his arms and body which had been so constantly moving there wasn't a sore spot.

Now, when a man of Ratliff's age who hasn't engaged in athletics for twenty years can suddenly take up a sport and presently get into condition to undergo such a tremendous strain as I have described, I hold that there is a good deal to be said in favor of this sport. More than the development of certain muscles is involved. It means that the body of the man who can do it is hard through and through.

Let us examine the fundamentals of this valuable form of exercise. When you paddle a canoe both the responsive craft beneath you and the light paddle in

your hands are almost part and parcel of your own brawn and muscle. Combined with this pleasing physical coordination is the constant need both for mental alertness and caution. In the happy combination of these various elements may be found the reason why canoeing is such healthful exercise and satisfying fun.

In the proper handling of canoe and paddle practically every muscle from your neck to hips is in constant operation. With the well timed stroke, the easy, strengthening dip, pull and rise of the paddle goes a combined pull, push and twist of the body that will not permit muscles to loaf. Arms, shoulders,



The end of the bow propeller's stroke in single-blade paddling. Nothing is gained by continuing the stroke beyond this point.



A common fault of the bow propeller is that of reaching too far forward. Power should be exerted where it will accomplish the greatest result.

event. His double blade gripped the water in its first stroke of the long hard pull.

The start had been made in early morning darkness. All that day, all that night and for the greater part of the following day his paddle dipped almost without rest. There



This is far enough for the stern propeller to reach back, although this is slightly beyond the point of effective paddling of the bow propeller. The photo at the right gives an example of the disadvantage of continuing the stroke too far, showing how the stern propeller may make the mistake of trailing his paddle.





Standing up in a canoe, as in the upper photograph, is always risky. The craft must not be allowed to become top heavy. The photo at the right, however, illustrates a very good position for paddling alone with a single blade, but only after you have learned the knack. Below, a quick get-away.



The double blade paddle is like two outstretched arms lashed together with a wooden hand at either end alternately gripping the water first on one side of the canoe and then with the next stroke on the other side. This paddle, which may be nine or ten feet long, is grasped by both hands, the backs of the hands being turned upward and about thirty inches apart.

As the blade on the right hand side of the canoe travels backward through the water

and sends the craft ahead, the blade on the left hand side is being automatically advanced forward through the air to get into position for the next stroke. As the right hand blade is released from the water behind, the left hand blade dips down and grips the water ahead. And so it goes. Both sides of the body are being constantly and equitably exercised.

Each of these strokes is at once a push and pull with the paddle; a pull with the lower arm and push with the upper, both working simultaneously. The power of

back, chest, stomach and hips are all vigorously at work.

As with many other forms of exercise, the most healthful results come from a wise combination of effort and conservation of energy. This fundamental principle as it may ordinarily be applied to canoeing means that one's object consists of propelling the craft ahead in a straight line with a wise distribution of strength in the swing of the paddle so that there is little or no lost motion and there remains a substantial amount of reserve power for a lot more swings to come. Method is quite as important as is action. Ratliff would never have reached Albany had he not learned this lesson well.

Two general types of paddles are used in canoeing, these being respectively the double blade and the single blade. Ratliff, as I have mentioned, uses doubles. There are many other canoeists who show the same preference. On the other hand, probably a greater number of canoe users paddle with the single blade. It all comes down to a matter of personal liking. Both types of paddles offer plenty of fine exercise. The respective strokes are fundamentally the same, although these differ in several particulars. That which I have first to say concerns mainly double blade paddling.

the shoulders should come into the stroke, with which is combined the chest and a rolling of the stomach muscles. There should be a pivoting of the body but not an actual turning of it. The body, to general outward appearances, remains fairly rigid, and it should be kept at all times well centered. There are some canoeists who sway from side to side with each stroke; this action rocks the boat and wastes good motion.

To extend the stroke too far backward is a common fault that is to be guarded; this is a waste of energy which has the added disadvantage of turning the bow of the craft off its straight course. Remember that the power of propulsion is in front of the body and that this quickly diminishes after the blade in the water has been brought back in the water to a point even with your side. On the other hand, the action of leaning very far forward may also result in a waste of motion and energy. Strike a happy medium.

Fully three-quarters of the paddle blade should be buried in the water with each stroke or else you will not receive the full benefit of the power you are putting into it. But in doing so you must beware of "crabbing" a stroke. This is a disastrous slip which (Continued on page 92)

The Athlete's Ideal Diet Should Be Your Diet

A Balanced Diet That Will Prevent an Athlete from "Going Stale" Will Keep You from Going Stale

By *Alfred W. McCann*

AN excessive meat diet, because it is an unbalanced diet, causes an excessive elaboration of acids in the body as a result of the decomposition of the albuminoid sulphur and the phosphorous-containing compounds with which meat abounds.

When the diet lacks the soothing, sweetening, correcting alkaline salts indispensable to health, these meat-acids seize upon the alkalines already present in the human tissues. This seizure, which really amounts to confiscation, leads at first to an impairment of the functions of the tissues and then to their destruction.

Dietitians who talk glibly of proteins, carbohydrates, and fats rarely tell us what kind of protein, carbohydrate, or fat they refer to. There are as many varieties of protein as there are varieties of fruit; as many varieties of carbohydrates as there are varieties of vegetables; as many varieties of fats as there are varieties of animals.

The conduct of purified protein in the body is not the conduct of the unrefined protein from which it is produced.

Purified starch does not conduct itself in the body as the unrefined carbohydrate from which it is derived.

Purified fat does not conduct itself in the body as the unrefined fat from which it is extracted.

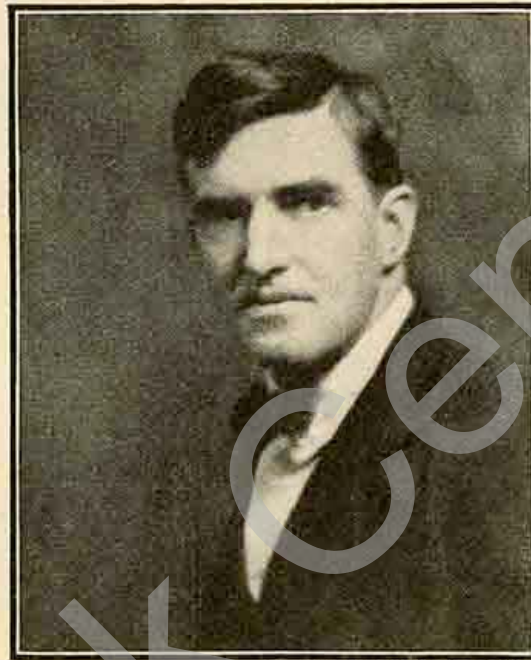
Robbed of their so-called "impurities," they act strangely. In fact, they don't act like themselves at all. Yet dietitians jump over this hurdle as though it didn't exist.

Not only do they make no effort to explain it, but they refuse to take it into consideration when preaching their curious gospel.

These scientific facts are beyond the borderland of dispute. Why, then, do dietitians, when they refer to them at all, refer to them as if they didn't know what they were talking about?

Does this mean that meat, because it is rich in proteins of many kinds, should not be consumed at all?

This would indeed be an extravagant conclusion, and if there is any one danger that we wish to avoid it is extravagance. Nothing said here should indicate in any



Photograph by *Nickolas Muray*

Alfred W. McCann

manner that meat should not be consumed. All that has been said indicates conclusively that moderation should be the rule.

Wherever meat is consumed a plentiful supply of green vegetables should go with it. Beef stew ought to be the very embodiment of a "balanced diet," but as it is usually served in American restaurants the meat in the stew is emphasized by its superabundance.

In fact, one of the complaints properly directed by travelling men against hotel life in most American cities is that the scarcest thing on the bill of fare is the vegetable. The novelty most rarely encountered in all this scarcity of vegetables is a vegetable appetizingly cooked and served.

All followers of sports have observed with persistent frequency

that football players and crew men are called upon during the training season to devour great quantities of beefsteak and chops. With the same frequency they observe among athletes that condition described as "gone-stale."

The "gone-stale" state is but one of the many forms of auto-intoxication or self-poisoning resulting from an excessive acid-producing diet. If the athlete who "goes stale" were not engaged in vigorous exercise his physical condition would probably manifest itself as "rheumatism."

"Staleness" does not confine itself to any particular group of athletes, but crops out in some form or other among all. It not only makes the oarsman a mere passenger in the shell, but destroys the resistance and endurance of the runner, wrestler, boxer and gridiron warrior.

Crew men, as a rule, complain of biliousness. This is because they are gorged with eggs. A child that consumes too many eggs, as a rule more than one a day, between the ages of four and ten, manifests the same symptoms of self-poisoning.

Eggs, the yolk excepted, are acid producers, yet it is not unusual for one man in training to consume as many as eight at a breakfast.

Track athletes, because of the preponderance of meat in their diet, suffer from constipation, particularly those

engaged in short-distance runs such as the 100-yard or 220-yard dash.

A not uncommon aftermath of the training table is appendicitis. Many a star quarterback has been laid low before a scheduled game on this account, his unsuspected enemy being the so-called "balanced diet," in which the presence or absence of tissue-sweetening salts has never been heeded.

The training table diet, as well as the diet of thousands of unfortunate children, seems to be based on the absurdism that muscularity and strength are directly proportional to the quantity of protein consumed. If such a theory, which constitutes but one of the many faddy aggressions against common sense, had any background of truth we might expect, by following it, to develop a giant from a pygmy or to convert a greyhound into a bulldog.

The training table teaches parents many truths that have direct application in the home. The very food that will give to growing children what they need will give to athletes all they require. What is really good for athletes is likewise good for growing children, business men, shop girls, laborers, housewives and statesmen. Any attempt to create mysterious distinctions as to the health requirements of juvenile and adult is based on a distorted understanding of the meaning of nutrition.

Food that will adequately nourish the big toe will also nourish the brain. There is no such thing as brain food, nerve food, chest food, liver food, thigh food or calf food. Food is either blood food or it is not food at all.

"But, doesn't meat make muscle?" asks the athlete. "Don't children need a lot of meat?" asks the parent.

The answer to these two questions is identical. It is perfectly true that the human muscle, as well as the animal muscle consumed as food, consists for the most part of protein, and that protein goes to repair broken-down muscle tissue.

It is also true that any protein (acid-forming) in excess of the quantity actually necessary for the restoration of waste becomes a burden—so much excess baggage to be got rid of, so much irritating, poisoning acid to be counteracted by sweetening alkalines.

These alkalines must be provided through the blood after they have been furnished by the food.

In America's refined and dealkalized diet these tissue sweeteners are sadly deficient in quantity. The blood is handicapped by this deficiency.

An ideal training table should be no different from any other table. The secret of all adequate diet is not found in carefully worked out tables of grams, but in natural and unrefined foods. We shall emphasize the reasons that lie behind this assertion later on. For the present it must be insisted that this secret is found in

whole wheat bread, whole rye bread, whole corn bread, unrefined sugar, unsulphured dried fruits, fresh fruits, prunes, orange juice, fresh vegetables, greens and salads, pure milk, wholesome meat in moderation, and fresh eggs in moderation.

The first thing to do in setting up a "balanced diet" is to reduce the quantity of meat ordinarily consumed to the minimum and to increase the quantity of vegetables and fruits to the maximum.

For children, milk is meat, but it is much more than meat in that it provides the very elements that are not present in meat. Milk makes a perfect substitute for meat wherever a growing child is to be considered.

This simple variety of foods affords a diet which has been found not only capable of supplying ample material for maintaining the integrity of the muscle structure, but in the case of the athlete, if his habits are not vicious, a diet of this kind will keep him in the pink of condition indefinitely and prevent his "going stale" regardless of his muscular activity.

In such foods are to be found all the materials that prevent exhaustion, all the materials that keep the body fluids normally alkaline, all the materials that preserve the muscle tissues in a state of tone.

Muscle tone is just as important to the expectant mother as it is to the athlete. Muscle tone means youth; lack of muscle tone means age.

As we have already seen, the poisons of fatigue and the poisons of refined foods are almost identical in their capacity to interfere with muscle tone and thus to bring about a state of premature or temporary age in young tissues.

In the 101 combinations that can be prepared from the simple foods enumerated, to which at discretion almost anything else may be added, without regard to rhyme or reason, a diet is found that neither handicaps the athlete nor the creature of sedentary habits; that imposes upon the body no unnecessary task of getting rid of excess baggage at the expenditure of energy or vitality.

In preparing a "balanced diet" it must be remembered that there are no fixed standards of measurement, no arbitrarily determined percentages of proteins, fats or carbohydrates. There is no necessity for weighing out grams or ounces of this or that food to combine it with grams or ounces of some other food in order to conjure health and longevity out of uncertainty or disease.

The farther away we keep from grams and ounces and all such other clap-trap as calorie equivalents, the better off we shall be.

The only place for the calorie is the hospital, and when we get along far enough on the road to dissolution to make the number of calories an important factor in our feeble hold on existence, we have become

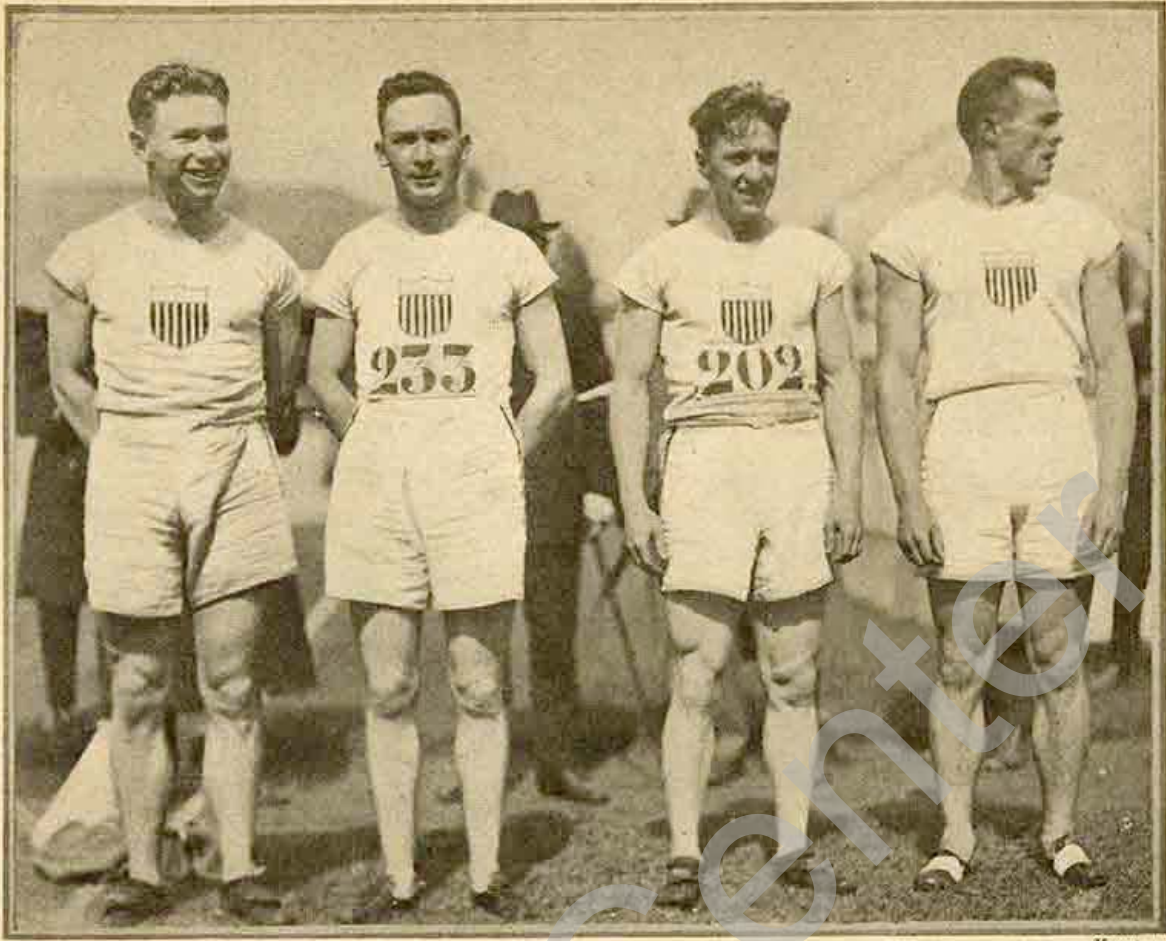
(Continued on page 84)

The First Thing to Do in Achieving a Balanced Diet

"The training table teaches athletes many truths that have direct application in the home," says Mr. McCann. "What is good for athletes is likewise good for growing children, business men, shop girls, laborers, housewives and statesmen."

"An ideal training table should be no different from any other table. The secret of all adequate diet is not found in carefully worked-out tables of grams, but in natural and unrefined foods. This secret is found in whole wheat bread, whole rye bread, whole corn bread, unrefined sugar, unsulphured dried fruits, fresh fruits, prunes, orange juice, fresh vegetables, greens and salads, pure milk, wholesome meat in moderation and fresh eggs in moderation." See Mr. McCann's more detailed lists of foods in this article.

"The first thing to do in setting up a 'balanced diet' is to reduce the quantity of meat ordinarily consumed to the minimum and to increase the quantity of vegetables and fruits to the maximum."



Keystone

Here is the team of four Americans that qualified for the final heat in the 100 meters at the last Olympic Games held at Antwerp in 1920, the finish of which is seen in the pictures on the opposite page. Left to right, Paddock, Scholz, Murchison and Kirksey.

“On Your Marks—Get Set—”

Paddock's Life Story

Presenting the Stirring Account of His 1920 Olympic Races at Antwerp—How It Feels to Smash All World's Records, and the Sensation of Running 220 Yards in 20 4-5 Seconds

By Charles W. Paddock

THE National Championships of 1920 had the largest entry list of any meet of the year, and the number who competed in Boston during those two days has seldom been exceeded in an American meet. The reason was obvious enough, for aside from being the annual Championships, these games were also the final tryouts for the Olympic Games, and those who were successful won passage to Antwerp.

There were more sprinters on the field and more famous stars in the dashes than in any other event. From Cary, an old-timer of the days of Arthur Duffey, down to Frank Conway, a prep. school star of promise, all the talent was there. Some of the preliminaries were run off on Friday, so that only twelve

sprinters were left in each event for the following day. My own heat of the hundred that day proved to be a stiff brush, for Billy Hayes, a Boston man, was off to a good start and ran hard all the way, he and I finishing together in ten seconds. All the great sprinters came through in one event or the other save Henry Williams of Spokane. The star of '16 was unable to compete with the stars of '20. Howard Drew managed to survive in both the 100 and 220 yards. The day had been humid and hot, and the strength of the Westerners, who were unaccustomed to the climate, was sorely taxed, Morris Kirksey especially feeling it.

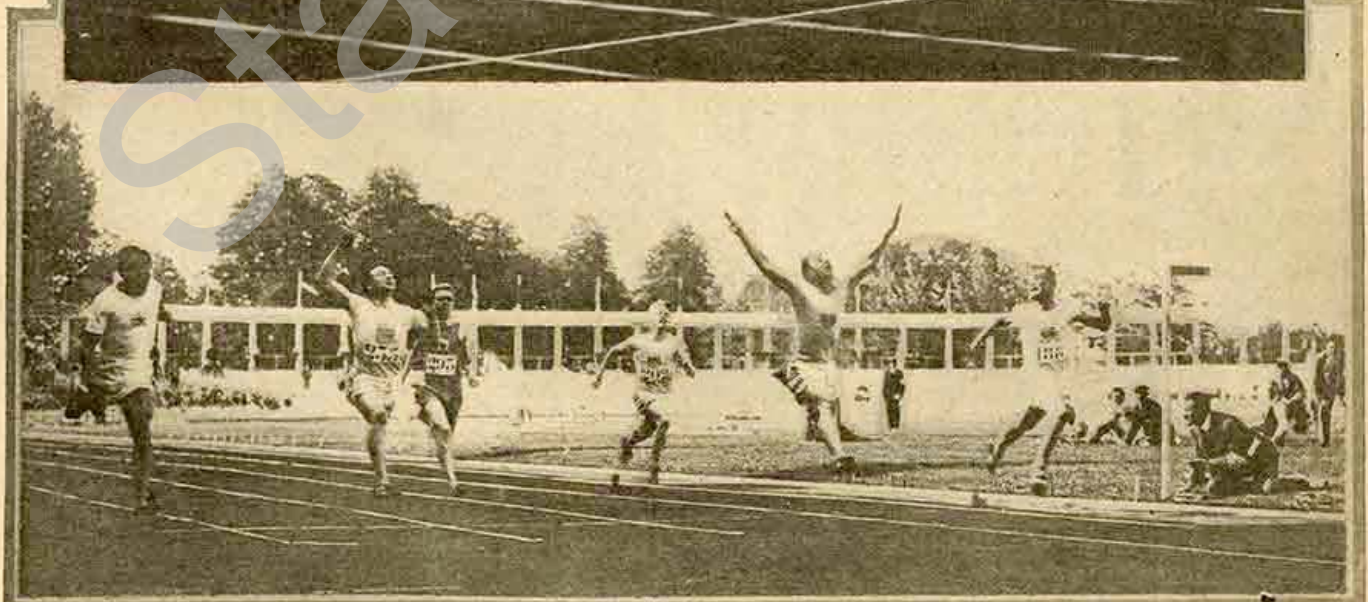
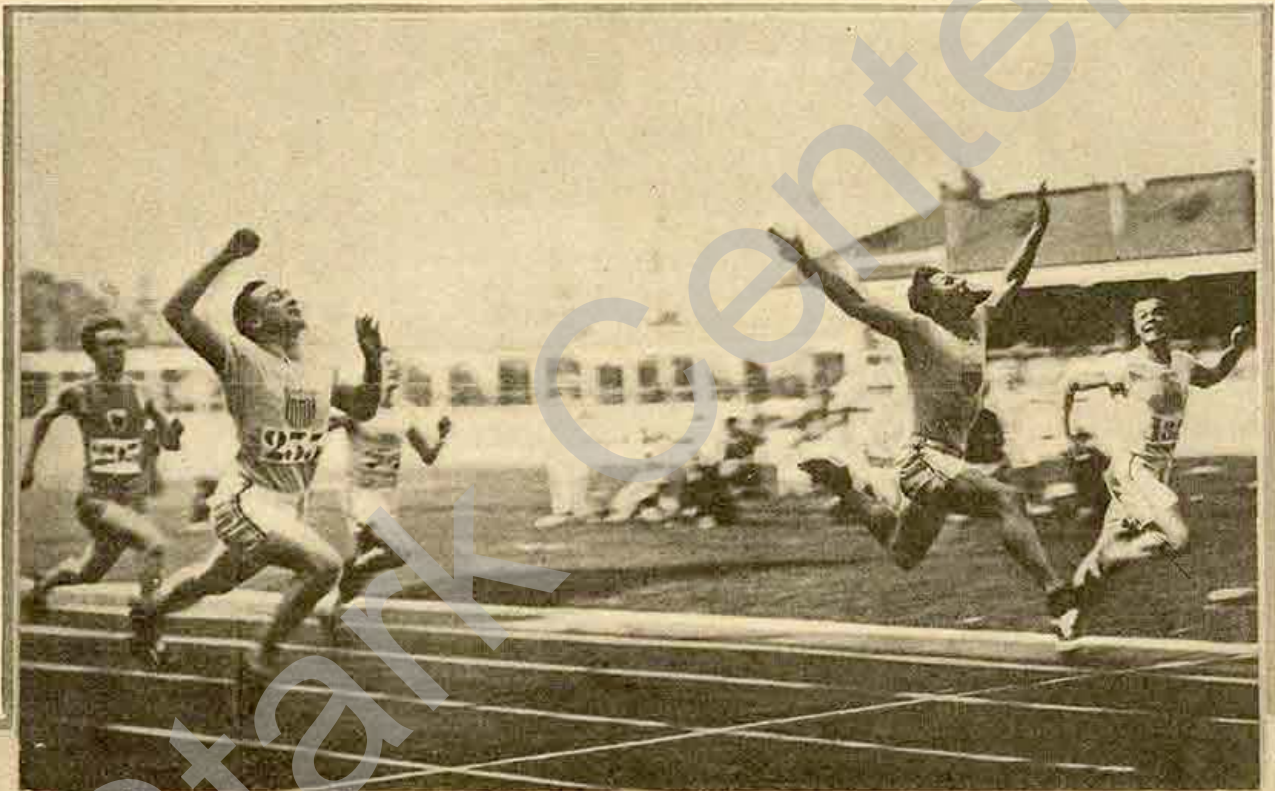
However, the heat was nothing in comparison to that which faced the athletes when they went to their starting holes for the semi-finals the following afternoon.

Three were to qualify in each heat of the hundred. Jack Scholz, Billy Hayes and I won out in one, while Loren Murchison, Allen Woodring and Morris Kirksey came through for victory in the other. During the twenty minutes' interval between those preliminaries and the final, I could not drive away the presentiment that this was my unlucky race, and the heat and the very atmosphere seemed to oppress and weigh me down. It was with feelings such as these that I went out for the finals. And as I walked along I speculated upon the chances of those who were to run against me.

Jack Scholz and Loren Murchison seemed to be treading on air. And their starting was just as phenomenal as it had been indoors. Indeed, the track at Harvard Stadium that day was little different from the hard indoor courses which I had attempted to run over the

preceding winter. A hard, fast surface had never been to my liking, and I wished again for a track like the Ebbett's Field course, rough and treacherous even as it was, for it at least had the advantage of offering an easy footing. Morris Kirksey, walking by my side, was of course the man whom I feared most. But Kirksey told me as we walked along that he seemed utterly weary and dead. Billy Hayes, that genial Notre Dame University giant, though at home on the Cambridge cinderpath, had suffered rather an off-year, and though a former National Champion in the century, did not inspire much fear on this particular occasion.

Finally, there was Allen Woodring. This meet had been the first in which I had seen him compete. However, I had heard a great deal concerning his work from Eastern friends who had come West. He had been one



Wide World

International

No human eye could give the spectator two different views of the finish of a race, but two different cameras recorded these two views, taken practically instantaneously, of the finish of the Olympic 100 meters in Antwerp in 1920. This race made Paddock (second from the right in each picture) the 100 meter Olympic champion, with Kirksey (at the extreme right) second, and Scholz third. Americans have usually, though not always, outclassed the field in the sprints. Will they do so this year?

of the most notable of all high school performers and was considered much more dangerous at 220 yards than in the hundred, but the very fact that he had eliminated so many heroes of the past and so many great century men in reaching the finals of this particular 100 yards made him appear all the more dangerous for the 220 which was to follow later in the afternoon. Even as he practiced that day before the event, I was impressed by his splendid stride, a thing not acquired in a day, but which had been worked upon and developed until at last he had it, as few men in the sprinting world. Right then I determined to make a mental note of Woodring's stride and to some day perfect it for myself. It was this that Allen taught me, and his work this day and in the weeks that followed made him eligible to join our table round, and sit with the twelve.

They called us to our marks, the starter and the assistant. We took them. We were set. Came the flash of the starting gun. With it was Murchison, and a fraction later Scholz. Then the rest of us followed. The two ahead, Scholz and Murchison, drew away in those first yards because of the perfect start they had gotten. Murchison was still slightly in front of Scholz, but neither could gain on each other, or the rest of the field on them. So we stood for the first fifty. A good two yards before us these midgets flew on, and the task seemed hopeless. Vainly Kirksey and I glanced at each other as we strained and pulled; fruitlessly we exerted our best energies to gain. But we could not. A load of lead weighted us down. The air oppressed us. The day conquered us, and it was only in the final yards that we commenced to gain. Slowly the two ahead seemed to come back toward us. But the rate was not swift enough to bring victory, and the roar of that mighty stand broke loose in acclamation. The East had won; Murchison was first and Scholz was second. Kirksey and I had followed these two across the finish line.

When the congratulations were over, Morris and I walked slowly back to the training quarters together. We both felt exactly the same. A vague kind of stupor weighed us down. We had run in about 10 2-5 seconds, the worst time either of us had been clocked in for years. The winning time had been ten seconds. Kirksey and I did not stop at the training quarters, however. We went on beyond and came to an open space, out of sight of the rest. And there we commenced to practice our starting. For an hour or more we would work awhile and then rest and then go back to work again. Desperately we tried to get the dull, dead feeling out of our bodies. And when the preliminaries for the 220 were called we were tired, but felt much better. Murchison, Kirksey and Haddock conquered in one heat, while Woodring, Massengale and I qualified in the other.

When we went up to the starting mark for this final race, Marshall Haddock came to me. He had been my running mate in the Inter-Allied and Service Championships, and he said, "Forget the climate, Charley, and run like we did in France. I am with you." Of all those who had been victors and dangerous in any field the year before, only Haddock had survived the trials, and courageously he took his holes that day, determined to conquer age as well as his younger opponents.

Again it was Murchison who was away at the starting gun, far ahead of his field. And Haddock and Kirksey and Woodring and I were striving to overtake

him. He was five yards before us at the fifty mark, and then Kirksey and I edged away from the field and started to overtake him. At the hundred our distances were identical with the way in which we had finished the first great race of the day, but at the 150 Kirksey and I were both ahead of "Murch." We increased that lead in the final strides, and I hit the tape with Kirksey inches behind in the time of 21 2-5 seconds, which tied the old National Championship record set by Bernie Wefers more than twenty years before. That race, coupled with all the practice which we had taken and the weather itself, almost conquered us after the contest was ended, and Kirksey and I had to hold to each other as we trudged back. Massengale had defeated Woodring, while Marshall Haddock had to be contented with sixth place.

Four men were to compete in each event for the United States, and usually it was the custom to take two extra stars to alternate if the case demanded. Allen Woodring was selected as the first alternate for the sprint team, and Billy Hayes and Joe Loomis were taken, one for emergency in the 100 meters and the other for the relay. Of all those who had successfully competed that day, Haddock was the only one not to be selected, but the reason for this was that Scholz, who had not entered the 220, could be used in the 200 meter event if occasion demanded.

Toward the end of this month of July in the summer of 1920 the *Princess Matoika* set sail for Antwerp with the Olympic team. Then began thirteen days the like of which had never been seen before in the history of American athletics, and which it is hoped will never be seen again. There were hardships to be endured because of a lack of funds and appropriations; poor food to be eaten; a lack of training space and facilities, and finally a dismal outlook in Antwerp to look forward to. For rumor said that training conditions would be still worse, and rumor was correct. The Yankee athletes, reared in freedom and liberty, resented the actions of the Committee in charge, and were not slow in making known their anger. The outcome of it all was the appointment of a committee of seven to look after the interests of the athletes and to protect those interests. And the first step was a series of resolutions which were adopted with but one single dissenting voice, and presented to the committee. And it did bring relief. It was an unfortunate circumstance that the finances were so inadequate, and before America sends another team abroad the first thing that should be definitely arranged is not the team itself, but the money to finance that team. Fifty points or more were thrown away in 1920 because of these unwholesome conditions, which cut down the strength and ability of the American contestants.

It is a great trip to look back upon; those days at sea aboard the *Princess Matoika*, and of all those athletes whom memory recalls there is not one who stands out more vividly than little Loren Murchison of the New York Athletic Club. We were together in the same stateroom and underwent the same hardships. What he did I did and the reverse. So that if ever two men were in like condition for a contest it was Murchison and I. We trained at the same time; we ate at the same table, and we slept in the same stateroom. And never would one train more than the other or eat more than the other, and both of us saw to it that we slept the same amount! Murchison said that he feared me in



Paul Thomson

The finish of the combined A. A. U. National Championship and Olympic Tryouts 100 yard dash at the Harvard Stadium in 1920. This is the race to which Paddock gives so much attention in a detailed description early in this installment of his story, won by Murchison, and in which, according to his own memory, Paddock and Kirksey were badly defeated. Paddock says that though Murchison won this race in 10 seconds, he and Kirksey did it in about 10-2/5 sec. The photograph, however, contradicts his story, inasmuch as, although only third, he was very little behind. He must have gained much toward the finish. From left to right, Kirksey, fourth; Scholz, second; Paddock, third; Billy Hayes, sixth; Murchison, first; and Woodring, fifth.

Antwerp, but Kirksey was the man who still looked best to me.

We arrived in Antwerp. We found our quarters. We realized that the rumors we had heard were perfectly correct. We visited the stadium, and we trained there. The track was just to my liking during those first days, for it was soft and easy to stride upon. Murchison and Scholz detested it, but Kirksey and I smiled as we strode along.

With the opening of the games came the first heats of the 100 meters. It fell to my lot to draw the fastest man in England for my first heat, and the competitor whom all the Americans were carefully watching, Harry Edwards. There were two to qualify, but this opportunity afforded us all a chance of seeing how fast this East Indian was. I led him to the tape in the first heat. I had come out of my holes fast and had gone hard for the first 50 meters. I believe he also was doing his best. After this point I slowed up a fraction and he gained. I slowed still more and coasted across, and he also coasted in. So when we finished I had a certain amount of confidence. For it has always been that any man I could lead from the holes I have not feared. But the sprinters as a whole did not know which was the best, as neither of us had shown our greatest speed. Murchison and Scholz won their heats that day. But the next day Edwards met and defeated Murchison, and the following time beat Scholz. Still I watched Kirksey, and was surprised at the way in which he was running. He came out of his holes in mediocre fashion, stumbled along the track in rather an uncertain manner, but he always

managed to creep into second place when it took a second to qualify, or into third place when no more than that was necessary. He won only his first heat, which went in 11 seconds for 100 meters. All the other heats had been 10 4-5 seconds. In the morning of the day when the finals were to be held Kirksey had trouble, it was claimed, in taking third place. But he was in the finals. That was enough for me, though few seemed to figure Kirksey as having much chance.

The day was cold, and a slight rain was falling when we went up the track, the six of us, to compete in the finals of the hundred meters. Here was the race that all of us had looked forward to since the days of our youth, here the opportunity to clutch the championship crown of the world, and all of us knew that only one could win that victory. Which one? Ali Khan of France, that slight little Latin youngster who was National Champion of his country and who had run off heat after heat steady as clock-work, would he be the conqueror, or was the honor reserved for Harry Edwards of England, the brilliant Britisher with the smooth stride, or would one of the four Americans win? The odds were of course greatly with the Yankees, though there were plenty of backers for the Englishman.

It took us a very long time to get started. Every one wanted the other man to wait and become more nervous and cold. But at last we got down, and Kirksey and I in getting set drew our hands back to the starting line, as we always do, having first placed them beyond the line, to get ourselves the more perfectly set, and then

the assistant starter called to Kirksey and me. By the time he had spoken we were in position for the race, and signaled the starter that the men were ready. While all this was going on Murchison was in the act of rising, probably believing that the starter would call us up from our marks. But he didn't, and before Murchison was to his feet the gun sounded and we were away. Kirksey was out in front, he who had not been ahead at the start in any race of the Olympic Preliminaries. On the other side I felt Scholz was slightly ahead of me, and Harry Edwards of England was beside me. Fifty meters had passed. Scholz had dropped back slightly, and only Kirksey was still before me. The Stanford star was running as he did in the old days on the Pacific Coast. Perfect rhythm, perfect action, strength, speed and power were all there that day. I could feel it as we dashed on. Ninety meters had slipped away, and still we were the same, with me a foot or so behind, and then came the tape, and one last wild leap to reach it. Kirksey turned his head in that moment, and the jump brought me to the string.

My greatest ambition in athletics had been realized.

The 200 meters lacked much of the excitement and the thrill which was attendant upon the 100 meters. Kirksey, with his bad leg bandaged, the self-same one he had hurt at San Diego years before, failed to qualify for the finals; Edwards had also hurt a leg muscle, and could not bend down to get set properly; Massengale was too sick to run, and Scholz had refused, leaving Woodring to take his place, while Murchison still seemed to be crushed from the bad start he had gotten in the 100. The finals were run in the rain on a muddy track, and the splendid stride of Woodring brought him into the stretch slightly ahead, and he maintained that lead to the tape, finishing in 22 seconds, with myself, Edwards, Murchison and the rest of the field following.

A few weeks later Scholz and I competed in the French-Swedish-American Olympics, which were staged at old Colombes, outside the city of Paris. This track had been my lucky one in the days that had gone by. It was here that I had always drawn number six, the worst lane on the track, but the luckiest. I had been travelling through Europe and was dead tired from my journey, but when I pulled

number six again out of the hat and hit on wood, as was always my custom, I felt hopeful. And though I was far behind in the first fifty meters I came through in the final meters of the race and barely beat Scholz to the string. The time was the same as had been registered in the finals of the Olympic 100 meters, 10 4-5 seconds.

And so it had always been up to this period of my cinderpath career. I could often tie existing records and come close to some of the best times which had been made in decades past, but I had never been able to shatter any long standing mark. This then was my ambition for the future, to break the records of those who had run before me.

The knights of the cinderpath had separated. For the year '21 found them scattered throughout the country, some engaged in business, some still attending school, and a few yet following the game. Woods had become a dentist; Williams, a lawyer; Teschner, a business man; Hass had married and left college; Haddock had forsaken the cinderpath for good; and so of the eleven which had gathered together only six remained in the game. And even the days of some of these were numbered.

But there was one more to come. The youngest sprinter had not yet won his spurs. But he did so in the year '21. He was a freshman in the University of Stanford, with Kirksey to train with and Templeton to coach him. His name was Eddie Sudden, and as I write these words I am convinced that he stands in the first five of American sprinters to-day, and that if he keeps on he will some day place in the Olympic Games. Though this man Sudden possesses speed, a good start, an excellent finish, splendid reserve, and fairly good form, these essentials are only partially responsible for his success. The real secret is an abundance of nervous energy. Murchison had some, and so did Scholz, but neither could rival this latest cinderpath star in tension and abundance of reserve nerve force.

Sudden had been high school champion and had competed in the Olympic Tryouts at Pasadena in 1920, but he was too young and without the necessary power to make the Olympic team that year. As freshman sprinter for Stanford he commenced to do things. He already held a victory



Keystone

Allen Woodring, one of Paddock's twelve "Knights of the Cinderpath" and winner of the Olympic 200 meters in 1920, in which race he defeated Paddock.

over Hutchison of California, and he was anxious to defeat that great veteran of the cinderpath, Morris Kirksey. That honor was not for him in '21. But he did capture the Junior Championship in the 220 yards at the Nationals held in Pasadena that year, and he did place in the Senior 220 yard championships. Moreover,

he was a better man at the 100 perhaps than he was at the 220. Strangely enough he has always placed higher in the big meets in this furlong distance. He has a small frame, with rather large bones, and weighs close to 140 pounds. His stride is also large for a man of his height.

The National Championships of this particular year meant a great deal to me. The season before at Boston I had taken third in the 100 yards, and was lucky indeed to have captured that position. Following it had come the Olympic victory, and the season of '21 had been my best. I had broken several records, and the kind of showing I made in the Nationals would determine whether I was really worthy of the records I had made. At least Eastern athletic opinion was inclined to place this weight upon my showing in the year's classic. For during the Spring I had been successful in the following way:

Stanford and California Universities had been faced on Bovard Field, the home track of the University of Southern California, and in these meets I had been able to accomplish 9 4-5 seconds for the hundred yards against my old-time rivals Hutchison and Kirksey. Then came the turn for U. S. C. to go North to return those meets. The Bovard track had never been considered fast, and so my showing had given me hope that at last the time had come when I might break a record, or at least tie one.

I went North by boat and was sea-sick for several hours, one of the few times that I had ever been affected by the ocean. This sickness, I felt, would somewhat weaken me for my races, and I reached Berkeley feeling rather discouraged over the chances for breaking any marks. The year before I had unofficially run 9 3-5 seconds on this Berkeley track, and it looked very doubtful that I would run in 9 3-5 the following



P. & A.

A very recent picture, taken this spring, showing Paddock in training with Eddie Sudden (left). Paddock claims that he will be in his best form this season. At his best Paddock is unquestionably the greatest sprinter the world has ever known.

still nervous from my sea-trip, and still thought that I felt weak. The wind, however, had died down, which was one comfort. I went to my holes and took a practice start, and in that start I commenced to feel good. In the race itself I ran through with legs shooting out before me as they had never shot before, and coming into the tape I threw myself forward with the greatest possible energy. I felt I had run my best race, and when the time was announced as 9 3-5 seconds, which tied the world record for the distance, I realized that my ambition had just been achieved.

Ambition, however, is a queer thing, and no sooner had it been fed than it thirsted for more. And so in my mind I was anxious to run through the 220 yards in 21 1-5 seconds that day and tie the world record for that event also while I was about it. I felt just right for the 220; a little bit tired (or I fancied that I was), with remembrance of my sea-sickness to make me nervous. Again I knew that Bob Hutchison was a much better 220 yard man than he was a century performer, and having had a taste of his running in high school, from which I had never fully recovered, I was anxious to defeat him, if possible.

I got away to a fine start and ran my hardest for the first hundred, and finding that I was still strong I kept the same pace for the second hundred. It was in this distance that I did my best running, my knees twice hitting my chin as they came up to fly out, and my arms were pulling as they had never pulled before. The final twenty yards I was dead tired, but having accumulated momentum I could still finish holding my speed, and with a last gasp I jumped for the tape. When I slowed up and hit the wall beyond I felt that my very best efforts had been expended, and I had the satisfaction of feeling that here was a time when the very best in me had been given. I was satisfied with the (Continued on page 88)

day, Saturday, March 28th.

To add to my discomfort, a high wind was blowing when I awoke the next morning, and this seemed to augur poorly for any record-breaking, as of course no time could be officially accepted which had been made with wind aiding the runners. The time for the race at last drew near. I was

Ida Lang

Added 27 Beautiful Pounds

From 105 Pounds of Invalidism to 132 Pounds of Robust Beauty Is the Stimulating Story of the Fair Central A. A. U. Diving Champion—An Example for Other 105-Pound Girls

By Clifford Thorne

THERE have been held for some time a great many so-called beauty contests. In the bathing girl Reviews, however, these contests are judged by mere guessing from sight, and the winner can often be seen to be deficient in some parts of her physique by expert judges of the perfect human form.

Silk stockings or silk tights cover a multitude of defects in the way of too small ankles or calves, and the winners of nearly all such contests are merely fairly well built, and usually girls with pretty faces that have no claim to physical perfection, in spite of the press agents' fervent announcements and the artists' jury assertions. Too small ankles and wrists constitute a defect just the same as deficiency in any other part of the body, and a defect that is often seen in the bathing model winner.

Two other very common defects are a too small neck and undeveloped forearms. As a rule, the upper

arm is of fair size, but, unless the owner has taken up athletic work, there is usually a marked deficiency in the size of the lower arm. The calves of the legs, as a rule, show up poorly. So many women show hollow

spaces around the collar-bones and lack anything like having a strong, graceful neck and well-rounded deltoid or shoulder muscles.

Some will claim that a woman can be well built and still show no sign of muscle, but a woman can be far better built if she can show just the rounded outline of the proper development of muscle. As a rule, the biceps, triceps and deltoid muscles are but seldom spoken of in giving the proportion of a perfect woman, but their smooth outline helps to fill out to perfection the frame of a girl athlete. This does not mean that they should show up prominently as in strong men, but it is a true sign of perfect physique in their rounded appearance, and to know that meat and muscle are there, instead of nothing but shapely fat. There is not, and



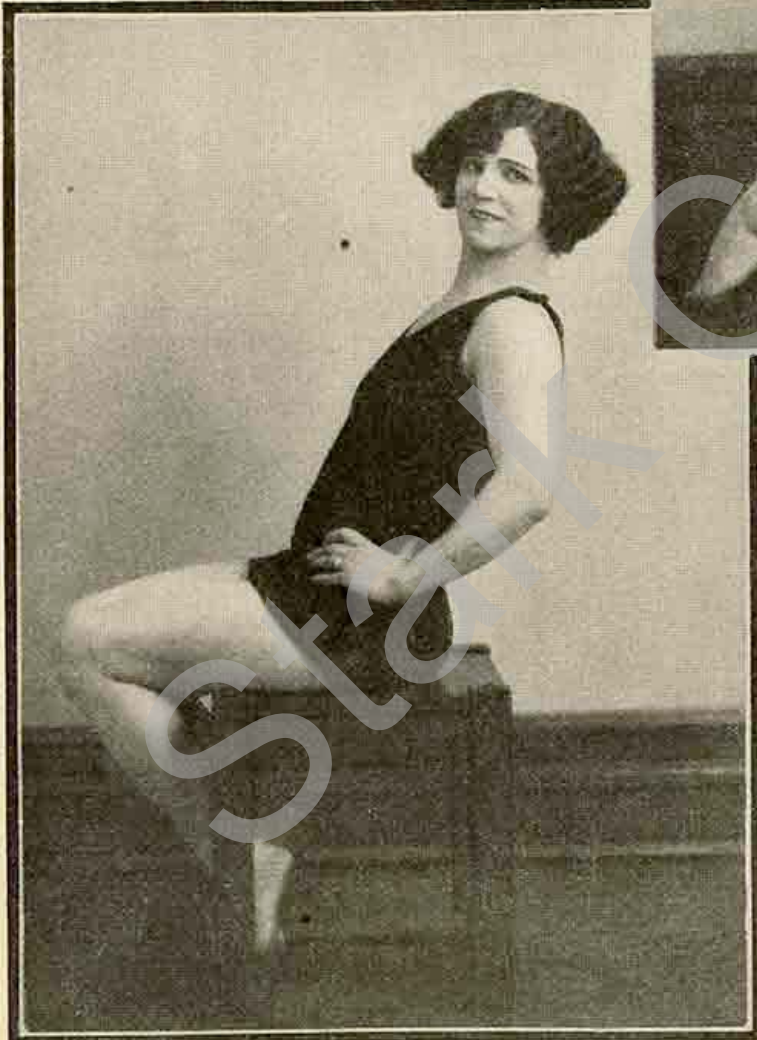
Photographs by Charles F. White, Detroit

Miss Ida Lang, all-round swimming champion of the Detroit Women's Swimming Association and Central A. A. U. diving champion, who has built up her bodily perfection, beauty and vigorous health through physical training, swimming and healthful diet.

probably never will be (in spite of press agents), a perfect type of either woman or man, but there are many athletes, both women and men, who come close to the ideal of perfection.

In Miss Ida Lang of Detroit, Central A. A. U. champion diver, is seen as nearly perfect a figure as can be found. The writer, a former coach at the University of Michigan, at The College of the City of Detroit, and now athletic coach of the Detroit Board of Health, considers, on account of his experience, that he is fairly well qualified to be a judge on the subject.

The physique of Miss Ida Lang is superb from head to feet, with not a sign of weakness or any deficiency of outline anywhere. Many wonderful girl swimmers, crack athletes, and girl models cannot show anything like her rounded perfect figure that yet shows everywhere the wonderful strength and health of which she is the possessor. But the most wonderful part of all is the short time in which



This is a fundamental type of exercise for strengthening the waist and the abdominal muscles. In the above position it will be necessary to place the feet under the piano or some other weight, for leverage. In the beginning do not try to bend very far back, only to an angle of 45 or 60 degrees. Later you can bend all the way back. The exercise is made more vigorous by folding the arms on the chest and then still more strenuous by placing the hands on the head. Further variations are found in holding the arms out straight, even with the shoulders, then twisting to touch the floor behind you, first with one arm and then with the other. Finally a decidedly advanced exercise is found in stretching the arms high over head, then bending backwards and touching the floor with the finger tips. The idea is to start with easy movements and advance gradually to those more difficult.

she obtained her magnificent physique, wonderful health and athletic prowess.

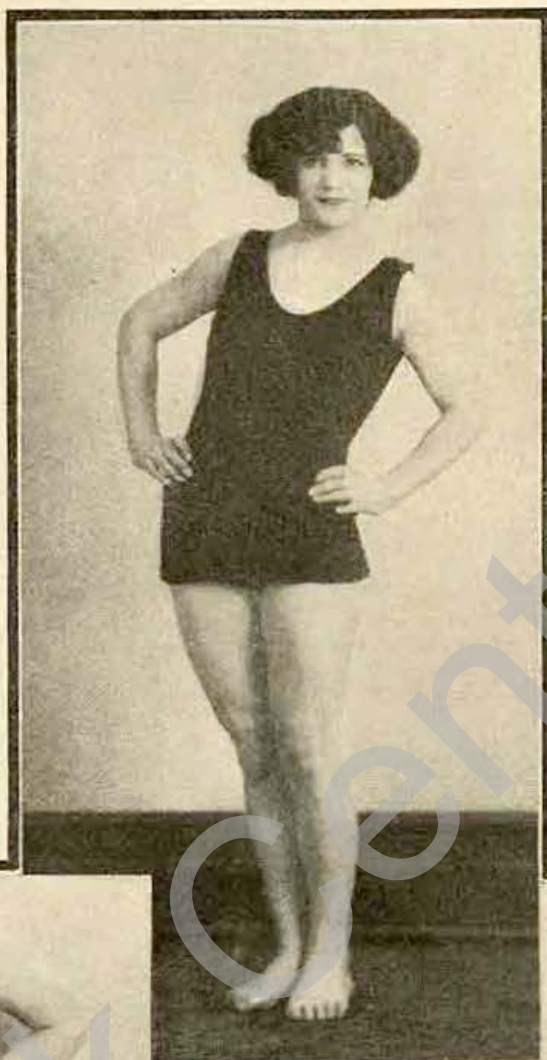
Troubled with dizzy spells, headaches, and general sickness, just four years ago, she started on her system of athletic training. Three years ago she could not swim a stroke, and two years back knew nothing about fancy diving. Working out a system of exercises of her own and putting into it all her determination and spare time, she went from 105 pounds of mere skin and bone and a life of misery to 132 pounds of radiant health, perfect physique, and a life of happiness.

She now holds many championships in amateur diving, and has a case full of medals

Some women weigh too much; others weigh too little. There is help to be found in this number of **STRENGTH** for both types. Here is a story of a delicate, run-down, underweight girl who suffered much from headaches and dizzy spells. Her pictures reveal the improvement that she has made. On another page you will find the opposite type of story, under the title, "Good-bye Fat"—and "Hello Health!"

she has won. Some of her titles are as follows: All-round Swimming Champion of the Detroit Woman's Swimming Association; Central A. A. U. Diving Champion off Low Board; Central A. A. U. Diving Champion off High Board; and Metropolitan Diving Champion. At present writing she is in training for the Olympic tryouts, and hopes to be one of the representatives of the United States in fancy diving. She gives much credit in her diving art to Mr. Matt Mann, the famous swimming coach of the Detroit Athletic Club, but her system of exercise was of her own devising. Miss Lang dives only for the liking, the benefits, and exhilaration of the sport, and is a strict amateur.

The art of fancy diving takes practice, some of which is almost drudgery, and the determination and grit of the novice who hopes to become an expert must be



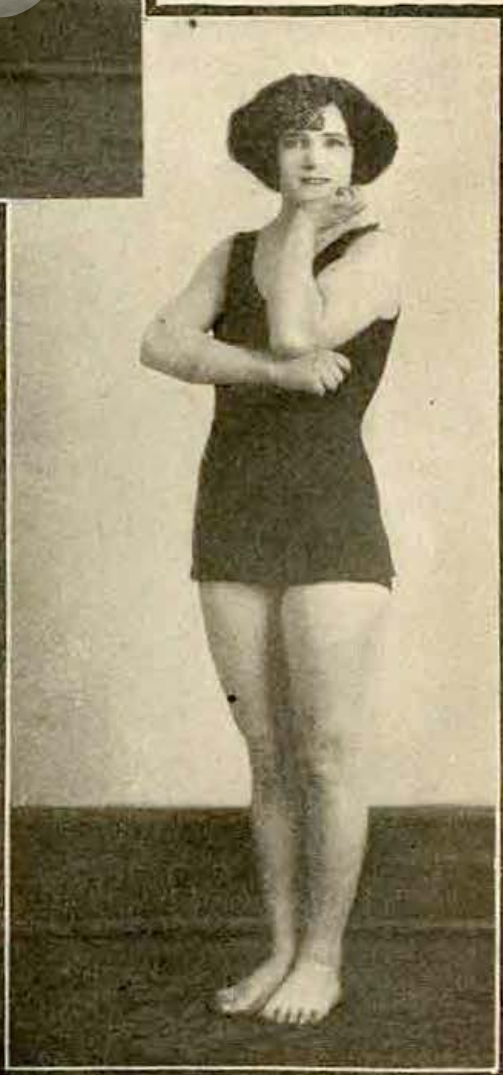
great. The returns of the exercise, of which much is bending, twisting, and that of obtaining control of muscles and body, are both rapid and wonderful. Even many star swimmers, unless, as some do, take up diving also, cannot show the wonderful build of expert divers. In the photographs of Miss Ida Lang, the reader can see just what is meant by a perfectly rounded, yet muscular physique.

Miss Lang had determined from the start that she would not stop at half-way methods or be satisfied until the best possible results had been obtained. She knew that the harder the exercise the quicker and surer the returns, but also that they would have to be graded in order to work up to the more strenuous kind.

Starting with easy move-



Above is another exercise for strengthening the waist and abdominal region, first very easily bending and twisting from side to side, then later with increased strength and flexibility use a wider circular movement. The hips and waist should be moved in a regular circle, first one way, then reverse. At the left, a neck exercise with hands on the back of head, forcing the head backwards and forwards against arm resistance. At the right, another neck exercise against arm resistance from the front.



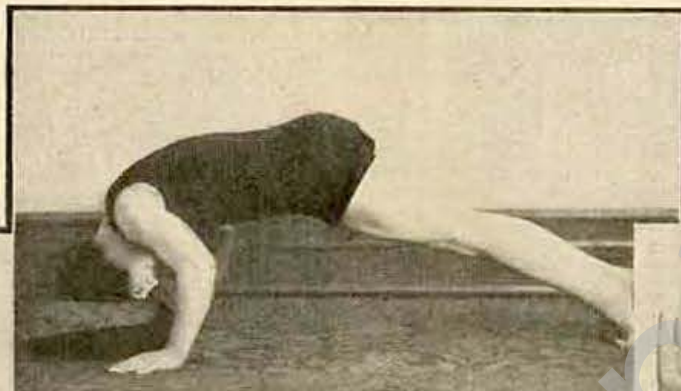
ments, the exercises were made more difficult as strength and health quickly increased, until there was evolved a series that any girl or woman could work up to, yet were strenuous enough for an athletic man.

The diet also was carefully arranged, yet Miss Lang did not become a vegetarian, but ate freely of fresh vegetables and fruit. She joined athletic classes at the German Turners, but relied mostly on results obtained from her own selected exercises. Even weight-lifting was afterwards used to some extent, and after a little training Miss Lang found she could handle with ease the fifty pound weights of the Turners. Persons who think weight-lifting will

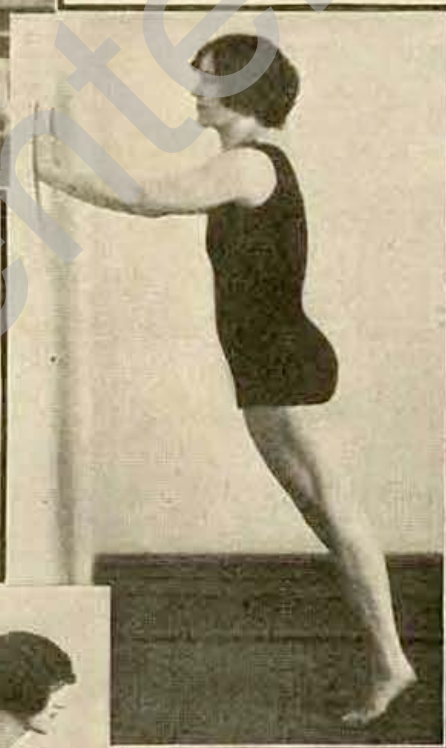
with the shoulders, next turn and touch the floor behind you with first one hand, then the other. Now hold both arms high overhead, then bend backwards and touch the floor.

At the top of the opposite page is an easy way of strengthening waist and abdominal muscles. At first use an easy bending and twisting movement, from side to side, but as soon as you gain a little power use a wide circular movement of the waist, keeping the head as straight as possible. The hips and waist should be moved in a regular circle. This exercise can be done rapidly and thus made strenuous. It will help to strengthen or reduce, and will also give grace and an easy carriage.

As the famous old song



Above, an exercise for neck, shoulders and chest muscles. With the support of arms move head from side to side, also forwards and backwards. At the left is an extremely advanced form of the same exercise. Do not attempt this until quite strong. At the right, the dip in its easiest form, performed leaning against the wall. Below, the standard dip, lowering and raising the body, which is held rigid. An advanced version is found by placing the feet on a chair in this same position.



slow an athlete up, or that it is an exercise fit only for men, might receive a big surprise did they ever watch her during work. In fact, her greatest trouble in fancy diving, in which agility, quickness and grace count for much, is her great strength and power, which give her almost too much speed and momentum.

In the exercises shown, the weakest girl or woman will find an easy series to start with, yet a husky man can get plenty of work from the advanced forms of these movements.

The first photographs show what may be either easy or advanced bending exercises, that can be graded by later folding the arms on the chest, and then again made still harder by placing the hands on the head. The feet should be placed under some support, as good leverage is needed. Hold the arms out straight, even

force head backwards and forwards. Resist with the muscles of the neck.

Place one hand under the chin and again work against the neck muscles. You can bring much more pressure by using your other arm to assist as in the picture.

The photograph showing the head on a pillow presents an exercise for building up neck, shoulders and chest muscles. It will also help to fill out any hollow spots in the upper chest. Move the head from side to side, also forwards and backwards. The next photograph shows an advanced phase of this exercise, strenuous enough for any one, but also one that (Continued on page 78)

goes, "Her neck was like the swan." Just the same a strong well-rounded neck, on either man or woman, is valuable from a health standpoint, and looks well from a physical point of view. Place both hands back of head and

What Improvement Do You Want Most?



Illustrating "Shape," which among the various physical qualities named by the author in this interesting analysis is usually the last one to be arrived at as a result of constant training, and the one which above all others signifies perfect health.

Do You Want Strength or Endurance, Speed or Development, Agility, Shape or Suppleness?—Can You Acquire All of These at the Same Time?—Together They Spell "Health"

By Charles MacMahon

I BELIEVE that most people who take up systematic exercise do so for the sake of improving their health. When I talk to a man about the necessity for exercise, he is apt to say, "Oh! so long as it makes me perfectly healthy, I will be satisfied." If we continue the conversation, I usually find that the man with whom I am talking has a secret but intense desire for some other physical asset. One man wishes to become extremely strong; another craves a pronounced muscular development; another is anxious to get what he calls a "perfect shape"; the fourth man, who may be interested in boxing, wants agility; another thinks that endurance is the most valuable asset a man can have; and still another thinks that suppleness is to be desired above all things.

So there we are; six separate men, each with a different ambition. Once in a while you meet an outspoken individual, who says frankly that he wants not only health, but also shape, strength, development, agility, endurance, and suppleness, and further that he wants all six of these attributes in a large measure. Well, why not? If you are going to exercise, you might as well start out with the determination to make yourself as fine an all-round physical specimen as is possible for a man to be.

Any experienced trainer will tell you that by following a special program limited to a certain kind of work, you can become either very strong, or very agile, or extremely enduring. If he is straightforward with you he will also tell you that such special training is limited in its effects; that by training for immense strength you would probably prevent yourself from becoming very quick in your movements, and that by training entirely for endurance you would thereby prevent yourself from becoming really well developed.

I agree with a man who wants everything, and I believe that by adopting a general program, which includes many varieties of exercises, it is possible to become very strong without losing your speed of movement; to become very enduring without limiting your muscular development, and at the same time to get a perfect shape and great suppleness.

The man who trains only for health is apt to be a lazy chap. Nine times out of ten his lack of health is

due to the fact that he persistently declines to take the daily exercise which is necessary to the maintenance of health.

When such a man starts to exercise, it is only a few days before he notices a great improvement in the way he feels. His headaches disappear, his digestion is better, and he has considerably more "pep." Then, as likely as not, he stops exercising, and dismisses the subject from his mind until he again commences to suffer from indigestion.

Any man when first taking up a system of exercise notices the improvement in his health before he can see that he is making gains or improvement in any other respect. It really takes very little exercise to keep one in health, although it takes a considerable amount of regular exercise to bring a chronic invalid to a state of abounding health.

Many people are fairly healthy, although they do not possess either muscular development or unusual strength. On the other hand, a man with a fine muscular development almost invariably has great strength, and is almost sure to have perfect health and abounding vigor. Very occasionally you will find an undeveloped man who has more strength than the average, and I suppose it might be possible to have a great development, and yet not have much strength, although I have never personally seen such a case.

My ideal is a shapely man with a pronounced muscular development, great strength, limitless endurance, extreme agility, and perfect suppleness; if a man can get all those qualifications he does not have to worry about his health, for, as I said before, the improvement in his health will be apparent long before he has reached the limit of his powers in other respects.

In considering these things separately we can see a connection between health and strength as between health and the other five gifts.

Health is the proper functioning of each and every organ and gland in the body, and that in turn means immunity from disease. Health is maintained, or can be restored by proper exercise, correct food, plenty of sleep, and proper living in general.

You can have a fair amount of health without possessing great strength. The strength of a muscle is its ability to contract against resistance. The strength of your whole body is the sum total of the strength of your muscles. A strong man is not necessarily a very enduring man. Among a group of men the strongest individual would be the one who could lift, move, or carry the heaviest weight. He might lift the weight only once, or carry it only a short distance. If you set the whole group to doing light exercises, the strongest individual might not be able to



Mr. Charles McGinley, an example of "Endurance," illustrating particularly the author's point that one may have both unusual strength and unusual endurance. Mr. McGinley can "chin" himself fifty times in succession and then, after a couple of minutes' rest, "dip" a hundred times on the parallel bars.



A back somersault, illustrating "Agility." Read carefully the author's comments relative to the difference between agility and suppleness.

repeat them any oftener than another man of much less strength. In exactly the same way the fastest runner is rarely the most enduring runner. A man who can cover the 100 yards in less than ten seconds is rarely a star at long distance running. In the picture representing strength you will see an athlete who is without a doubt exceptionally strong. He has just lifted another man slowly

overhead by pure arm strength. His strength enables him to do this feat once, but he wouldn't attempt to repeat the feat two dozen times in succession, nor would you expect him to do so; yet you do not hesitate to say that he certainly is powerful.

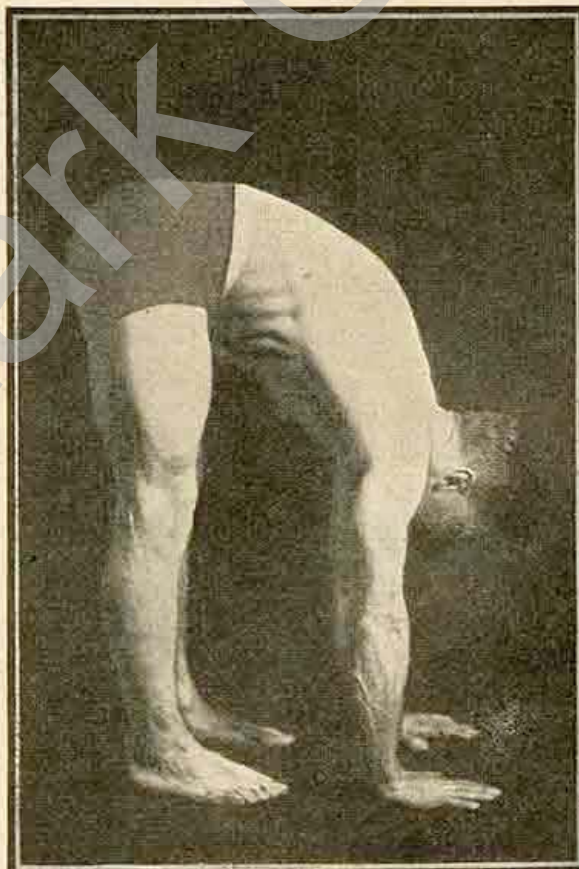
Strength bears a certain relation to muscular development. A very well developed man always has muscles of considerable size; nevertheless you cannot tell how strong a man is just by looking at his muscles. The reason for this is that there is such a thing as quality

as well as quantity in muscular development. Two men may possess measurements exactly alike in all parts of the body, but that does not mean that their strength is exactly the same. On the other hand, two men may be fairly well matched in strength, while one has highly developed muscles of large size, the other has a much less pronounced development. The two pictures side by side on page 41 illustrate this. I know these two men are of about the same strength, but notice the difference in their development.

Endurance. Many people confuse strength and endurance. We have already defined in its true meaning—the ability to lift or move a heavy object once or twice. Endurance is the ability to perform a certain movement or series of movements a great number of times in succession. Common sense will tell us that the strenuousness of these movements must be well within our limitations, or we would not be able to make many repetitions. Even a long distance runner can sprint 100 yards at a pace which he could not possibly keep up for one mile, let alone ten miles. Men who go in for endurance feats are usually slender in build, with small wiry muscles. This especially applies to long distance running, where the weight of the body itself has to be carried and propelled by many successive strides. The less one weighs, the easier it is to run long distances at great speed. There are many large and powerful men who can display great endurance in the performance of a stunt which requires little speed. Some of the best long distance walkers are big men. The man who put a 200-pound plow on one shoulder and carried it a mile had both strength and endurance. A man who is much stronger than the average can display great endurance in the performance of work or feats of strength so strenuous that some lighter man could not do



Illustrating "Strength." To push a man up overhead slowly and steadily is a matter of pure muscular power. Endurance, as the author explains, is a different matter. You naturally would not expect this man to repeat this feat a couple of dozen times. He might or might not have endurance.



Illustrating "Suppleness." While agility and suppleness sometimes go together, the latter has to do primarily with the ability of the joints to move freely, depending upon the elasticity of the muscles and tendons concerned.

at all. Start the average bookkeeper at shoveling coal, and in fifteen minutes he is exhausted, because shoveling is to him a feat of strength, but to the professional coal heaver, who has a very strong back, shoveling is merely a feat of endurance which he can continue for eight hours a day.

It is almost impossible to picture endurance itself, but in the portrait of Mr. Charles McGinley you will see a man who possesses unusual strength plus unusual endurance. To chin yourself on the horizontal bar is a moderate feat of strength, because you lift the weight of your own body. The average first-class athlete, who has both strength and endurance, will chin himself thirty times in succession. To dip or "push up" on the parallel bars is likewise a feat of strength, and the average first-class athlete can repeat it forty times. Mr. McGinley possesses such a measure of strength and endurance that he can chin himself fifty times in succession, and then after a couple of minutes' rest, dip one hundred successive times on the parallel bars. Therefore, his combined strength and endurance is more than twice that of the first-class athlete, and several times that of the average man. His case proves that the possession of great strength does not prevent you from being very enduring; also that it is possible for the endurance type of athlete to possess a fine muscular development.

Agility means quickness of movement; that is, speed. Nevertheless, speed and agility do not mean exactly the same thing. A sprinter who can run 100 yards in ten seconds has great speed, and this speed comes from a certain kind of muscular strength, plus a certain kind of nervous energy. A sprinter might be very slow with his hands. On the contrary, a boxer might be possessed of extraordinary agility, and yet not be a very

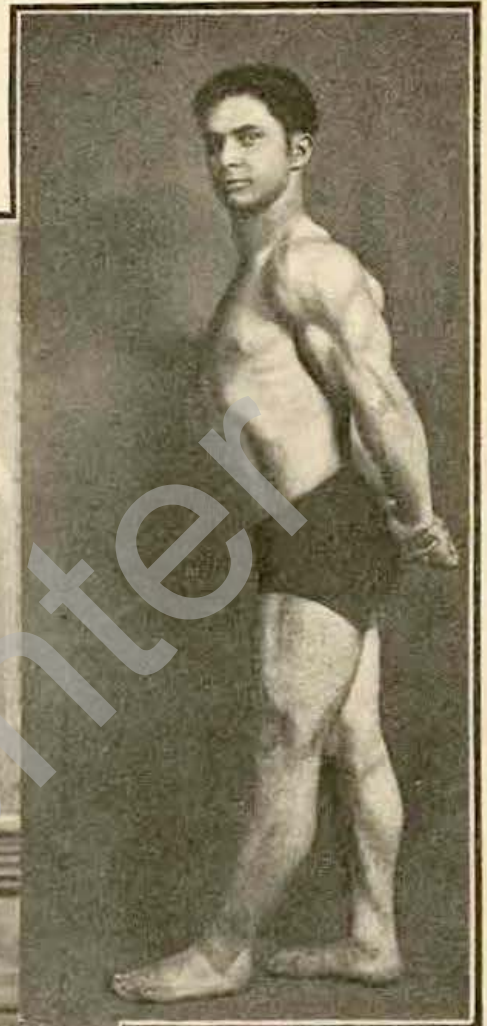
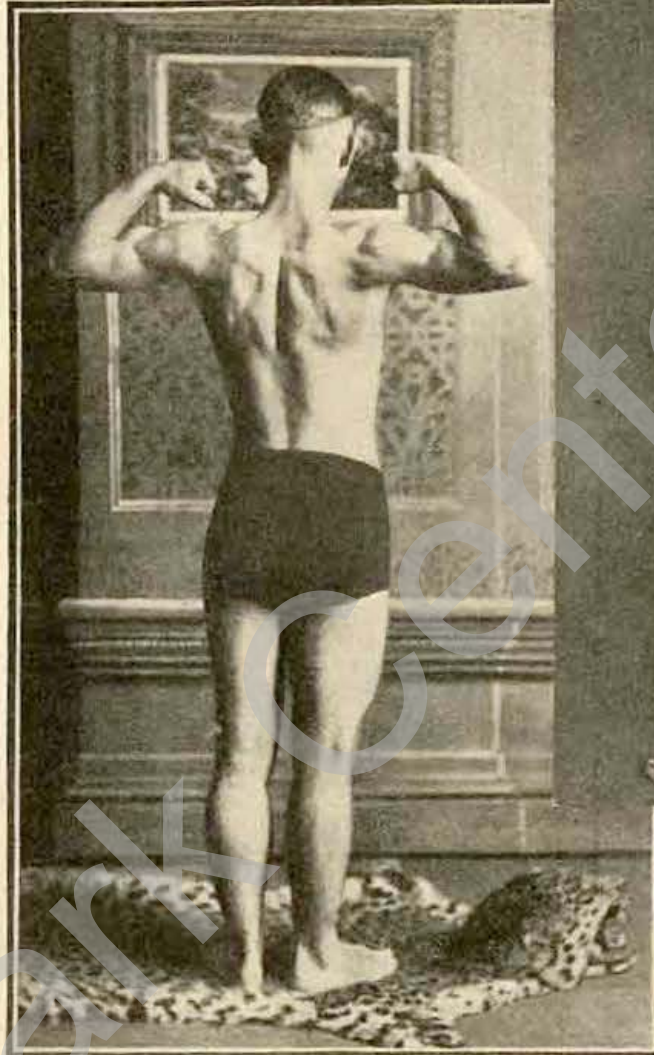
fast sprinter. I know fighters who cannot run 100 yards in eleven seconds, and yet they can hit, parry, side step, and duck with the speed of a flash of light. Boxing, bag punching, rope skipping, and tumbling all require agility for their successive performance. I know that any one can greatly increase his agility by practicing ground tumbling. In doing hand-springs, back somersaults, and similar stunts, the body and limbs have to move at an incredible speed. A back somersault cannot be stopped by any type of camera except the Graflex, which is the camera used for photographing racing automobiles, etc. It is necessary to set the Graflex lens for an exposure of one-three hundredth part of a second in order to get a perfectly clear picture of a man doing a back somersault. The idea of the picture is to catch the tumbler in the air with head down and feet up. The head and the shoulders being at the center of the circle turn comparatively slower, but the feet travel so fast that they are apt to blur.

Most professional tumblers are not only very agile, but also extremely strong, very shapely, and beautifully developed, showing that it is possible for one individual to possess at least four of our requisites at the same time.

Suppleness. Agility and suppleness sometimes go together, but not always. Unless a boxer was fairly supple, he could not be very quick in his movements. Suppleness is nothing more than the ability of joints to move freely, and that in turn means that the muscles near those joints have to be very elastic and pliable. In the ordinary man the tendons which connect the muscles to the bones hold together firmly the ends of the two bones which make the joint, and since tendons are inelastic, the only way for that man to increase his suppleness is by exercises which stretch the muscles, and thus add to their elasticity.

A contortionist is an individual whose tendons are so long that the joints can bend to an unusual distance, and with unusual freedom. Some contortionists can actually dislocate their joints at will. This is not due to the great elasticity of their muscles but to the peculiar and freakish state of their tendons. The average man can get all the suppleness he wants by devoting only a few minutes a day to exercises which stretch the muscles.

These two photographs illustrate respectively "Light Development" and "Great Development." The author's point that strength and development are not synonymous is illustrated by the fact that these two men have equal strength.



Some of you find it difficult to lean over and touch the floor with the tips of your fingers while keeping the legs stiff. I find no difficulty in leaning over and placing the palms of my hands on the floor, as

illustrated on page 40. I can stand on a block of wood ten inches high and touch the floor with the fingertips, and I have seen the same stunt performed by men who were more heavily built than I am. When making a very low bend like this one, it is necessary to have more than just the limber spine. You must be able to move the shoulders forward and downward, and the muscles on the back of your legs must be very elastic.

One of the best exercises for developing suppleness is to stand on your left foot, put the heel of the right foot in the palm of the right hand, and then stretch your leg out straight in front of you. The first time you do it you will feel a distinct pain in the back of the thigh. When you are able to do it with the foot held at the level of the waist, then try to raise the hand higher as you straighten the leg. This stunt stretches the muscles of the shoulder, the back, and the back part of the leg. Any chorus girl will do it with her hand held higher than the top of her head.

Development. A muscle becomes developed only through use, and I have found that the weight of your own body furnishes enough (Continued on page 95)

Exercise Cured His Spinal Curvature

Love and Hygiene, Food and Persistent Training,
Triumph Over Injuries and Deformity

By Annie Riley Hale

ALMOST any day one may see ambling and sprinting about the streets of Pasadena (please note I said ambling and sprinting—not hobbling and limping) a cheery little man who, ten years ago, was to all outward appearance a confirmed hunchback, but whose spinal column today is as straight as the average. His story is only one of the many miracle tales which followers of hygiene and the simple life are daily bringing to light; but the tale is ever new and interesting to the yet greater multitude who still grope in darkness—too often in pain—and ignorance of the basic laws of health.

James Faulkner, N. D.—as we read on his professional card—tells a story of husky, happy boyhood spent on a farm in southern Missouri, where as Number 8 in a family of 12, the resourcefulness which was later to stand him in such good stead found ample opportunity for expression in wresting from the exacting routine of farm work sufficient leisure for his favorite pursuits of trout-fishing and squirrel-hunting. He says his love of these sports was so great that he would gladly have spent all his time in the woods with his dog or loitering on the banks of streams with fishing-rod and tackle had not the stern hand of parental discipline jerked him back to the path of duty beside the plow handles and the garden hoe.

Although he accepted this good-humoredly and cheerfully bore his part in all the farm chores as well as the social activities of the Ozark country—such as apple peelings, gooseberry stemmings, corn-huskings, and camp-meetings—young Faulkner evinced even at that early age considerable originality and independence of thought. He rebelled, for example, against the strict Sabbatarian code of his community, saying, "I never could see why I should behave myself better on Sunday than any other day. I figured that a religion which could last a fellow six days in the week would beat the holy Sabbath stuff all holler, and my old squirrel dog held the same views; but if he caught any game on Sunday he had to eat it himself, for if I took it home I got a scolding for breaking the Sabbath." Concerning the camp-meeting revivals he naively observed: "It always seemed to me the camp-meeting was a losing game. It did offer a place of meeting for the beaux and belles of the neighborhood; but before the next Fall most of the converts had back-slidden, and the whole work had to be done over again."

He describes himself at this period as too shy to be seen walking with a girl in the daylight, and only on one occasion did he muster up sufficient courage to ask the privilege of escorting one home from the church under

cover of darkness. It appears an older brother had spied on this venture, and held the bashful boy up to the family ridicule at the breakfast table next morning. This painful experience, followed soon after by the unhappy accident which undermined his health and so nearly wrecked his life, very effectually put an end to all youthful amours for our young friend for some years to come.

Prior to this, however, while yet a lad of ten or twelve, he gives an amusing account of his attitude toward the fair sex among his school-fellows. Among the fur-bearing animals which the inhabitants of the Ozarks used to capture, the skunk was specially prized for its beautiful skin—regardless of its odor—and young Faulkner relates: "Sometimes the boys would get sent home from school for hunting skunks the night before, and I learned that if I didn't want the school girls to borrow my knife and dull it sharpening slate pencils, all I had to do was to forget to wash it after skinning a skunk!"

There came the fateful interruption to this merry, bucolic life when James Faulkner, at the age of 16, one day took a tumble out of his father's barn-loft, and gradually developed from that in the next six years a pretty bad case of spinal curvature and arthritic rheumatism. The trouble was aggravated by a second fall a year or two later in a scuffle with a school-mate, which broke his hip, and after recovering from this sufficiently to get around again, he was run down by an automobile driven by a woman. Thus for ten varied and precarious years life became one long battle with pain and weakness for James Faulkner, from which his final emergence as victor was due to several contributing causes.

At the age of 23, after exhausting all the remedies in the family medicine chest and all the suggestions of the family physician—who as a last resort, with a dubious shake of the head, thought he "might try a change of climate"—our young friend left the Ozarks and went to live with one of his older brothers in Washington State. The brother, a practicing lawyer at Cheney, had heard of some marvelous cures of "incurables" effected by an old German nature cure doctor living in the little village of Conconully, nestled far up on the slopes of the Cascades thirty miles from a railroad, and he proposed to drive James to the place and put him under this doctor's care for a while. At this time our hero says he could not turn his head without turning his whole body, as every vertebra was stiff from the neck down, and he walked with great difficulty. Raising his arms to his head was accompanied with excruciating pain, and his limbs were shrunken and withered. He found the eccentric old

German—who held the queer notion that Nature does all the curing—alone in the woods, as Faulkner expressed it, “five miles from nowhere.”

He informed his young patient the only medicines he used were water, sun, air, selected food and thought, work and play. “Learn how to combine and use these intelligently, and Nature will do the rest,” he would say. Thus our young health-seeker was introduced to sitz-baths and other forms of water-cure. He learned for the first time what is meant by an “eliminative diet” and a constructive or chemically balanced diet; and he was told that much of his miserable plight was due to a weak surrender to “bad feelings” and a failure to take proper exercise in the open air. “Health means life—*more life*,” the old expounder of nature cure would declare, “and life means action, strength, which is fostered by exercise. If you don’t use the strength you have—however small—you will never get any more.”

Thus encouraged, young Faulkner began the regimen of natural, rational living which set his feet on the upward climb toward health and happiness, his naturally buoyant, resourceful temperament finally bringing him to the coveted goal. Besides lessons in corrective diet, correct breathing, proper exercise, etc., the old doctor gave him various manipulative treatments, a sort of combination of osteopathic, chiropractic, and Swedish massage, which did much toward correcting the spinal deformity; and at the end of three months young Faulkner felt himself so much improved that he went back to his brother’s in Cheney, where—following his doctor’s advice—he took a job of wood-sawing for the winter, sawing for his brother and some of the neighbors.

He says at this time he thought a little about studying law with his brother, but one or two visits to the court-room sufficed to dissuade him from this project.

It seemed the courts were designed to evade rather than to administer justice, and so for the time he contented himself with humbler pursuits, taking a job as cook at a sawmill camp the following Spring and Summer.

In this capacity his genial kind-heartedness and readiness at good-humored jest made him quite a favorite with the men, and he afterwards served as camp cook to two grain-elevator crews. There was slowly forming in his mind, however, the desire to be a health instructor, or a doctor of natural therapeutics if you please, inspired by the wish to pass along to others



James Faulkner is to-day straight, sound and well, although a few years ago, as a result of a series of accidents resulting in serious injury to his spine, he appeared to be a chronic invalid and confirmed hunch-back. Read this remarkable story of his recovery. The photographs show him with Mrs. Faulkner ready for a mountain climb and, above, his evident appreciation of a bunch of home-grown California grapes.

the therapeutic good word which had done so much for him. This had taken definite shape as he drifted from one small job to another which alone—because of his physical handicap were open to him. When his ambition to become a professional became known to his family, they assisted him to get the preliminary preparation by giving him a year at the State Normal

School in Cheney, and he afterwards attended the State College in Pullman. He was still so lame during these years that he says the professors allowed him an extra five minutes for getting to a class room, and that his heart beat so fast on climbing stairs that he had to stop frequently to rest. Concerning this symptom he remarked with his customary dry humor: “Luckily I was too poor in those days to consult a heart specialist, otherwise I might have bought myself a fear of a bad heart that would have cut short my career. There is no question in my mind now but that fear sends more people to premature graves than disease.”

He had settled on the Lindlahr School of Naturopathy for his professional studies after his academic training in the Washington schools, but before he could carry out this design fate cast young Faulkner in Wyoming for a year, where again he worked at various jobs and served as village postmaster for eight months before going on to Chicago. Of these economic ups and downs he said later on: “I am glad that

I worked at so many different jobs, as that broadened my experience and my view. My misfortunes of past years I am daily coining into profit. Knowing people in different walks of life quickened my sympathies for others.”

He arrived in Chicago with less than three dollars in his pocket, but soon effected an arrangement with the Lindlahr Institution whereby he could pay for his tuition with work. Of his life there he says: “These months of schooling were not altogether easy, for I often worked all day and part (Continued on page 90)

What Is Good Air—Live Air—Dead Air?

Old Theories Are Exploded and New Values Emphasized in This Searching Study of That Wonderful Gaseous Mixture in Which We Not Only Breathe But Have Our Whole Being

By Paul von Boeckmann

THE object of this article is to present briefly and in simple language a number of important facts in regard to *air* and its effect upon the human body. Since the subject is of great importance, one would assume that it had been discussed in innumerable practical books, and that every well-informed person has at least a knowledge of the basic laws of *air hygiene*. This is not so. Most people have a vague understanding that the blood needs oxygen, which is derived from the air we breathe, and that it is necessary to health to have "fresh air" once in a while. Most books on the subject are anything but practical. They usually contain citations of exhaustive experiments showing the necessity of pure air and present suggestions for the proper ventilation of the home, but the more important factors are either omitted or presented in language so technical that the information is of no practical value to a layman. In fact, even physicians have little knowledge of the subject of air hygiene. The following incident proves the truth of this statement:

Recently I attended a meeting for the discussion of psycho-analysis. Before entering the hall where the discussion was to be held, I sat down in a small anteroom with a number of men, mostly physicians and scientists. Most of the men were smoking; the windows were tightly closed; the place was uncomfortably hot. While we were sitting, discussing various subjects, men were passing in and out of the room. Presently a man walked in who was recognized by several of those present as a well-known physician, formerly an inspector on the Board of Health, in the Department of Ventilation. When I was introduced to him, among others, he gave me a second glance, as if to say, "Oh, you're the von Boeckmann of whom I have heard: the hygienist." After entering into discussion with us, he suddenly got up and said, "How long do we have to wait in this suffocating room?" No one answered. He said, "Let's go out and get some fresh

air." No one moved. He then turned directly to me and said, "You'll go out with me, won't you?" Desiring to continue my interesting conversation with the other men, I replied, "No thank you; I think I'll stay." Rather nettled that no one would accept his invitation, and being a man of a rather antagonistic temperament, he said to me rather pointedly, "Don't you practice what you preach about fresh air?" The manner in which he said it was a challenge; my companions looked at me, wondering what I would say. I replied, "Doctor, you're an authority on ventilation and fresh air, and I confess I'm an ignoramus on the subject. Will you tell me what

you mean by 'fresh air' and in what respect the air in this room is not 'fresh?'" He was rather taken aback, stammered a little, and exclaimed indignantly, "What do you mean?"

"In your opinion, is the air in this room deficient in Oxygen or perhaps overloaded with Carbon Dioxide to a degree that it is injurious to health?"

He replied, hesitantly, "Yes, of course."

I answered calmly, "It is not, and when you use the term 'fresh air,' you are using a term that is meaningless to scientists. Sit down a minute and let me tell you some facts about air and ventilation."

My retort brought forth a merry laugh from the others and they induced the physician

to sit down. I proceeded then to explain that the air was not deficient in Oxygen or poisoned by Carbon Dioxide, but that it was devitalized—that is, it was "dead air" and of very low humidity. When I had finished, all who were present agreed to take a walk in the open air to get what I had termed "live air."

The object of this brief article is to present in simple language the facts which so impressed this gathering of medical men and scientists, facts which if acted upon will be of untold value in the preservation of health and bodily comfort.

The state of the air in which we live and which we breathe is by far the most (Continued on page 72)

Like a Fish Out of Water

YOU have seen the distress of a fish out of water, but did you ever stop to think of your own situation if you were suddenly yanked out of your own ocean of atmosphere? For of all the primary necessities of life which include also water, food, clothing and shelter, that one is the first necessity without which you would most quickly perish. Of course that is air. You are even worse off submerged in water than is a fish in the air. And it is not only because you need the oxygen in the air but because you depend upon it for warmth, for coolness and for the facility of perspiration by which you can maintain comfort and health. Yet although air is obviously the first factor in our lives and one over which we have fairly good control and which should therefore be kept just about right, it is the one thing to which most of us pay almost no attention at all. Often this is because we do not know what we should know about our air. This author, however, tells us just the things most necessary to know.—The Editor.

Neysa McMein

on
"The Ideal
Figure"

*—and How
to Get It*

Famous Artist Sets Forth Her Standards of Beauty and Health—Also Detailing Her Own Athletic Life by Which She Keeps Youthful and Fit for Long Working Hours of the Most Exacting Profession—An Interview

By Ada Patterson

A WOMAN'S opinion of another woman's figure is always interesting. Its interest is heightened if the woman who holds the opinion has drawn pictures of a thousand women, all from living models. Further weight is given to her opinion from the fact that by drawing women she earns as much a year as does the President of the United States.

Neysa McMein has definite ideas about what constitutes beauty. If she had not, her pictures of women would not appear upon the covers of many of the magazines and frequently on the *Saturday Evening Post*. She is known as the interpreter of the "wholesome American girl." Through her successful experience her ideas have crystallized into convictions.

Miss McMein says to be beautiful a girl must be strong. She must be supple. She must be slim. "Slimness is beautiful," she said in her studio near Central Park in New York. "The opposite is ugliness. In their taste in feminine loveliness Americans are the antithesis of the Turks. We like slimness because it has the grace and dignity inherent in the straight line. Paris is the most beautiful city in the world. It is a city of straight lines. Looking out of the windows of Paris by night one sees parallel straight lines, long lanes of light that deviate not an iota from uniformity. The ancient idea that the curve is the line of beauty is fading



Photograph by Edwin F. Townsend

Neysa McMein is the most popular woman artist delineating the beauty of the American girl, and is, incidentally, our highest paid woman artist. Her standards of feminine beauty will interest all women.

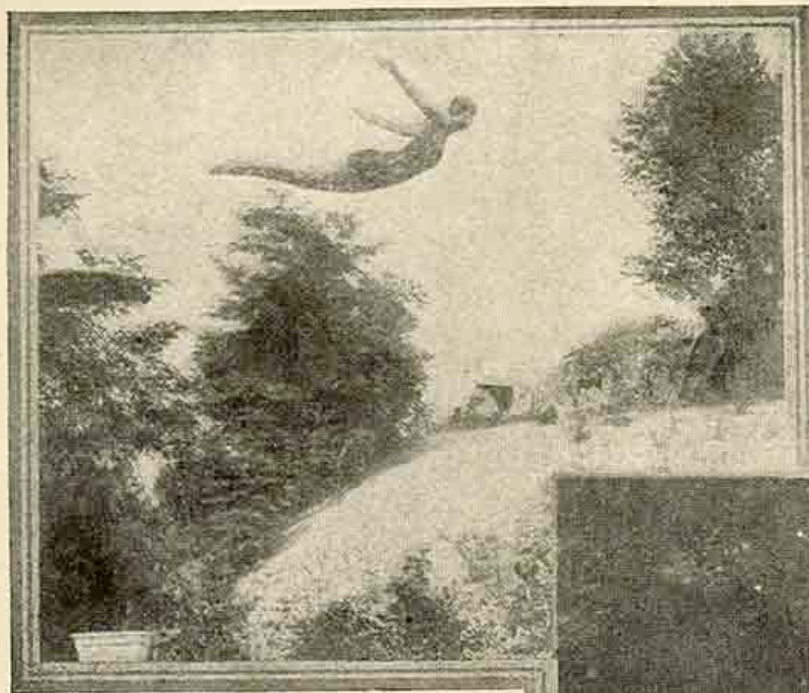
from the artist's mind and that of the layman. Taste is swinging back to the majesty of the Gothic. What structure in New York is as beautiful as Saint Patrick's cathedral or the Woolworth building? The modified Gothic is being accepted as a model in human figures."

"Would not the Gothic girl be a bony creature?"

"No. She would have fine straight lines and flat hips. Her figure would resemble a boy's yet have the feminine undulations. Though those undulations would not be as marked as they have been in the past."

I asked the handsome young artist whether she agrees with the standard of her brother craftsman, Coles Phillips. I reminded her that his ideal girl is five feet six inches tall and one hundred and twenty-five to thirty pounds, and that her shoulders must be wide enough to carry her clothes well.

"I disagree with him about height and weight," she said. "A girl who is five feet six inches tall and weighs only one hundred and twenty-five pounds would excite our pity. She would be too thin. My opinion is that she is too tall. The little woman is always the favored one. The small woman has the inside track. She is considered more likeable, and generally she is. The most attractive of women has a height of five feet four inches and a weight of one hundred and fifteen pounds. Her shoulders should be well developed. They should be



man. She is slender and perfectly proportioned with wide shoulders. Every line is flawless. I have seen her stretch her hand across the table and the line was perfect. She never makes a false, ungraceful motion. The girl who is perfectly proportioned is not awkward. It is the sense of being ill proportioned, rather than timidity, that causes awkwardness."

"How shall a girl reach the proportions of your ideal girl?"

"By living on good terms with the out-of-doors. Daily exercise for setting oneself up are excellent. I recommend them

broad in relation to her figure and should not slope. The drooping shoulders have gone out, I hope never to return. They belong to the leisured woman. Mme. Le Brun and all of Romney's subjects represent idleness. Idleness is now an anachronism. Every woman is busy at something. The war taught us the hideousness of doing nothing.

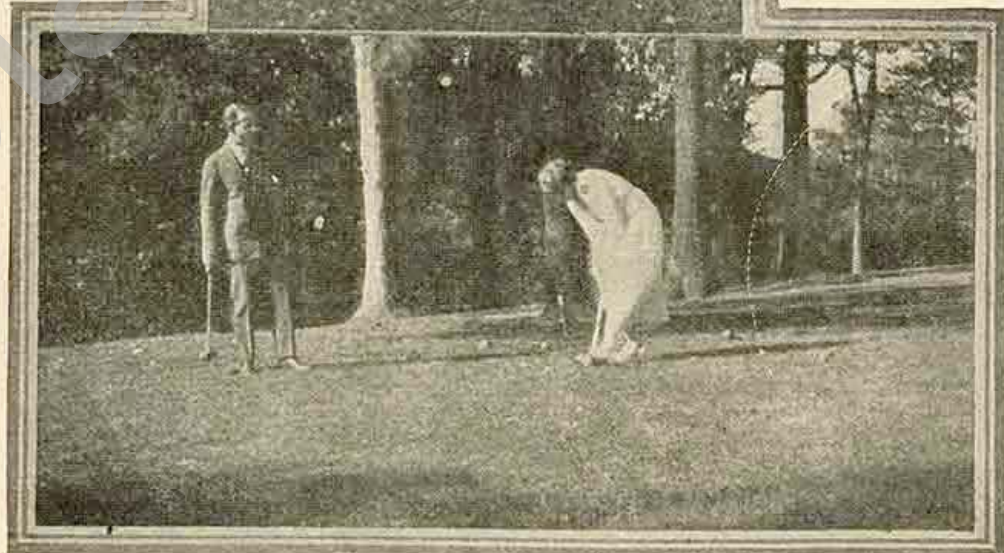
"The girl of the future will be slim but not bony. She will have what the French call 'fausse maigre,' false meagerness. In this generation we will see slim middle-aged women."

The artist, sitting on her high casel in her enveloping smock, brush suspended, asked me whether she had visualized her ideal girl for me. "In proportions, yes," I answered. "But what of her coloring?"

"Coloring is only incidental," she said. "The Anglo-Saxon will predominate. She will have blue eyes and brown hair," said Miss McMein. "Though coloring is subordinate, the figure is the foundation of beauty. Right proportions give beauty to any woman. She is a design. That is the name I give to a woman who is independent of color. She might be converted into a stone statue and lose none of her beauty. Such a woman is my friend, Christine Nor-



because I have seen the results of systematic indoor exercise in some of my friends. But I have always been a working girl. My hours are as long as the longest. So from the time I rise in the morning life is a scramble to reach my studio before my model arrives and to fulfill my commissions. Therefore I have never done a setting up exercise in my home. But I have always used my summer vacations to



Being of athletic temperament, Neysa McMein (Mrs. Baragwanath in private life) finds her recreation and physical training both in outdoor pastimes, including swimming, riding, rowing, tennis, croquet, skating and dancing. She also has her own system of breathing exercise.

good purpose. And from six o'clock Saturday until rising time on Monday morning I have regarded as a chance to refill my storehouse with energy.

"Friendly terms with the out-of-doors are possible to every one. No girl who stands in a store all day is deprived of it. True, after standing for eight or nine hours she is in no mood to walk. But there are the open windows, and the flat roofs which occupy a third of the space of New York, where she may go for deep breathing exercises. Four times a day, five minutes at a time, of deep breathing will be a strong brick in the wall of her strength. I have practiced various deep breathing systems, and I have found that the most effective for me is to sniff the air, draw it in with quick intakes five or six times, then slowly exhale. This drives the stale air from the very pit of the lungs."

Six forms of outdoor exercises have helped to keep Miss McMein fit during an exacting career. They are swimming, dancing, skating, riding, rowing, and tennis or croquet. Not all of these are within the reach of every woman, but one or more is.

"All outdoor exercises will tend to remake a figure into normalness. Fat figures lose flesh and thin ones gain in muscle. Activity is the keynote of health," said Miss McMein.

"I like dancing. The music and the sight of one's friends make for cheerfulness. I enjoy it, but I recognize its drawback, the lack of pure air. That is the reason why the best time for dancing is the summer and the ideal place out of doors.

"Swimming is my favorite exercise. In the midsummer I go to Lake Bomoseen in Vermont. With several others I belong to a club of six who make an island in the lake their storehouse of energy supply. It is the most stimulating of all sports. I rank it as the most healthful. The way I feel after a swim is a testimonial to swimming as the leader of my exercises. It brings nearly every muscle into play. It makes a draft upon the chest and arm muscles. It leaves one glowing, invigorated, for the moment a goddess. It is the one moment when a mundane creature may feel that she is divine. The vigorous exercise causes the body to perspire. The impurities that pass out through the pores are at once washed away by the water. Salt water bathing is especially beneficial. It is purifying and vitalizing. Physicians often prescribe it for persons whose strength is below par. The shock of the cold water is a stimulant to tired nerves.

"Diving is the most thrilling feature of swimming. But it requires a knowledge of the sport and should never be attempted by any one who is not a good and



Ira L. Hill's Studio

To be beautiful a girl must be strong. She must be supple. She must be slim. Right proportions give beauty to any woman. She is a design. This photograph is of Christine Norman, regarded by Miss McMein as an ideal type, being slender and perfectly proportioned, with wide shoulders, and never making a false, ungraceful motion.

practiced swimmer. To dive well and safely one must keep the knees stiff in jumping, keep the lungs well filled with air in going down, and protect the head with the hands over it. A good dive is made when the body follows the hands into the water through the opening made by the palms and there is little splash as it goes down. To do this one must dive straight, the legs straightening out after leaving the raft or float or springboard and following the torso into the water. The head is the rudder in diving. When you have gone down low enough you turn to come back to the surface by throwing back your head. This makes the body turn under water, and if the lungs are filled with air it will come to the surface at once, head first.

"But I would not recommend swimming, great as has been its building value to me, if I did not give some warning.

"Until you have reached the stage of expertness swim toward the shore, not away from it.

"A short stay in the water is better than a long one. Make twenty minutes an average especially while you are young in the art of swimming.

"Do not swim shortly before or after eating. Not for an hour and a half before or after a meal.

"Don't swim while you are tired.

"Don't swim while you are cold.

"Don't go straight to the bath

house after a swim. Take a run on the beach.

"Skating is a healthful exercise that sweeps the lungs free from impurities as the wind through open windows sweeps the room free of dust. It makes firm the muscles of the back and the lower legs. It gives practice in delicate balancing of the body. Skating rivals dancing in the cultivation of grace.

"Rowing is very severe sport," Miss McMein continued. "We have all read of the oarsmen being exhausted at the end of a race. I advise that it be taken slowly and gently at the beginning. If a girl engages in a rowing race she would better do so with her girl friends rather than with trained and powerful oarsmen of the other sex. It is not a sport for one whose heart is weak. But taken gently, as one strolls through a garden on a day in late June, it is an admirable exercise. I often row about the island in Lake Bomoseen several times. But I row slowly, and since the island is one of twelve acres it is not a feat about which I am boastful. It is a good exercise for the sedentary, for it takes the 'cricks' out of arms and legs gyved by the habit of years.

"Rowing improves the carriage, making it erect and graceful. It arches and strengthens the chest. It quickens the circulation and increases the activity of the skin. It compels deep breathing and so purifies the blood. It is a blessing to the overweight girl or woman,

for the air and exercise soon destroy the excess tissue. As with most other exercises, rowing should be properly done or harm may result. It is a mistake to bend the head forward, crook the back, contract the chest and let the arms do all the work. The arms need not bear the brunt of the exercise. If they do the other muscles will suffer from the incorrect posture.

"The accomplished oarsman always assumes a good sitting position. The back is held straight. The swing must come from the hips. The shoulders should be braced when the oar grasps the water. Pulling evenly and equally with both hands requires long and concentrative practice.

"While rowing one breathes air that is free from dust. The farther one goes from the bank, the clearer and purer becomes the air. Every breath is a lung bath. Rowing is not an exercise for puny girls. Those who are weak of lungs or heart would better avoid it. For the girl who is strong enough, and a test or two will prove whether she is, it will develop poise, grace, courage, alertness of mind and body. The girl who is trained at the oar will act promptly and wisely in any emergency.

"No one should paddle a canoe without first knowing how to swim. Canoeing is a perilous sport. The canoe is convenient for exploring a country of shallow waters, for it may be used in a stream of scant depth."

"Do you play tennis?" I asked.

"Yes, at the Vermont island. I wish it were possible for me to play it here every day. It requires more physical exertion than any of the other amateur sports. But it should be played with moderation. Played thus it is one of the best forms of physical exercise for a woman. It requires a strong heart and a great deal of reserve force to play it daily. But for one who is fit there is no better exercise. The perspiration which it induces carries away impurities from the skin and flesh.

It forces the player to breathe rapidly. The heart, too, beats faster. The benefit to the circulation is proven by the glow in the cheeks of the players after a game."

"And croquet?"

"That is ladylike sport. I use it as a rest after swimming. But for the person with weak heart or lungs or knees or one

unused to outdoor games, it is a good exercise. The greatest benefit it confers is that it keeps the player out-of-doors."

"Walking? Indeed yes. Wherever you go, if the distance is not unreasonable, walk. Contrive somehow to walk two miles a day as a minimum. Eight to ten miles on Sunday or a holiday for a maximum to the accustomed walker. For the unaccustomed there should be a gradual increase from a slight beginning. Walking is one of the best exercises. It calls most of the muscles into use more on a hill or mountain climb than on the level. There is a theory that since each step in walking is a fall, and a recovery, the natural posture in walking must be head forward and shoulders bent. I don't agree with it. That, I think, throws back to the walking habits of our ancestors as they developed from the ape. I think we should walk as we stand, head up, chest out, shoulders straight. If we contract the chest and curve the spine by bending forward we lose half the benefit of the walk and lay the foundation for bad habits in posture.

"And gardening! How I should like to lock my studio door for two weeks and go to the home of some unoffending friend or relative in the country and dig and plant in his garden! It might be hard on the garden, but I know what it would do for me. It would flex the muscles of my back and waist and abdomen. It would make the muscles of my arms and legs stronger. And like all the exercise I have talked about, it would give the invaluable benefit of action in pure, invigorating air."

Riding is one of Miss McMein's favorite sports. Because she begins work at the hour that saleswomen do in the department stores, and finishes at closing time, she does not ride in Central Park on week days. On Sundays, in dark blue coat and knickers, and on a brown mount, she rides at a trot along the bridle path. She regards it as an exhilarating sport.

There have Neysa McMein's ideal girl, her answer to Mr. Coles Phillips' description of his ideal girl, and the regimen by which she has worked continuously for fifteen years at one of the most exacting professions and remained as youthfully attractive as at the outset of her career.



Of all her activities, swimming is Miss McMein's favorite.

International

Does Smoking Make You Thin?

Is There a Relationship Between Tobacco and the Dried-up, Under-weight Condition of Many of Its Victims?—Do You Know Whether or Not Smoking Is Hurting You?

By Charles Thomas Hicks

WHENEVER I meet a particularly skinny man, one of the stringy, leathery, undeveloped specimens of the genus homo that are so numerous in our civilization, there usually comes to mind the question as to whether or not he is a smoker, and, if so, as is usually the case, if his use of tobacco has had something to do with his under-weight condition. I have met so many cases, both of smokers who were below weight and of those who had given up smoking and then gained weight just through that one change in their habits.

In the May number of *STRENGTH* was published the story of a man who had smoked from early boyhood, always sure that it never did him any harm, since it did not actually give him any pain that he could associate with his use of tobacco. After smoking for forty-six years and reaching the age of fifty-four, he stopped smoking as an experiment to see if it would relieve a severe bronchial cough that he thought was going to kill him. At the time he stopped smoking he weighed 112 pounds, a typical example of the human smoked herring. He commenced to improve at once, and his weight steadily climbed up to 154 pounds, a total gain of 42 pounds. Likewise this man, who all his life was sure that tobacco did him no harm, found to his dismay that he was going blind. Some time after he stopped smoking he discovered that his sight had marvelously improved.

Now it happens that this is not an isolated case. I have met it in other instances. There was the case of a young man who had smoked for years but who indulged in greater excess than ever when he went to France with the A. E. F. That war, by the way, was the greatest thing that ever happened to boost the business of the cigarette manufacturers. After coming back from overseas this young man found himself unfit for work because of a peculiar nervous condition. He suffered from strange frights and felt a curious paralysis at the very prospect of meeting people. Upon an impulse of disgust he one day threw away two packages of cigarettes as far as he could throw

them. Being under-weight, this man gained 15 pounds and complete relief from his nervous symptoms the first month of his freedom from tobacco, and he swears that this breaking of the cigarette habit was absolutely the only change that took place in his manner of living. His experience exactly tallies with that of others that have come to my notice.

I know another man, Mr. C., of very robust health and athletic ability in spite of his being well up in his forties. My friend C. smokes cigarettes moderately because, as he says, they represent the mildest kind of a smoke, and because he has found that the use of cigars brings down his weight. He weighs normally about 185 pounds, but says that by smoking cigars he could and would bring his weight down to 155 pounds within a few weeks.

All of which raises some interesting speculations, bearing upon the relative natural adiposity of the sexes among other things. It has been our custom to suppose, for instance, that women are by nature more inclined to plumpness than men. We think of their flesh as being softer, through a greater proportion of fatty tissue, while we think of men as being comparatively lean and hard. Of course we like to think of men as lean and hard in the sense that a healthy, vigorous bull terrier is lean and hard. Because this means good athletic condition and enduring energy. But that does not mean that we want to see men stringy and under-weight. A

man wants full and rounded development, the bulk of which is firm muscular tissue.

However, the question now arises as to whether fatty tissue is a distinctly feminine characteristic. On the very face of it we know that it is not essentially so because of the number of fat men that we see and from the number of men who become increasingly soft and flabby after the age of thirty, with expanding belts and water-melon fronts beneath the same. Perhaps in the light of our present hypothesis the relative adiposity of the more or less fair sex is only due to the artificial drying-up and emaciation of the
(Continued on page 89)

Are You Carrying Even a Small Unnecessary Load?

The athlete knows that he cannot afford to smoke, that he cannot carry any load at all and do his best. He wants all of his strength for competitive effort. The athlete knows where he is at because he frequently puts himself to a test. That is what most men never get acquainted with.

A man says that he "feels all right" because he has no distinct sense of pain. He may be dying of kidney trouble or tuberculosis and still feel no pain. One cannot judge of his condition by a lack of sensation when he is under no strain or effort. But put him under test conditions and he will quickly find out that he is lacking. Take the athlete who knows what it means to run a half mile inside of two minutes. If you have ever done it, or attempted its equivalent in some other athletic endeavor calling for the maximum of endurance and condition, you know what it means. Really, unless one has done something of the kind he does not know life. If you have never run a quarter mile in fifty seconds, then you cannot understand what it means until you have tried it. The fact is that it is only under test conditions that one finds out whether or not he is in good shape. Under ordinary conditions of easy-going life it is pure nonsense for any one to say that he feels all right or that this or that form of dissipation "does not hurt him." He cannot know, and he does not know.

Muscle Control—

Have You Learned It?

The Possibilities of Interesting Muscular Display Through Purely Mental Control—Of Some Use as an Exercise for Retaining Development But Doubtful for Building Strength

By Alan Calvert

Mr. Calvert founded the STRENGTH Magazine ten years ago, and has written for it almost continuously since the first number was published. It has been his custom of late years to write the department called "The Mat," and one other article for each issue of STRENGTH. He wished to be excused from writing the article for this number, because he is writing a book. Knowing that thousands of our readers would be disappointed if there was no special article by Mr. Calvert, I induced him to allow me to publish one chapter of his forthcoming book.—THE EDITOR.

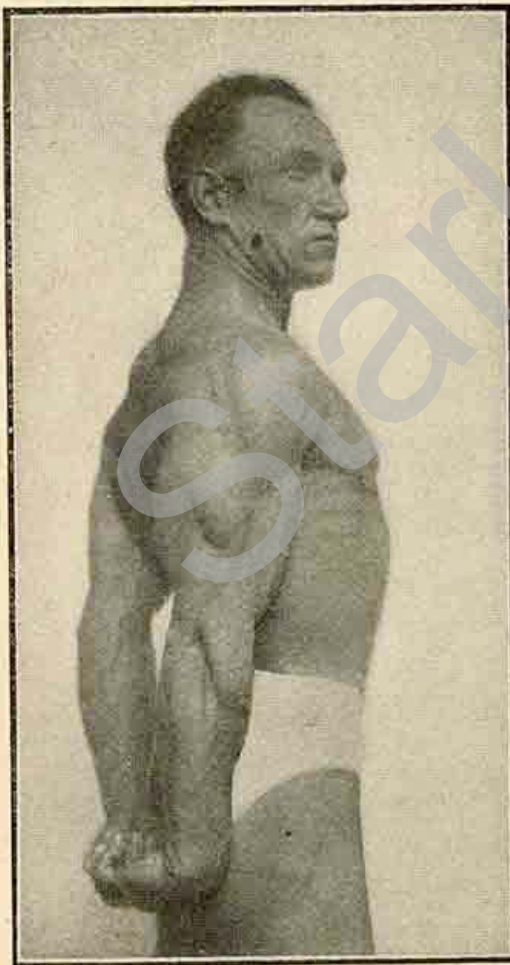


Fig. 92. Showing the best position for flexing and displaying the triceps muscles.



Fig. 91. You can make your biceps bigger by holding your elbow high.

THE strength of a muscle is its ability to contract against great resistance. Strength is partly a matter of will-power; that is, of mental control over the muscles. Just the same, no man can make himself strong just

by an effort of the will. The size of a muscle has a great deal to do with its strength. If there are two men of exactly equal measurements, the one who has the greatest amount of will-power, or mental control over his muscles, will be the stronger of the two. Nevertheless, no slender, small-muscle man, no matter how great his mental control over his muscles, can hope to equal the strength of a man whose muscles are twice as big and who has an equal control over them.

There is a great deal of unnecessary mystery about this subject of "muscle control." It is one of the simplest things in the world. You have been exercising a while, and your arms have gotten considerably bigger and much more muscular than formerly. If you get into a discussion concerning muscular development, you are apt to say to your opponent, "Well, feel my arm!" And as he puts his hand on your upper-arm, you bend your arm at right angles and tighten the muscles of the upper-arm so as to make it bigger and harder. That is "muscle control." Any one can do it.

If you will think back you will recall that every time you asked a friend to feel your arm you instinctively bent the arm at right angles so as to put the muscles in a favorable position for contraction. If you are a beginner, you are apt to bend your arm all the way, so as to make the biceps muscles stick up in a large hump; but if you are experienced, you know that if you bend the arm only at right angles it is possible for you to harden the biceps on the front of the upper-arm, and at the same time harden the triceps on the back of the upper-arm, thus making your arm bigger than if you flexed and hardened only the biceps muscle.

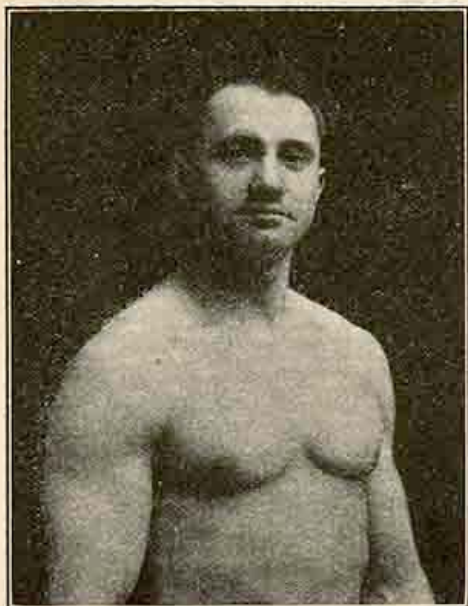


Fig. 93. Showing highly developed breast muscles in a relaxed condition.

At the top of the cabinet (and out of sight of the audience), were one or more very powerful lights, with reflectors so arranged that they threw a strong downward illumination on the body of the athlete. This strong light from above accentuated the shadows thrown by the muscles. In some cabinets it was possible to switch off the top-light and turn on a light placed at the height of the athlete's elbow; and this light would throw shadows sidewise, and would bring out details of development which would not be revealed by a high light.

The "strong man," standing on a low pedestal in the middle of the cabinet, would strike one attitude after another, thereby displaying to the greatest advantage the prodigious development of his muscles. If you were so lucky as to see several different men pose you would notice that they all employed the same positions; that in order to show the biceps muscles to best advantage they would hold the arms in a certain position; that to show the abdominal muscles fully flexed they would bend their bodies in a certain way. There is a fixed routine of such positions or movements which is known to all professional and most amateur "strong men"; and if you learn the positions and have sufficient development you can make a most amazing display, because as you go from one position to another different sets of muscles will be flexed, and huge bands and masses of muscle will appear on different parts of your body. The average reporter in describing such an

act will say that "the athlete's muscles moved about under his skin like a mass of snakes writhing under a blanket."

act will say that "the athlete's muscles moved about under his skin like a mass of snakes writhing under a blanket."

All this posing work is simply a matter of "muscle control." The fundamental principle of "muscle control" is that before you can flex or contract a muscle to its fullest extent you must place the body or the limb in the most favorable position. For instance, if you hold your elbow at your side and double up the right arm you can make the biceps muscle very hard, but that muscle will not be fully flexed. If you put the right hand behind your neck and raise your right elbow as high as you can, as in Figure 91, you can flex the biceps muscle with much greater force, and it will be bigger than it is when the elbow is at the side of the waist.

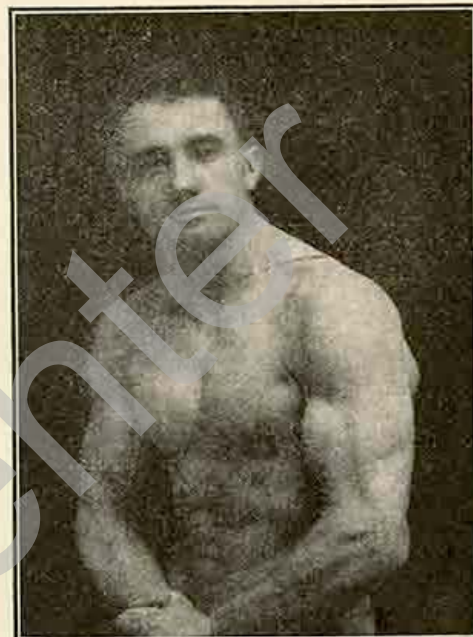


Fig. 94. Showing the breast, shoulder and arm muscles vigorously contracted. Note the contrast in the appearance of all these muscles with their relaxed condition in Fig. 93.

If you wish to get full control of your biceps you have to first raise your arm in this position. After the elbow is up, harden the biceps as much as you can; then release the tension, and your biceps muscle will become softer and the humped-up appearance will disappear. If you

keep your elbow up and flex and relax the biceps several times in succession you will find that after a couple of weeks' practice you can make the biceps stand up in a much more impressive curve than it formerly did.

When you have your elbow up, as in Figure 91, you will find it impossible to harden the triceps muscle on the back of the upper-arm, because that muscle has been stretched by bending the arm at the elbow. In



Fig. 95. Arco's abdominal muscles in a peculiar formation of his own devising, described by the author.

order to get control of your triceps, you have to stand with the hands clasped behind the hips, as in Figure 92. In that position, if you press the elbows towards the back and press the hands outward, the triceps muscles will flex themselves as shown in the picture. The moment you relax the tension the triceps muscles will relax, and the back of the arm becomes perfectly smooth.

That shows you the general principle of "muscle control." It is easiest for most physical culturists to control the upper-arm muscles, because most of their developing work has been devoted to the cultivation of those muscles. But when a beginner tries to do the same thing with the muscles on his back, his chest, his abdomen and his legs, he can't make nearly as good a display; because, in the first place, he does not know the positions most favorable to contraction (therefore, to display); and in the second place, his muscles are not big enough to be impressive even if he *does* learn how to contract them. Most of the large muscles on the body and the limbs can be brought under mental control just as easily as can the arm muscles. Figure 93 shows an athlete with remarkably developed breast-muscles. In this picture the muscles are relaxed (in fact, the whole body is relaxed), and this man's breast-muscles are so large that they sag slightly of their own weight. Figure 94 shows the same athlete with all his muscles flexed. You can hardly believe it is the same man, and the immense difference in his appearance is caused by an alteration in position and by "muscle control." The muscles on the breasts bring the arms forward. In Figure 94 the athlete is pressing his hands against each other with great force, and this has flexed the breast muscles and entirely altered their outlines. At the same time he has hardened the muscles on the shoulders, the arms and on the front of the abdomen. The beginner has to be satisfied with flexing one or two muscles at a time; but a bar-bell user, like this man, can instantly and simultaneously flex every muscle in the body. If you



Fig. 96. Arco's back, arm and shoulder muscles present a very formidable aspect in this position, the unique appearance being accomplished in part by the spreading of the shoulder-blades.



Fig. 97. A feast of muscle control by which the display of the shoulder-blades is altered so that they look like two immense lumps of muscle at each side of the upper back. This is a very impressive display frequently used by professional strong men.

want to get control of your breast-muscles you can do so by assuming the position shown in Figure 94 and pressing the palms of the hands against each other. After a while you will get so that you can stand in a perfectly normal position and, simply by *thinking* about it, harden the muscles on the breast and completely alter their outlines. But (and this is a very big "but") the flexed muscles will not *look* like much unless you have already made them big and thick by proper exercise.

I have been familiar with this subject of "muscle control" for over thirty years. In 1893 I saw Eugene Sandow do most of the feats of "muscle control" that have since been done by other athletes. When Sandow was standing or sitting at ease his body and limbs, while of great size, were just as smooth as those of a Greek statue. By a mere effort of the will he could make muscles stand out in knots and ridges all over him. Any other bar-bell user can do the same thing. After you *get* your muscles by work you can do marvels in the way of "muscle control;" but you cannot *develop* strong muscles or big muscles by simply flexing and relaxing them through an effort of the will. The best exponents of "muscle control" are former bar-bell users. The man who is best known as an exponent of "muscle control" was making lifting records several years before he advocated "muscle control" as a means of development. As far as I can see, his muscles were just as big and just as much under his control when he was doing bar-bell work exclusively, as they are today. Perhaps the most skillful man in this line is a lifter by the name of Nowielsky, who is known on the stage as Otto Arco. Figures 95 and 96 show two of his "muscle control" stunts. In Figure 95 he is showing the "rope" of muscles on the abdomen at the same time that he displays the muscles of his arms and shoulders. (By the way, he is the originator of this "isolated control" of the abdominal muscles.) Figure 96 shows what

looks like an incredible development of the muscles on the upper-back, but part of the effect is obtained by his control over his shoulder-blades. In this pose, by flexing certain muscles, he has spread the shoulder-blades apart and changed the angle at which they are usually inclined. I give you my word that when this man is standing at a normal position, with his arms hanging at his sides, his back does *not* show these extraordinary contours. His back is very broad and packed from shoulder to shoulder with wonderfully developed muscles; but when he is not flexing those muscles, the back, while perfectly shaped, is not humped-up with muscle. But when he raises his arms in the position shown, *spreads his shoulder-blades* and flexes all the muscles on the upper-back, he looks just as you see him in Figure 96. It is quite possible for you to learn to spread your shoulder-blades just as he has done, and you may make your flexed muscles just as *hard* as his are when flexed; but unless your muscles are fully developed you will not be able to duplicate the effect of his pose.

Sandow used to say that while on an exhibition tour he never deliberately exercised. He claimed that the two exhibitions he gave every day afforded him plenty of hard muscular work, and that in between times he could keep his muscles in condition just by "flicking" them while sitting in a chair reading his newspaper. (By "flicking" them he meant alternately flexing and relaxing them.) I believe it is true that *after* you have developed your muscles you can keep them close to the highest pitch of development by practising "muscle control" for a few minutes a day, but your muscles will not grow any bigger or stronger.

"Muscle control" is all right as a means of displaying your muscles, but it positively is not a source of increased strength or development. I have seen skinny men practice "muscle control" stunts for months without adding one inch to the size of the chest or as much as a quarter of an inch to the size of the arms or legs. True, they were able to make such muscles as they had stand out in knots. Any one can do that if he can learn the correct positions. Your little brother can learn to control his biceps muscle by putting his arm in the position described in the first part of this chapter; but after he does flex the muscle, it is just one tiny lump. On the other hand, if you personally have big arms, a little practice



Fig. 98. Archie Gillespie making his back broader by muscle control. This is a matter of featuring the latissimus dorsi, or so-called broad back muscles.

Referring back to Figure 95, we see the one exception to the general rule. The ordinary athlete, when he wishes to display the abdominal muscles, leans slightly forward and contracts those muscles so that they appear in horizontal ridges. This man, Arco, accidentally discovered that if the lungs were almost emptied of air there would be a partial vacuum created; and that when you flexed the front abdominal muscles the sides of the abdomen would cave in, as in the picture.

I consider that "muscle control" is valuable as a supplementary exercise, and that it is invaluable to the athlete who wishes to do muscular posing. Almost any exercise is good. Even "muscle control" has some value, because if you go through all the different positions which display all the different muscles in the body, you get at least a little exercise out of it.

There are some other details which may interest you. If you can control your muscles, you can, in certain poses, produce some very pleasing effects. In Figure 98, the athlete's back is very broad at the line of the armpits and comparatively narrow at the waist. He has made his back broad by spreading his shoulders apart; but it should be noted that as he spreads the shoulders, the muscles in the middle of the back seem to disappear. That man can deliberately press his shoulder-blades together and make his back nearly six inches narrower than

(Continued on page 86)

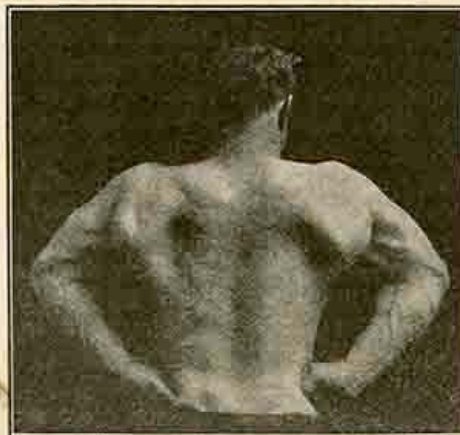
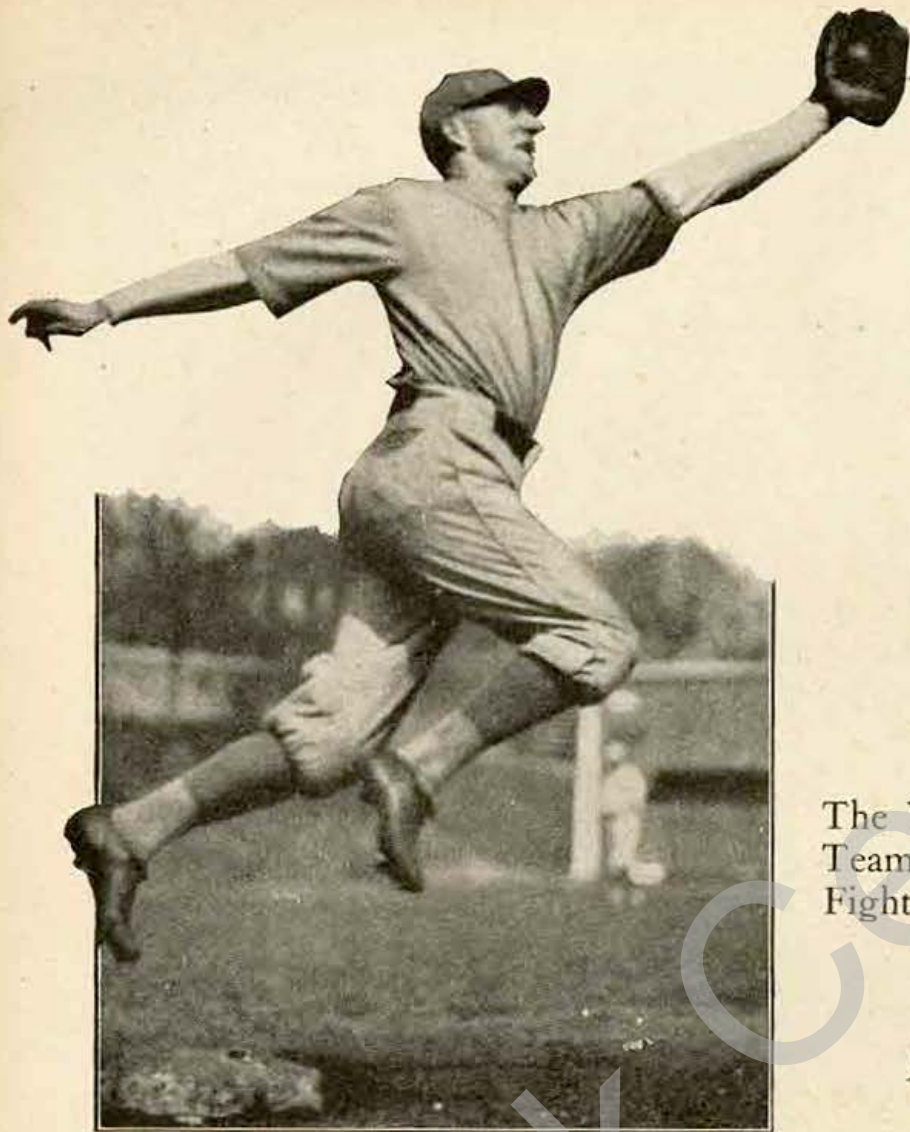


Fig. 99. Joe Nordquest, through constant lifting, has secured absolute control of his muscles. In this pose he has widened his back by spreading the shoulder-blades apart, and then flexing the back muscles.



Max Bishop, Athletics' second base, jumping for a fast one.

What Is the Keystone of a Baseball Team?

The Vital Spots in a Championship Team—Some Boxing Champs Who Fight and Some Champs Who Don't.

By *T. Von Ziekursch*

A LONG, long time ago some keen analyst of things baseball dubbed second base the keystone sack. He was an oracle.

The other day an American League manager was discussing the main factors in the making of a winning machine. He didn't talk of three hundred hitters all around or Johnsonian pitching exclusively, nor of the kind of defense the old Chicago White Sox were capable of offering about 1906.

"Give any manager two real stars in the pitching box, a great second baseman and shortstop and his troubles are just about over," was the way he put it.

Think it over and it's easy to see that he just about summed it up, also to figure out that when you're referring to the keystone sack in these days you don't mean second base exclusively. That expression has taken on a new meaning and spread out until now it embraces the shortstop, and it's easy to see why. Covering the second sack has become as much a part of his job as it is the second baseman's.

Certainly, the first and third basemen and the outfielders are mighty important factors in the play of any ball club, but it's down around that old keystone that pennants are won and lost, including the pitcher, of course.

The manager who pointed this out went on to elucidate, indicating the Yankees and the Giants last

season with Bancroft and Frisch forming a formidable barrier for McGraw, and Scott and Ward a corking pair to carry the burden for Miller Huggins. But that wasn't the main point in the argument.

In the first place it takes pitching to win ball games, but the best of pitching and the coolest of mound stars cannot be effective when there's always a thought turned from the batter to a weak spot on the inner defense. Put yourself in the pitcher's box, figuratively speaking, with a runner on first and a strong defensive combination around second base. What a difference it makes when you can devote all your attention to "bearing down" on the batter to force him to hit through the center of the diamond, down toward second or short, secure in the knowledge that there are a couple of sharks waiting there to turn his wallop into a double play or to ruin his hit and run plans with a force out.

Not only that, the aforementioned pilot pointed out, but the average manager on the side lines or the bench looks toward the second baseman and shortstop to act as the pivot around which the whole team revolves, to steady it and hold it together from the standpoint of team play, even to direct it when the tight moments come and quick decisions have to be made. That is the only part of the entire baseball field where two men are playing one position to all intents and purposes.

In addition to all that the best pitcher is likely to look

like a tramp when the infielding is off color and a lot of grass cutters are sneaking through for hits or a lot of bounders that should be double plays are merely going for outs. Also the sweetest first basemen in the world or the greatest of third sackers will have a hard time shining when it's necessary to be figuring continually on what the shortstop or second baseman is likely to do on any and every play.

The premium on an outfielder is his hitting ability. There are plenty of them who can field and throw well enough. In a sense the third baseman plays a lone wolf rôle and can perform a heap more capably if he can simply figure out what is expected of him on every given situation and then proceed to go through with his part of it, knowing that he'll get the right kind of backing from the shortstop. It makes a lot of difference to the guardian of the hot corner when there's a man on second, for instance, and the batter drops a bunt down the third base line if he knows his position at third will be plugged by the short fielder while he comes in to gather up the bunt.

Those are the little things that make or break a championship contender. Look back over some of the great teams of the past. All that's necessary is to pick out a couple of them. Any team that had Hans Wagner at short and a couple of classy flingers had something, and that's where Pittsburg landed its National League flags.

Then there were the Cubs with Tinker and Evers, about as steadily brilliant a combination as ever lived. There have been greater shortstops than Tinker and better second basemen than Evers, but they were a wonderful pair together. About all the rest of the team had to do was keep its head up and try to think fast enough to carry out what Tinker and Evers started.

The same way with that famous team which Connie Mack developed to rule the roost in 1910, '11, '13 and '14. Barry and Collins were just about all that could be desired. They had every play made before it started. Of course, that's a little far fetched, but it about describes it. That team never had better than a fair outfield, and not even a great hitting outfield at that.

Jack Coombs, the famous right hander who figured so prominently on the pitching corps and who was mighty wild at times, told the writer that he never worried about how many men he walked, because he could always figure on them being taken care of at second. What a load to lift from a pitcher's mind.

Looking back, too, you'll notice that McGraw always had a fancy pair around second on all his championship teams, and that leads down to the season of 1924.

He let Bancroft go to manage the Braves this year. Banny's been up there under the big top and a star for nine seasons. Undoubtedly he'd be good for several more as a top flight brilliant. But McGraw let him go and took a chance on young Travis Jackson, who came up from the Southern Association and stepped into the shoes of Banny when he was hurt last season. Jackson helped pull the Giants through to their pennant.

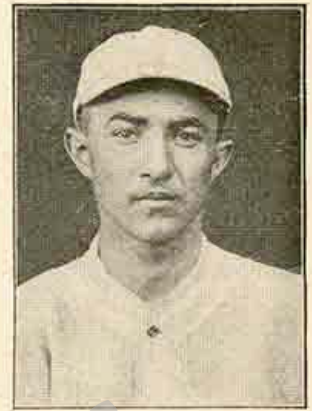
But he still has to prove that he's a capable running mate for Frisch. If he fails it will take a baseball miracle to pull the Giants through with that uncertain pitching staff. Once again you've got the old keystone combination in all its importance. But we're inclined to think that McGraw must see the goods all cut and polished in Jackson or he'd never take a chance like that by turning Bancroft loose, even to help out Christy Mathewson and his Braves.

But there's another angle to this keystone situation in the National League. Give either the Pirates or the Cincinnati Reds a player of the calibre of Frank Frisch down there at second base and we doubt whether they could be beaten out of the pennant even by the Giants. That's where the Pirates are uncertain, with age creeping up and the Reds no more sure. Undoubtedly Cincy has the pitching staff, but it's been touted beyond all reason.

All winter critics and baseball men generally have been shouting the praises of that Red hill corps. Certainly it is good with Rixey, Luque and Donohue as mainstays, but Benton is an ancient veteran, Carl Mays will be the surprise of the year if he amounts to much, and Jackie May has yet to win his major league spurs.

Hopping from the National to the American League you bump into a couple of mighty formidable keystone combinations. The Yanks have Scott and Ward, and that's enough said. They've got it, and in addition to that they've got the peer of any pitching corps in the league. Next to them we'd rate the Athletics with Galloway and Max Bishop, who came up from the Baltimore Orioles a big leaguer right off the bat, and Jimmy Dykes to fill in. As a matter of fact, Galloway and Bishop look every bit as good as the Yanks combine, but the A's have got a pitching staff to equal that of the Yanks, and there you are. The White Sox have some-

(Continued on page 94)



Everett Scott, Yankees' second base.



Eddie Collins, White Sox second base.

"Good-Bye, Fat" —and "Hello, Health"

The Self-told Story of a
Woman Who Got Rid
of Fatigue Along with
Her Surplus Weight

ILLUSTRATED BY LUCILE PATTERSON MARSH



The fat person is the world's great conservative.

THE fat person is the world's great conservative. Fat clogs the vital organs and gives us asthmatic brains as well as whistling pipes. Instead of being considered the "picture of health," the fat person is only a caricature of himself, a fit subject for jest.

In the dim ages, when the mentality of man was struggling toward enlightenment, man was his own storage plant. Dame Nature gave him reservoirs of fat to prevent famine. He ate inordinate quantities of food when it was plentiful, to guard against the lean times.

But after he conceived the idea of storing food outside himself, he did not rid his brain of the fat complex. Thus we see the rotund waist, the bulging arms, the unsymmetrical torso. He consumes more food than is needed for nourishment; he goes groggy on sugar, hilarious on meat, auto-intoxicated with starches, and the result is fat.

Fat is to blame for more premature deaths than any other one cause. The insurance companies used to look upon the fat man and call him good, but Old Man Statistics has been investigating him and his doom is sealed. He dies early and the insurance companies do not want him.

The war did some good; it melted out lard by the ton. Those of the men who were not killed or maimed or gassed, returned from overseas with slim waists and fresh complexions and the slackers and stay-at-homes turned green with envy. Then along came the women with the corsetless figure. Where she had been vilified for wearing stays and compressing the vital organs, she was now accused of vulgarity. But she had learned that fat was hideous; that she could, if she exercised them, depend upon her muscles for support; she also caught the idea of abstemiousness in eating.

I know, because I burned up thirty pounds of adipose tissue. It didn't "melt and dissolve itself into a dew." It took plenty of play and work.

In the first place, I was too thin. I affected my friends painfully. Out of consideration for them I concocted a menu that was warranted to put fat on a stone image. Thick soups, lots of milk, white bread, all the potatoes I could eat, an orgy of pie, cake, rich puddings, crullers and doughnuts were articles of regular diet;

from 110 pounds, I attained the weight of 185 pounds, and felt like the morning after the night before. I was not myself, but some weird usurper.

My face had grown to resemble a full moon, I was bulgy, I had lost my taste for gowns and hats, my mirror and my same friends commiserated with me, my enemies praised me. When enemies praise, beware. It was the praise that inspired me again to be myself.

My first step in this reducing process was to rise an hour earlier. That was the hard part of this new, self-imposed regimen. The next step was to walk to business after having eaten a light breakfast of whole wheat bread, toasted, two eggs, and a cup of coffee. It was about two and a quarter miles from my home to the publishing office where I was employed as an editor. Part of the route lay through Central Park and I got to know every beautiful nook and cranny of this wonder spot. At first I walked one way; after a time I walked both distances.

During the time of my greatest bondage to fat I would arrive home at night too fatigued to make any changes in my toilet. I would wash my face and hands, dab on a bit of powder and call it a day. Now I determined to change that bad habit. I would divest myself of my office clothing upon arriving home, take a hot bath followed by a cool shower, lie down for half an hour and then refreshed, reclothe myself in fresh linen and one of my frivolous evening frocks, which I had grown too dejected even to look at for some time.

I changed my dinner diet. I now was served with a thin soup, the lean part of lamb chops or roast, or a bit of steak or chicken, plenty of fresh vegetables, and always a leafy salad. My dessert, a water ice, ice cream, perhaps, or a few nuts and coffee. I varied my menu so that I would not tire of it, nor miss the rich foods upon which I had been fattening. I was obliged to keep my energy up to concert pitch, as my duties were exacting.

After a dinner of this sort, I felt like dancing, instead of ambling groggily off to bed as I had done when I was intoxicating myself with food. So I danced almost every night. There was a wonderful hotel on the corner of the street. Nightly in the restaurant there played an orchestra conducted by a violinist who was like unto the Pied Piper of Hamelin in his appeal.

After my exercise of dancing I would sleep like a baby,

my ears filled with entrancing strains of music.

Then I found in my ramblings about town during the noon hour another wonderful place to dance. It was at the top of a tall building on Broadway, where ozone was plentiful and the music divine. I used to order my lunch and forget to eat it, and it was during these happy days of reducing that I discovered that the mid-day meal was superfluous.

The afternoons under the old regime had been times of terror. A peculiar drowsiness used to steal over the faculties, which was maddening. Under the new order the afternoons were hours of pure delight. My work became a keen pleasure, instead of a burden. As fatness was sweated out of body and brain, I fell in love all over again with life. I acquired more work and more pay, white hyacinths bloomed in my soul, all the beauties of "This City by the Sea" became mine. The noise, which in my fat neurasthenic state had almost crazed me, became now as the music of the spheres. I became more interested in the crowd of people that surrounded me. Their pleasures became mine, their sorrows aroused my sympathy. At last I was myself again.

A sound mind in a sound body! The combination is an irresistible force which sweeps on to success. A few intellectual geniuses like Robert Louis Stevenson have been able to triumph over the flesh, but usually when the body is obtruding itself upon the consciousness because of some ailment the brain is less effective.

The fat person is a fertile field for such ailments as neuritis, rheumatism, arthritis and the complaint known as heart disease. Not only is the body outwardly fat, but the stomach, the liver, the pancreas and the intestines all have their coating of adipose tissue. You can't think, you can't breathe, you can't work effectively when you are too fat.

Someone with more wit than kindness has said that the way to a man's heart is through his stomach. If this were true, I would recommend that the women of the country go prospecting for another route. But I do not believe it. I think that men have been maligned. I believe that women have created a false demand by their desire to concoct weird messes and to be considered fine cooks! Who forced the white flour atrocity upon the suffering world? Women! They just couldn't resist the looks of loaves made of lovely white flour.

The world is being starved with white flour; about everything is removed from it that the human system demands for nourishment. Take a piece of fresh white bread and manipulate it with your fingers and in a moment you have a mass of dough that only a goat could digest. I use that dough to model little figurines. It's splendid for that. Whole wheat bread is rich in iron. Experiments have been made on white rats. The little animals fed on whole wheat bread thrived, while those fed on white bread became anemic; that is, there was not sufficient iron in the diet to form the red blood corpuscles in the right quantities.

It seems strange that women do not more generally take up the studies of the chemistry of food, its diges-

tion and assimilation. Their kitchens are their laboratories, into which come the raw materials for the nourishment of the race. Do they know that the body contains fifteen chemical elements, all of which have to be supplied by the food we eat?

For instance, iron is an essential element of the human body, but does every one know that you can supply it with the leafy vegetables and raisins? That is, you must have the *organic* iron that is found in foods and not the sort that grows in patent medicine bottles. Iron helps to form the hemoglobin, the coloring matter of the red corpuscles that gives the blood its power to carry oxygen from the lungs to the tissues.

The minerals or inorganic substances which make this marvelous machine of ours are—Calcium, Phosphorus, Potassium, Sulphur, Chlorine, Sodium, Magnesium, Iodine, Fluorine, Iron. Iron is found in the small percentage of .004, but how absolutely necessary it is that we have the proper percentage.

Take the element Potassium for another instance. Potassium is another name for potash. The fruit acids are partly neutralized acid salts of potassium. When these acid potassium salts of fruits and vegetables are digested, the acid element—purely organic—is oxidized, or to put it more plainly is burned; this frees the potash for recombination with the mineral acids of the blood. That is why lemons are used in rheumatic cases—lemons and other fresh fruits and vegetables. I have heard so many persons protest against the use of fruit acids in rheumatic tendencies, but that is because they do not know the chemical reactions that are going on in their own systems.

One of the greatest crimes of the age against the body and brain is the eating of denatured foods. Polished rice, refined sugar, patent cereals, white flour all come under this heading of denatured foods, and these foodstuffs are used in the confectioneries, the pastries, the breads, the biscuits, of modern commerce. With denatured foods we endeavor to satisfy our appetites.

Because the essentials have been extracted we eat and eat, pile on fat and are starved. Vitamins, which the scientists discovered and the manufacturer laughs at, are exclusive; they refuse to associate with refined foods.

The ills that follow in the train of a diet of denatured foods are legion; obesity is one of them, and like Abou Ben Adhem leads all the rest. Then there is neurasthenia. We are a nervous nation, because we are a starved nation in the midst of plenty, starved, with rolls of fat to carry which add to the burden of our famished muscles, for you can be famished and still be fat. Anemia may have marked you, though you weigh two hundred pounds.

Air, water, food, these are the fundamentals of living; translated into energy, these foodstuffs are our servants. The energy which comes from the Infinite ceases to flow when the body is deprived of these three fundamentals. Anyone who doubts can try the experiment of living without one of these fundamentals. The newspaper columns would carry the account.



Where she had been vilified for wearing stays and compressing the vital organs, she was now accused of vulgarity.

"Life Feels Like a Fight"

By Wilbur Hall

ILLUSTRATIONS BY THOMAS SKINNER

The Ups and Downs of Life

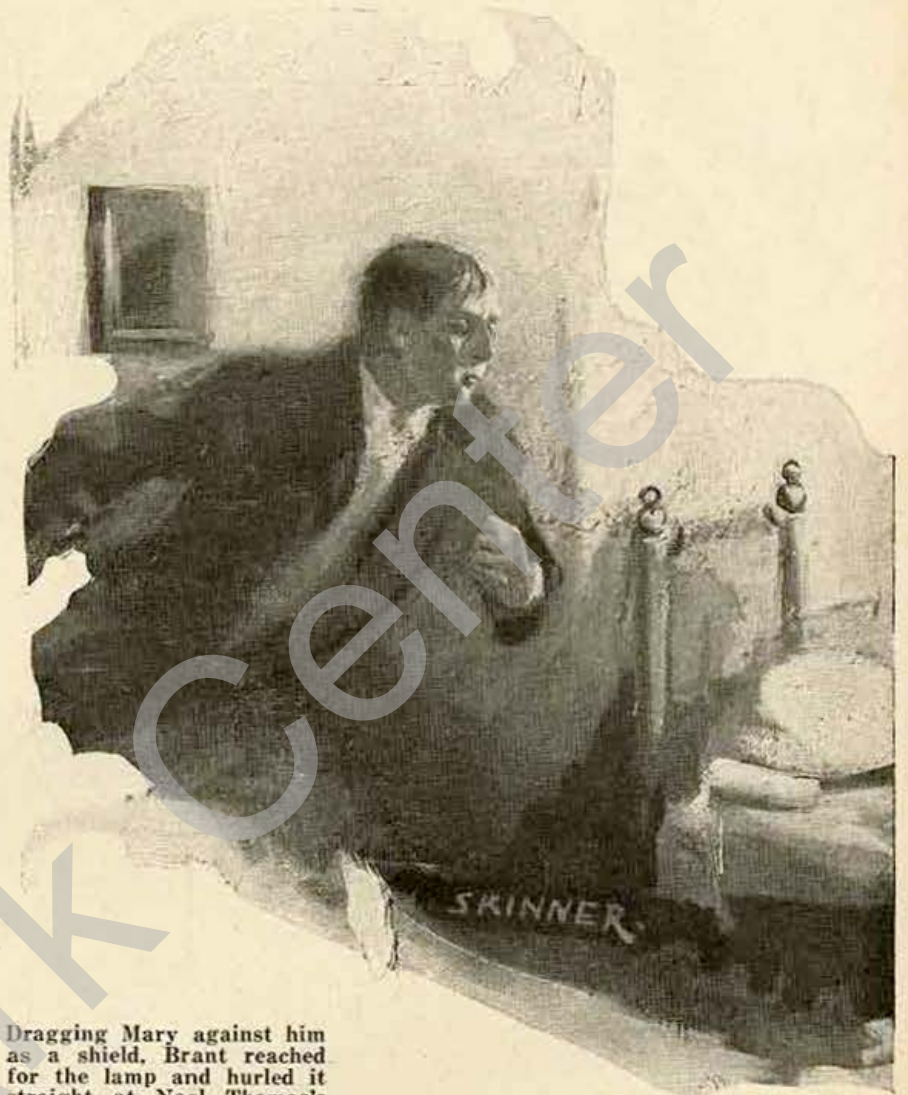
THE test of a man's strength, spiritually speaking, is whether he keeps on fighting after he is licked, or quits. It seems that sometimes the taking of a series of lickings is a part of the building of strength. Strength is acquired through effort. And it takes a spiritual effort to go on in such a case. Most people cannot go through life without taking a series of lickings. Some get strong on them and keep coming back for more. Anyway, this story is in this particular a faithful reflection of life, and we are still wondering whether our hero is going to emerge from his struggle as a man or a weakling.

Craig Gantry, young loafer and waster, having lost his fortune, and subsequently nearly dying in a blizzard in the Sierra mountains, is nursed back to life by Mary Clyde and her blind and deafened father. Recovering, Gantry undertakes to help his hosts dispose of the timber on their land, securing a contract to supply the Pacific Western with bridge and tunnel timbers. In this he clashes with Sill Thurston, timber baron, to whom the Clydes are under obligations. Gantry finally succeeds in getting logging operations started, and the timber is being delivered at Andrew Fack's sawmill. Trouble is brewing, however, in the very nature of the ancient antagonism between mill hands and lumber jacks, crystallized here by the ill-feeling between Noel Thomas, the woods boss, and Defoe Brant, in charge of the mill. There is a clause in the contract by which the lumbermen undertake to keep the pond at the mill filled with logs, Gantry forfeiting two hundred dollars a day for delay if the fast working mill hands are able to empty the pond. A crisis is precipitated when, partly as a result of a disastrous accident in the woods, the mill pond is finally emptied and the mill closed down, leaving Gantry for the time being pretty thoroughly beaten. Surprising developments follow.

CHAPTER VIII

I

Craig Gantry wrote two letters.



Dragging Mary against him as a shield, Brant reached for the lamp and hurled it straight at Noel Thomas's face.

My dear Miss Clyde:

I am compelled to decide in favor of the theory (perhaps of weaklings) that life is not a fight but "a game of private theatricals." Having made an abject failure of my bombastic gesture in behalf of yourself and your father, I have no alternative but to withdraw from the play. It is of no consequence how you regard me; I wonder if you can ever forgive yourself for having encouraged the ludicrous attempt I was making to market your timber for you and lift your financial burden.

Advice from me will come with little to commend it to you: I do most strongly advise you, however, to turn to Noel Thomas in this emergency. He is a thorough lumberman, honest and zealous, and fully capable, I believe, of pulling you out of the hole into which I have dragged you. Moreover, he loves you.

I have no heart to tell you how sorry I am for this failure. I admire you more than any one I have ever known, and have since you first dragged me back to life. My return to you for all your kindness is typical of me—I have always been incapable of a successful gratitude. My one hope is that the play may go on to a happy third curtain, now that the buffoon of the piece has retired.

C. G.

The other was written more hastily. It read:



My dear Noel Thomas:

I have, you observe, made a complete failure of my attempt to be of assistance to the Clydes. However, if I am removed from the field, there is no reason why the business should not yet be pulled off.

I will see Mr. Parker M. Forbes, of the Pacific Western, with whom I contracted for delivery of bridge and tunnel timbers, and can promise you that he will transfer the business to you and Mr. Clyde without any change in the terms. I will also undertake to induce President Langnickel, of the Lumbermen's Bank in Lassen, to furnish you the necessary funds to go on.

I don't ask you to think at all of me, or to carry this work on because I request it. I only point out to you that Miss Mary Clyde is very much in need of a friend in this emergency, and that one with perseverance and ability will be a happy substitute for

CRAIG GANTRY.

He had previously packed in a small roll such things as he would need on the road, and had donned a thick jacket. His other possessions—few and valueless to him now—he was abandoning. With the letters folded, enclosed, and addressed, he stood up and reached for the

lamp on his table. For just a moment he stood looking around the cabin where he had been so hopeful, so changed from his old cynical self, so busy and so near to being happy and—he laughed bitterly—where he had thought for a time that he was going to be successful and useful at last.

Then he leaned down to blow out the lamp.

II

Swift footfalls came along the trail; he heard gasping breaths and a cry.

"Craig! Come quickly! Father's sick!"

Gantry snatched up the two letters and crumpled them in his pocket. He jerked the door open. Mary Clyde leaned in it, panting.

"All right!" he exclaimed. "I'll go ahead."

But she was at his side, swift and strong. They raced to the house.

Francis Clyde lay propped up by pillows, and Gantry, inexperienced in the ways of death, knew nevertheless that the awful visitor was in the room. Clyde turned his head ever so slightly. His fingers were raised and he tried to turn his hand over and extend it towards them.

"Is that—Gantry?"

"Yes, Dad?"

"Good. Mary, Gantry. I've nobody else—but you—to leave her to."

Craig took the cold hand.

"I'll stand by, Mr. Clyde!" he said, speaking loudly and distinctly.

The old man smiled faintly.

"Don't shout! My deafness is gone. Maybe they are getting me ready—to hear the music of—the spheres. I wonder—perhaps I'll—see—there."

Mary, weeping softly, knelt by the side of the bed.

"You'll see, and hear, and understand, Dad!" she cried.

"I think I will," the stricken man said. His voice was a little stronger—it had in it the resonance and something of the old victorious quality which Gantry had heard often. "I want to understand. I think I'll learn first about the struggle—we have to make here—for God and—the universe.

"I'm sure, now, that James was right. For, as the essence of courage is to stake—one's life on a possibility, so—the essence of faith is to believe that—that possibility exists!" I've believed. Now—I know. Go on, Gantry, having the faith and the courage. Mary—my dear, dear girl—"

His voice failed. Mary knelt, holding him against her. His head and hers were together on the pillow.

And so, with a smile for them both, he died.

III

Francis Clyde was buried from the little church in Granger. His grave was under a giant spruce in the upper corner of the village cemetery, and from it one could look up and down the river for miles.

There had never been a larger funeral in the mountain country thereabouts. While he lived the old scholar had been retiring, quiet, and unobtrusive. People didn't count him many friends, although all of them liked him and most of them could remember at least once when he had done them some service or kindness, or given them some sound advice in a time of perplexity and trouble. All who came were surprised at the number of others who did likewise. It was a great outpouring of sympathy and love from an entire community.

As Mary and Gantry drove up from the churchyard to the cabin Craig was mainly silent. It puzzled him to understand why his whole world seemed to have

been upset by the simple death of this simple man. He was grief-stricken; moreover he was very much sobered by the responsibility thrust on him by the dying engineer. He felt himself trusted in an emergency and for a task that he was totally unfit to meet and perform. Yet not for an instant did he consider abandoning that trust. It was a sacred one. Gantry realized that he had loved Francis Clyde like a father.

The fortitude and serenity Mary showed amazed Gantry. She had not broken once; yet she was neither benumbed by grief nor in any sense immune from its ravages. She had been the practical one, she had remembered details and seen them attended to; it was Mary who had carried the load. At the grave she had faltered.

Craig, watching her keenly, had touched her hand and she had seized his like a child and clung to him until the body had been lowered and the flowers—mostly sober ones the mountain people had nurtured



Mary, weeping softly, knelt by the side of the bed.

through the long fall, with many greens and ferns—had covered the gaping blackness of the sepulchre. Now, riding homeward, she was talking gently of her father; for the first time Gantry learned a good deal of the story of his life, full of activity, achievement and success, and full, also, of sorrow, disappointment, and suffering.

"I can't go to the house now, Craig," Mary said, as they turned in the lane from the country road. "Dad and I used to go out to the rock at the head of Samson's Gulch, when we first came here, and he could still see a little. Will you go there with me now?"

"Of course. It's going to turn cold, Mary. Let me get you a heavier coat."

She smiled at him—one of her quick, frank smiles.

"You're starting to take care of me already!" she said. "All right. May I wear that thick jacket of yours?"

"Why, certainly, that's just the thing," he said.

He hastened to get it from his cabin, then they went up the trail.

IV

Her rock stood out above the canyon to the north; it was a great flat out-cropping below which the mountain-side dropped away almost sheer for four or five hundred feet into Samson Gulch. They could see the creek in the bottom, and could follow it as it wound and twisted northward to the river by Fack's mill. Mary flung herself down, cupping her chin in her hands, and gazing out on the panorama with sober eyes.

"We've got a big heritage, Craig," she said, abruptly. "I wanted to talk to you about it. Do you want to stay on and fight this thing through?"

Gantry stammered.

"Why, of course. I—I couldn't—I haven't thought of anything else." It was the only thing he could say.

"Since father died—no. But before that? When Fack's mill-boss closed down? Through all these troubles that have come? You thought of doing something else many times then."

"Yes." He faced her resolutely. "I did. I was ready to quit. But that was when I couldn't believe that life felt like a fight."

"Does it feel like one now? Wait, Craig! Do you want to fight? You don't have to, you know. I can sell out to Sill Thurston. He sent word to me by Mrs. Bannister, when she came up yesterday to stay with me. He'll give me plenty, she says, to keep me comfortable."

Gantry studied her.

"Do you want to take his offer?"

She hesitated for a time.

"Craig," she said, "it all lies with you. I—I used to think things about you that were silly. I—do you remember the night I went to your cabin and kissed you? Yes, I know you do. Well, then I thought that I loved you. I was growing silly about it. Now I know differently. I want to save you. That's all."

"It seems to me you've done about all for me that you should undertake,"



"You'll see, and hear, and understand, Dad!" she cried.

he said, sadly. "I can't remember a time when I seemed to myself to be worth saving."

"You are, though. You've got big possibilities. The world needs you, not because you are strong, but because you are weak."

"That's paradoxical. It doesn't sound like you, Mary."

"Perhaps not. I've changed lately, Craig." She smiled wanly. "I've been seeing things as Dad saw them—learning what he meant by 'the struggle for God and the universe.' He meant a good deal more than merely beating evil and resisting sin. Dad wasn't much of a moralist. Mostly he meant beating weakness—the wish to give up. Because, if the world could conquer failure and discouragement it could go on and conquer anything. And every weak man and tired man and cynical man who wins a fight wins something definitely for all Life."

She paused, looking away. Gantry, strongly moved, spoke slowly.

"You know me better than I've known myself, Mary," he said. "I thought I was superior—now I see that I was only weak. I was always quitting. It never seemed worth while to make the effort."

"I don't want you to misunderstand," the girl said, interrupting. "Whatever else you may be, you are a man of honor. You would stay on now and try to carry out Dad's wishes—take care of me. You can see that's unnecessary. It isn't I who need you to stay and fight."

"It's myself, isn't it? That's what you mean?"

"Yes. If you give up here—fail—I wonder if you would ever do anything with your life?"

"I know I wouldn't. That's why I'm going to stay."

"Not for me?"

"Not primarily. I see what you mean. You would take care of yourself."

"Yes. I want you to win."

Gantry was tossing two small rocks from hand to hand, unconscious of the game. His thoughts were racing. For just a moment he wondered if this strong, gallant girl were not worth a struggle for her own sake. For just a breath a wave of hunger for her strength and companionship and loyalty on a new basis of relations swept over him. But he was afraid of his own instincts. More exactly, perhaps, his instinctive cynicism still conquered his instinctive tenderness and gentleness. And she had just told him that love wasn't part of the scheme for him. He shook himself.

"Mary," he said, "I'm going to perform a ceremony." He held out the two stones with which he had been abstractly toying. "This stone is weakness and this one is discouragement. They're going over the cliff!"

She flashed a smile on him, then sobered. She put one hand on each of the rocks, as he held them balanced on his own palms.

"All your weakness and all your discouragement in them?" she asked.

"Yes."

"And you'll never go down there to Samson's Gulch and find them again—and put them back in your heart?"

"Never. I promise."

They were half laughing, half serious. She took the two stones from him—tossed them over the face of the precipice.

They fell away, struck far below in soft shale, and started a trifling landslide. This loosened more rocks

and earth. The slide grew. Limbs, boulders, and then a dead log butt, half buried in debris, began to follow the bounding rocks. The log shot down, nose first, sped faster and faster—plunged, with a shower of boulders, into the pool made by Samson's Creek at the foot of the cliff.

"They're gone forever!" Mary Clyde cried. "Thank God for it."

Almost soberly, impressed by the act that had been begun lightly but that had ended so dramatically, Craig rose with her, and they went silently back toward the house where was now only the spirit of the man who had so strongly influenced both their lives.

CHAPTER IX

I

The sudden death and the funeral of Francis Clyde had created a sort of truce in the war between Fack's mill-hands, led by the now triumphant and gloating Defoe Brant, and Gantry's loggers; it sprang into life again the night of the funeral day when four or five loggers encountered a dozen millmen in Castlemont and were badly beaten up in the fight that followed hot words. Noel Thomas, disheartened by the victory of Brant, was now angry and rebellious. For two days the logging crews worked half-heartedly and the logs moved steadily down the hill into the Fack pond so that, on the following Monday, the mill began operations again.

But the whole trouble, Thomas realized, lay in the transportation problems Gantry confronted. The expense of moving the green logs down the hill by motor truck was almost prohibitive and the service independent. The cost of sending the finished timbers on to the railroad at Booker and so to the Pacific Western construction camps above Lassen was inordinately high, and Gantry, as Thomas well knew, had not made the fight that might have been made to force a reduction of rates on the Indian Rock narrow gauge.

To Thomas this mismanagement of the enterprise was peculiarly galling, first because he knew that it would result in little or no profit to Mary Clyde, and second because his own standing as a woods boss was seriously threatened by circumstances entirely beyond his own power to control. He had liked Gantry from the first, but the young manager's tendency to blow hot and cold irked the forthright Thomas. Finally, he was in love with Mary Clyde, and his feelings distorted his vision and made him more critical than he would have been in any other employment.

The fight in Castlemont was the last straw. Two of his men had been seriously bruised and worked indifferently for several days. The morale of the crew had been shaken by the triumph of Brant—it was shattered by the losing fight, against heavy and unfair odds, in the lumber town. The loggers were sore, disgusted, and sullen. They wanted Thomas to lead them down to Fack's for a clean-up; his refusal was based on expediency that they could not recognize. It began to look as though the mill pond would scarcely be kept supplied for a full week before Brant would have an excuse to blow that shut-down whistle again and laugh at their discomfiture. The whole enterprise, originally a daring one, was obviously approaching the supreme crisis.



"They're gone forever!" Mary Clyde cried. "Thank God for it."

II

Defoe Brant, on the other hand, was drunk with power and pride. The death of Francis Clyde had interfered with his original plans, but he did not alter, only postponed them. Brute though he was, he realized that her father's death would seriously affect Mary; it is probable that he would have waited, with the dull patience which was characteristic of him, for a seasonable time, if he had not taken to drinking. As it was he deferred any step for a week, but on the Sunday following the re-opening of the mill he chanced on an acquaintance in Booker who had come into possession of two quarts of very bad whiskey. In the afternoon the two of them attended a Portuguese festival where wine flowed freely, and by dark Brant was fuddled enough to be insolent and dangerous.

Shaking off his friend and one or two mill-hands who wanted to stay with him until death, the mill boss started west over a mountain trail he knew, afoot, wary, determined, and reckless of all consequences.

III

On that same Sunday Noel Thomas had gone to Gantry with his mind made up to quit. Gantry, surprised and disturbed, tried to argue. Thomas interrupted him.

"I'm not getting nasty, Gantry," he said, "but the fact is, I don't believe you're ever going to make a go of this timber contract as long as you use motor trucks. The country isn't built for them. A railroad would answer, but I guess you haven't any money for a logging line. When it costs you a dollar a thousand to get your logs to the mill, and a couple more to deliver them to the Pacific Western, Miss Clyde might as well burn her standing timber as to cut it. That's the straight of it, and I don't want to be tied up to a losing proposition."

Gantry nodded.

"I don't blame you," he said. "Your figures on our hauling costs are high, but I'll admit we aren't making what we ought to make for Miss Clyde. The only trouble is that if you leave me, Thomas, things will get worse for her instead of better."

Thomas looked away—answered doggedly.

"I don't know about that. But I'm not going to stay unless things change."

"How would you run the show if you were manager?"

"I'm not."

"If I make you manager?"

"I wouldn't take it. I'm only a woods boss. I know enough to keep to my job."

Gantry smiled.

"I'm afraid I'm not as wise as you, Noel. I wasn't even a good pot-boy, the madame said."

But he realized that one of his old spells of depression was falling on him, and he shook it off resolutely.

"Give me another week, Noel," he urged. "I'll find a way out. We've got to make this thing go, and the more difficulties there are in the road the bigger victory it is to overcome them." He glanced out—saw Mary Clyde riding in on her plunging range-horse. "Will you do me a favor, Noel? Don't let Mary get wind of any of this. I don't want to worry her."

(Continued on page 80)



The DINNER TABLE

— Conducted by Jane Randolph

This Salad Is a Square Meal

ONE Spring evening about sunset an automobile full of hungry friends unloaded on my front porch. They had come with the proposal that we all go to the nearest inn where they served chicken and waffles for supper with "dancing afterwards." I knew I had one beautiful head of lettuce and plenty of real whole wheat bread in the pantry, so I proposed that we all turn to and get supper for ourselves and eat it on our front porch. There could be "dancing afterwards" just the same with the victrola rolled to the living-room window and the porch chairs and table out on the lawn. And so we did.

While two of the guests were setting the table and making the coffee, another helped me prepare the vegetables for a huge salad. There were a lot of us, and we were as hungry as bears, so first of all I put a dozen eggs on the stove to boil. It took five minutes to start them cooking, twenty to boil them, and five to cool them by keeping the water running cold.

While the eggs were cooking I took off the outside leaves of the lettuce and cut them up in small pieces to put in the salad. The light colored, crisp leaves I arranged around the edge of my largest meat platter. Next I shredded one head of cabbage, two carrots, one turnip, one sweet potato, and cut up the outside pieces as well as the leaves left from the Sunday dinner celery. To this mixture of chopped vegetables I added the cut up lettuce, poured over all a generous amount of the mayonnaise dressing that I always keep on hand, and heaped it into the middle of the platter. Over the top and round about I put the eggs cut in halves, pressing them down into the salad so they would look as though they belonged to it and wouldn't roll about. On top of all I poured more dressing in little yellow heaps here and there and everywhere.

At the last minute I had a sudden inspiration, and brought fresh from the garden six tiny, scarlet radishes. With a little green leaf left on top for a hat, they sat among the eggs and dressing like funny little men inviting us to eat. When this salad was placed in the middle of the table, no other decorations were needed. We ate it with the home-made whole wheat bread and butter, and when it was gone, we spread the bread with honey and ate it with our coffee. Like the meal that Ma Pettingill "bought off'n" Ruggles of Red Gap, it was composed entirely of food. It looked good, it tasted good, and although we ate it all to the last crumb,

nobody was either sick or hungry when we got through.

It took altogether forty-five minutes to prepare it, and except for the dressing, which is made once a week at our house, no previous preparation had been made. In twenty minutes more we were able to clear up everything and put the dishes in the dishwasher. It cost about \$2.25 to serve 10 people, or about 25 cents per person. The chicken and waffle dinner was five miles away, and was considered cheap at \$1.25 a head. After supper we each dropped 50 cents in the teapot. After I had taken out \$2.25 for expenses we gave the rest to the Community Club House Fund, and voted that we had had a good time cheap.

The salad which I have just described, combined with whole wheat bread and honey, made a meal. The most expensive thing in it was the dressing, which was not as expensive as it sounds, because it was very high in food value and a little of it went a long way. And best of all, it was made of things that almost every woman keeps in her pantry all the time and which can therefore be used in an emergency.

If you have read and thought about food at all lately, you know that the mineral salts of the green leafy vegetables, as well as the fresh root crops, are a most necessary part of the well-balanced diet. They prevent disease, aid assimilation, and help elimination. They are rich in vitamins, and are essential to life. Last month we considered how they should be cooked by methods that would preserve their juices, and served to the family at least twice each day.

But no matter how carefully it may be done, the vitamins are probably injured to a slight degree in the process of cooking. It is apparently only in the raw vegetable that we can be sure we are getting the full value of the food just the way nature gives it to us, and unimpaired by the use of heat. Every one ought to eat a little of these vegetables raw, just as the dog chews by instinct the grasses and weeds in the fields, and just as little children want to and usually don't because they are forbidden. The Art of the Salad is the art of giving the green and root vegetables a maximum of palatability. The salad should be a part of every meal except breakfast, when fresh fruit serves the same purpose.

The Simplest of All Salads

The recipe is simple and consists of a good French dressing, almost any appropriate variety of green leaves and edible roots, and a few simple tools. I have a good-

sized wooden bowl, a grater from the ten cent store, a vegetable chopper, and a good sharp paring knife. The grater is one of the kind that has four different sizes of cutters on its four separate sides. For salads I use the third size, which cuts the vegetables about the size of shredded coconut. The vegetable chopper is called a "Tearless Mincer," and can be bought in almost any good hardware store. It consists of a small glass bowl with a removable bottom of wood and a four-bladed knife that works up and down on a spring. The whole is covered tightly with a nickel lid which, if kept closed, prevents the onion juice from flying into the eyes. This mincer is the joy of my life, and I use it for all kinds of vegetables and eggs.

If the supplies in the pantry are reduced to first principles, I can make a good salad with nothing more than cabbage and onions. Sounds pretty scrubby, does it? Dear reader, they are the king and queen of all vegetables. Get over the idea that because a thing is cheap or easy to get, it is undesirable. The Children of Israel, so the story goes, lived for forty years in the wilderness on manna that came as a gift from God and cost them nothing at all save the trouble of picking it up. "And the taste of it was like wafers made with honey."

To make the salad I take about one-fourth of a medium sized cabbage and shred it into the wooden bowl. Then with the vegetable mincer I cut up an onion about the size of a golf ball, put the two vegetables into a bowl together, pour over them half a cup of French dressing (see recipe further on), and mix it all up thoroughly with a spoon—that is all there is to it. The family like it, they eat it, and it is good for them.

No, certainly I do not give them just that twice a day every day in the year. But I do my best to give them some kind of a salad twice every day, and it is more often that or some variation of it than any other kind. One thing that should especially commend the cabbage and onion combination to economical housewives who look askance at the price of good head lettuce is that cabbage is so cheap as to be within reach of the shortest purse, and is, besides, available all the year around because of its good keeping qualities.

With cabbage and onions as a base, there are a great many kinds of vegetables that can be added to give variety as well as additional food value to the salad. Carrot is our next favorite. Shred about half a medium-sized carrot with the cabbage. It will make the salad look very pretty, give it an added flavor, and the family trustfully believe they are getting the much desired "variety." You can do the same with a third or half a turnip. Did you ever eat a young raw turnip? It has a spicy, succulent flavor, and a little of it improves the salad immensely. A smaller amount of raw sweet potato—not more than about a tablespoonful after it is grated—may be used in the same way. Sounds

funny, doesn't it? Raw sweet potato! Well, try it! It tastes very much as though nuts had been sprinkled over the salad, and the children think it's fine. If you are afraid of their prejudices, don't tell them what it is, and they will never know the difference till they've committed themselves to it—by mistake, as it were.

Sometimes I add just one of the above vegetables, sometimes two, and sometimes all of them. Carrots or turnips alone will give the salad enough flavor so that the onions can be dispensed with, if for social reasons it is not desirable to eat them. If you have access to a green grocer, you can substitute a green or ripe sweet pepper for the onion, or add it. If you buy a stalk of celery, serve the heart and the tender stalks as they are, and reserve the outside pieces to put in the salad either in place of, or as an accompaniment to, the onion. Just scrub the rust off them, chop them up, and stir them in. If the leaves of the celery are fresh, they make a delicious addition to the salad.

When you prepare spinach for cooking, save out a few of the freshest, crispest leaves and chop them up in the salad. They will make almost no change in the taste, but they add to the food value.

There are other vegetables that are in season only at certain times of the year, and which are economical and wholesome. Of these the tomato is perhaps the most important. If you have only one tomato, cut it in small pieces and mix it with whatever vegetables you have. It improves any combination. Cucumbers have their turn. Contrary to the ancient tradition, they are wholesome, save for persons who can't eat them because of some idiosyncrasy, just as others can't eat strawberries. Cut up in small pieces, they seem to combine more completely with the other vegetables and be more eatable than when sliced in the usual way.

Then there are greens which can be had in almost anybody's backyard at certain times of the year. Nature, who is a good doctor as well as a kind mother, puts them there at just the right time of the year—the time when we need them most, in the Spring. There are the dandelion leaves, sour grass that the children love so well, and wild mustard. In the garden there may be endive and kale, and by the spring or along the creek are mint and watercress. Parsley may be had almost any time of the year, and sets off any salad made with cabbage for a base.

Lettuce is a salad all by itself. It can be served alone or in combination with any or all of the vegetables that I have mentioned. Taken all round it is the cheapest, most satisfactory vegetable that I know. Almost everybody knows how to use it, prepare it, and care for it. In all the salads that I have described, lettuce could be used as a base in the place of the cabbage or in combination with it, and tastes even better than the cabbage. I use lettuce almost every day, and I imagine you do too. That is why I have tried to tell you about other things that are not so often

(Continued on page 85)

What's Your Food Problem?

THIS new department, "The Dinner Table," conducted by Jane Randolph, is intended to offer the practical help needed by the average family in the matter of securing a well-balanced diet that will build strength. Even those who know the theory of correct eating sometimes find difficulty in putting into practice what they have learned or in securing the right kind of food.

The reader is invited to write to Mrs. Jane Randolph in reference to his or her food problems, also giving any information along these lines derived from experience.

Incidentally, the preparation of foods and meals outlined in this department will follow religiously the teachings of Alfred W. McCann, whose authoritative articles have for some time been a feature of STRENGTH.
—The Editor.

THE MAT

Analytical Comment on Subjects Connected with Body-building,
Muscular Development, etc.

Conducted by Alan Calvert

Your Development in Relation to the Size of Your Bones

Editor of "The Mat."

Dear Sir:

I hear so much in your magazine of how to build up the thin man, reduce the fat man, but nothing for a very small-boned individual. Anyhow, nothing to help one who only has a $5\frac{3}{4}$ inch wrist and desires to become perfectly developed. How about it? Is it possible? I am sure this will prove a boon to thousands of other "Strength enthusiasts!"

Please withhold my name.

Yours truly,

H—— B——

When I received the above letter I wondered whether this gentleman is really so small-boned as he thinks he is. If a man's wrists actually measures as little as $5\frac{3}{4}$ inches, it is likely that his ankle measures only $7\frac{1}{2}$ inches, and his hips not more than 33 inches. By measuring the three parts just named, you can get a very good idea of the size of your own bones. In one article in the April issue of this magazine you were told that the correct place to measure the wrist was right close to the base of the hand, and that the tape should pass around the wrist between the hand and the lump of bone on the outside of the wrist.

In a big-boned and well-developed man this is the smallest part of the whole arm; but in a small-boned man who has never exercised, a measurement taken at this part will be bigger than if the tape was passed around the forearm 3 inches away from the hand. A $5\frac{3}{4}$ inch wrist is very, very small for a man of average height; although there are many men who stand only 5 feet 1 or 2 inches in height, whose wrists measure only $5\frac{3}{4}$ inches.

If you will take the trouble to write to the Milo Bar-Bell Co. they will send you my pamphlet entitled,

"How Much Should I Measure and How Much Should I Weigh?" In that pamphlet I discuss the possibilities of development for men of different heights and of different sized bones; and if you will follow the rules given in that pamphlet, you can figure out for yourself the possibilities in the way of development for a man of your height and bone-structure. My standard is much higher than the standards of those other writers who have issued charts of "perfect development" or "perfect proportions." For example, when these other authorities say that a man 5 feet 8 inches tall should have a normal chest measurement of 40 inches, I say that he should have a 43 inch chest, if his bones are of average size. I believe that the usual way to make up such a set of figures is to take the measurements of several hundred fairly developed athletes, and then to average them. I did practically the same thing with the measurements of a lot of advanced pupils. Where another writer will say that a man of such height ought to have such measurements, I feel safe in saying that he positively can get the measurements given in my standard. It is not guess work with me, because I have seen so many men improve their proportions and develop their muscles to the size which I had predicted in their cases.

If you get that pamphlet, don't misread it. The other day I received a letter, in which the writer said, "Why is it that you claim a man of 5 feet 8 inches with a 7 inch wrist cannot get an upper arm larger than $15\frac{3}{4}$ inches?" And he went on to mention the names of a couple of famous athletes who had 7 inch wrists and very big upper arms. In my reply I asked the man to show me the part of the pamphlet in which I said that a $15\frac{3}{4}$ inch upper arm was the limit for a man with a 7 inch wrist. Not only was there no such statement in the pamphlet, but on the

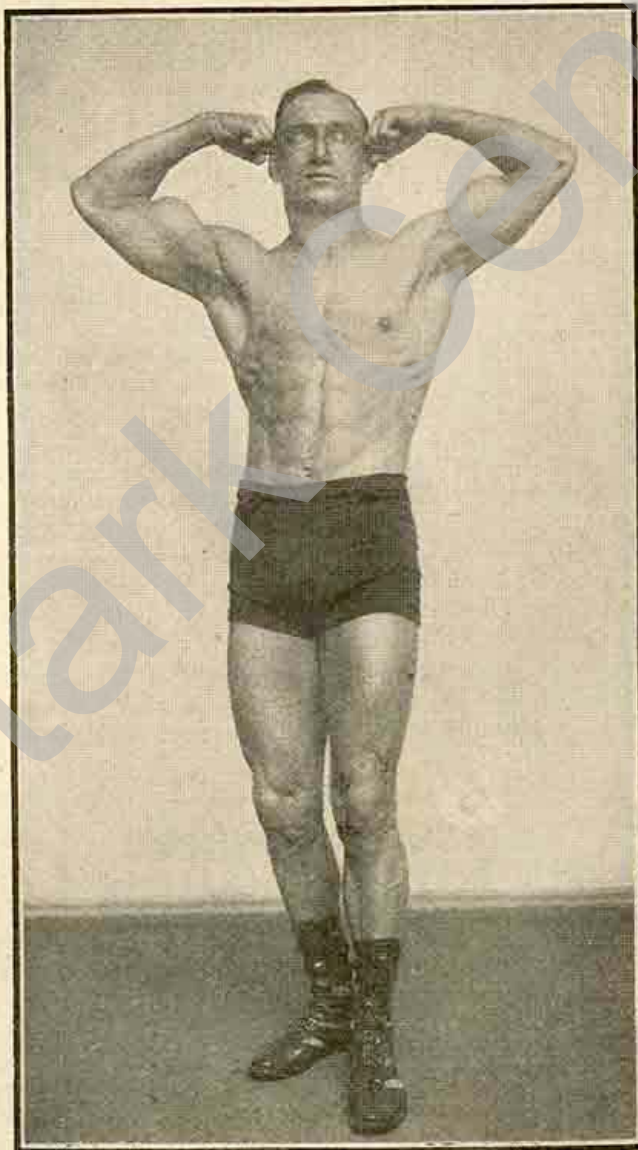


Fig. 1. Mr. Walter Donald illustrating the arm development for a man of medium-sized bones. Wrist nearly 7 inches, forearm $13\frac{1}{4}$ inches, upper arm 16 inches. In this connection see the frontispiece illustration, page 16, of full-arm development with large bones.

contrary there is a paragraph saying that many of my pupils had *exceeded* my standard.

Hundreds of times I have heard a thin man say, "Oh, there is no use in my trying to get a good development. Look at my thin wrists." It cannot be denied that very thin wrists and ankles are a handicap to any one who wishes a massive development. But then, it is not every one who wants a massive development. Most men prefer to be perfectly proportioned. The late Louis Cyr was a mountain of bone and muscle. The elder Zybysko is an enormously thick-set man, with a 50 inch chest and a 20 inch upper arm; but never once have I heard a man say that he would like to be built like Cyr or like Zybysko. I have heard hundreds of men say that they would like to be built like Hackenschmidt, and thousands say that they would like to be built like Sandow.

One comforting thing about this world is that there are always compensations. What you lack in one respect is made up for by your accomplishments and possessions in another respect. Take, for example, Hackenschmidt and Sandow. Hackenschmidt was thirty pounds heavier than Sandow, although only an inch or so taller. His bones were bigger than Sandow's, and his muscles were bigger. Also, he was 15 or 20 per cent stronger than the other man. What Sandow lacked in bulk and sheer strength he made up for in the perfection of his proportions and the elegance of his figure. Sandow's bones were but little larger than the bones of the average man of his height, although, of course, his muscles were very much bigger. What gave him such a fine appearance was the size of his muscles in comparison to his small joints.

When I said in my pamphlet that a man could get a forearm one and nine-tenths times the size of his wrist, and an upper arm 25 per cent bigger than his forearm, I further said that those figures were not the limit. (When you measure the forearm you hold the arm straight, clench the fist, and take the measurement at the largest part, which is about two inches below the elbow joint. When you take the upper arm measurement you bend the arm at the elbow

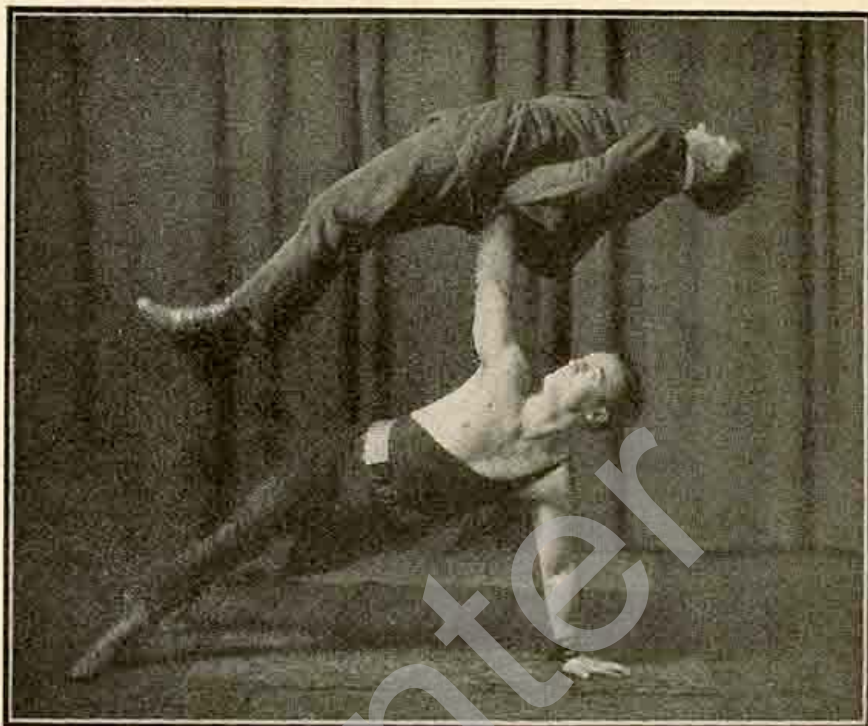


Fig. 2. Mr. R. B. Snyder illustrates development possibilities of the small-boned man. Wrist $6\frac{1}{2}$ inches, forearm 12 inches, upper arm $14\frac{1}{2}$ inches.

and hold the arm out horizontally to your side and take the measurement around the biggest swell of the biceps.) Sandow's wrist measured $7\frac{3}{10}$ inches, and his forearm $13\frac{4}{10}$ inches, whereas I believe he could have gotten a $13\frac{2}{3}$ inch forearm. On the other hand, his upper arm measured $17\frac{1}{10}$ inches; that is, instead of being only 25 per cent bigger than the forearm, it was $27\frac{1}{2}$ per cent bigger. I do not know what Hackenschmidt's wrist measured, but his forearm was $14\frac{1}{2}$ inches around, and his upper arm more than 18 inches. According to my standard he should have had a $17\frac{4}{10}$ inch upper arm, whereas his upper arm *did* measure more than 18 inches. So there are two men whose upper arms proved that it is possible to exceed my standard.

I am telling you all this to show you that there is hope for you if you happen to be small-boned. If your wrist measures only $5\frac{3}{4}$ inches, it is possible for you to get a forearm measuring almost 11 inches, and an upper arm of $13\frac{1}{4}$ inches; but, if, like Sandow and Hackenschmidt, you beat my standard, you will probably get a 14 inch upper arm. Let me assure you that such measurements

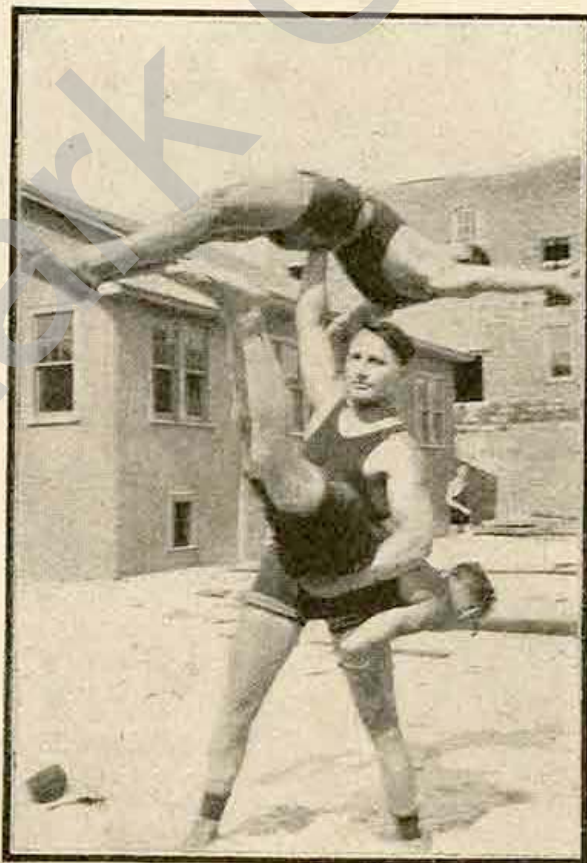


Fig. 3. Mr. W. Weber, a high-class amateur strong man, in a feat of strength which is very remarkable, not for the weight lifted but by reason of the manner in which it is done.

are well worth working for. The fact that Hackenschmidt has a gigantic arm is no reason why a small-boned man should not try to get a 14-inch upper arm. There are men who look at pictures of Hackenschmidt's arms and then quit exercising before they start. Why should one do that? You know perfectly well that you hope some of these days to be worth a million dollars, and you don't stop trying to get that million because John D. Rockefeller and Ford have a billion apiece. The idea is to make the most of yourself, and a short, small-boned man who gets his upper arm to 14 inches will have the same sense of satisfaction as a big boned man in getting his arm to 16 or 17 inches.

Now, I will tell you why it is possible for a small-boned man to make his upper arms almost one-third bigger than his forearms. While, with very small arm bones, it is almost impossible to get a very big forearm, it is still possible to get a great upper arm development, even if the bone in the upper arm is thinner than the average. The size of the upper arm is influenced partly by the size of the forearm, and partly by the size of the chest. If you can make your chest bigger; that is, the *rib-box* bigger, your shoulders will grow broader as your "true chest" increases in circumference. The bigger the rib-box the more muscle you can put on the outside of it. But here is the main point. The upper arm bone is moved not by the muscles on the upper arm, but by the muscles on the upper part of the body, which are attached to the bone of the upper arm. Now, the size of the muscles on the upper body affect the size of the upper arm, which explains why it is that when a man's chest increases 5 or 6 inches in girth, his upper arm seems to increase in size almost automatically in order to keep pace with the growing chest. Sandow and Hackenschmidt were famous for the size of their chests. Both of them had chests that were very deep from front to back, and both of them had almost incredible development across the upper back, and that, to my mind, explains why their upper arms were more than 25 per cent bigger than their forearms.

A big-boned man usually has quite wide hips, whereas in the small-boned man the hips are narrow. In the average man the measurement of the normal chest, taken at the line of the arm-pits, should be three or four inches larger than the measurement around the largest part of the hips. In big-boned men the hips are sometimes almost as large as the normal chest, but in small-boned men the normal chest is sometimes very much larger than the hips. Although Sandow's normal chest meas-

ured 44 inches, his hips measured only about 39 inches, with a consequence that his body seemed to taper from the shoulders to the hips, and thereby gave him an appearance of great lightness and agility. Walter Donald is built along the same lines. His bones are quite small, and his normal chest is fully 5 inches larger than his hips, as you can see by looking at his photograph. The point is that if you have the narrow hips which usually accompany small bones, it does not prevent you from getting a fine chest, and since you can make your chest a great deal bigger, it means that you can get a magnificent shoulder and upper arm development.

A man with narrow hips can never get quite as much development along the outside of the thigh as can a man with wide hips, and the small-boned man cannot get the same massive development of the forearms and the calves of the legs that is possible for a man with big wrists and ankles. A small-boned man can get the developments and proportions of Mr. Donald, and in recent years there have been few athletes who could even approach the proportions, the symmetry, and the development which Mr. Donald possesses.

There are some small-boned men who by diligent and continual training have acquired arm development far beyond the limits which I thought were possible. I know a man with a 6 inch wrist who has a 12 $\frac{1}{4}$ inch forearm and a 15 inch upper arm, and he is only 5 feet 3 inches tall. Fritz Rhode, whose height was 5 feet 5 inches, and whose hips were small, developed a 24 inch thigh.

Some years ago the famous English lifter, Thomas Inch, decided to

make an experiment. He then stood about 5 feet 10 inches in height, and weighed about 160 pounds, and had a 44 inch chest, 16 inch upper arm, and a 24 inch thigh. He had said that, if he cared to, he could greatly increase his measurements. When his statement was disputed, he made a bet that he could reach certain figures in a certain number of weeks training. I believe that his upper arm went to 19 inches, his chest to 49 inches, and his thigh to 27 inches, and his bodily weight increased to about 200 lbs. His wrist was no larger when he finished than when he started this special training. From my point of view he did not improve his figure to any extent, because as a middle-weight he was most beautifully proportioned, and had a wonderful set of clean-cut muscles. When he made himself bigger, his figure was not nearly as good, and his muscles had lost their outlines. By making himself 40 pounds heavier he became able to lift considerably heavier weights than he had lifted as a middle-weight.

I have seen some cases (Continued on page 74)

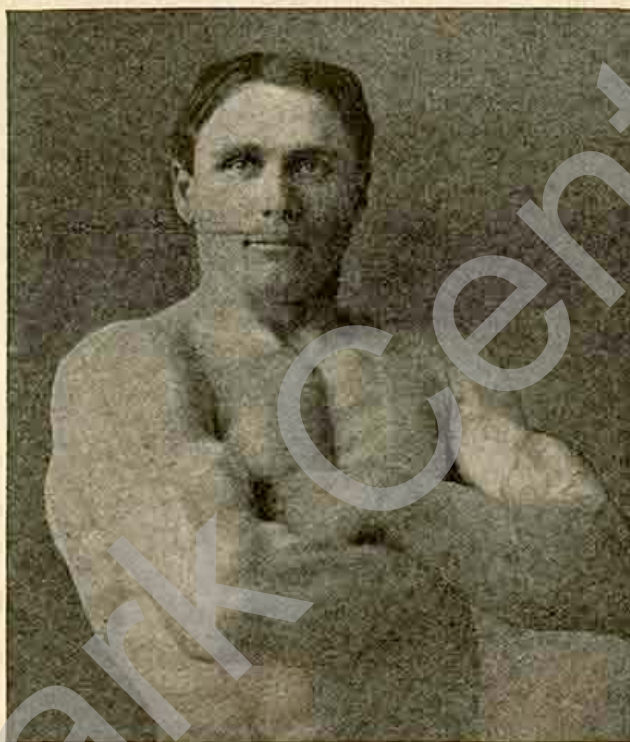
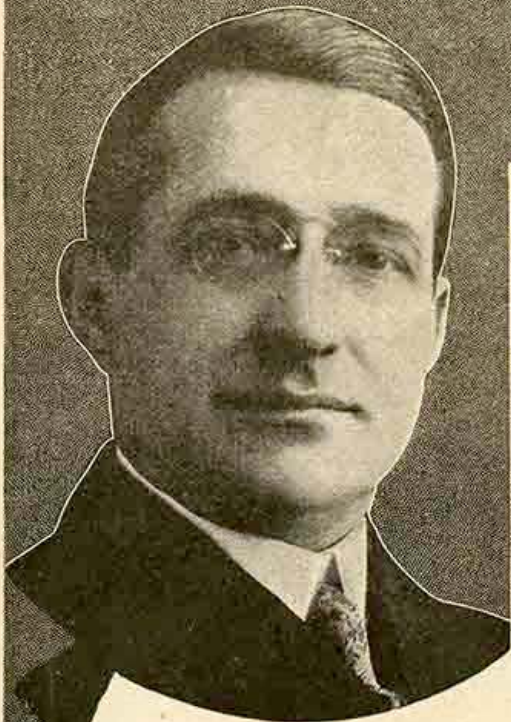


Fig. 4. John Y. Smith, holder of some very remarkable amateur lifting records.

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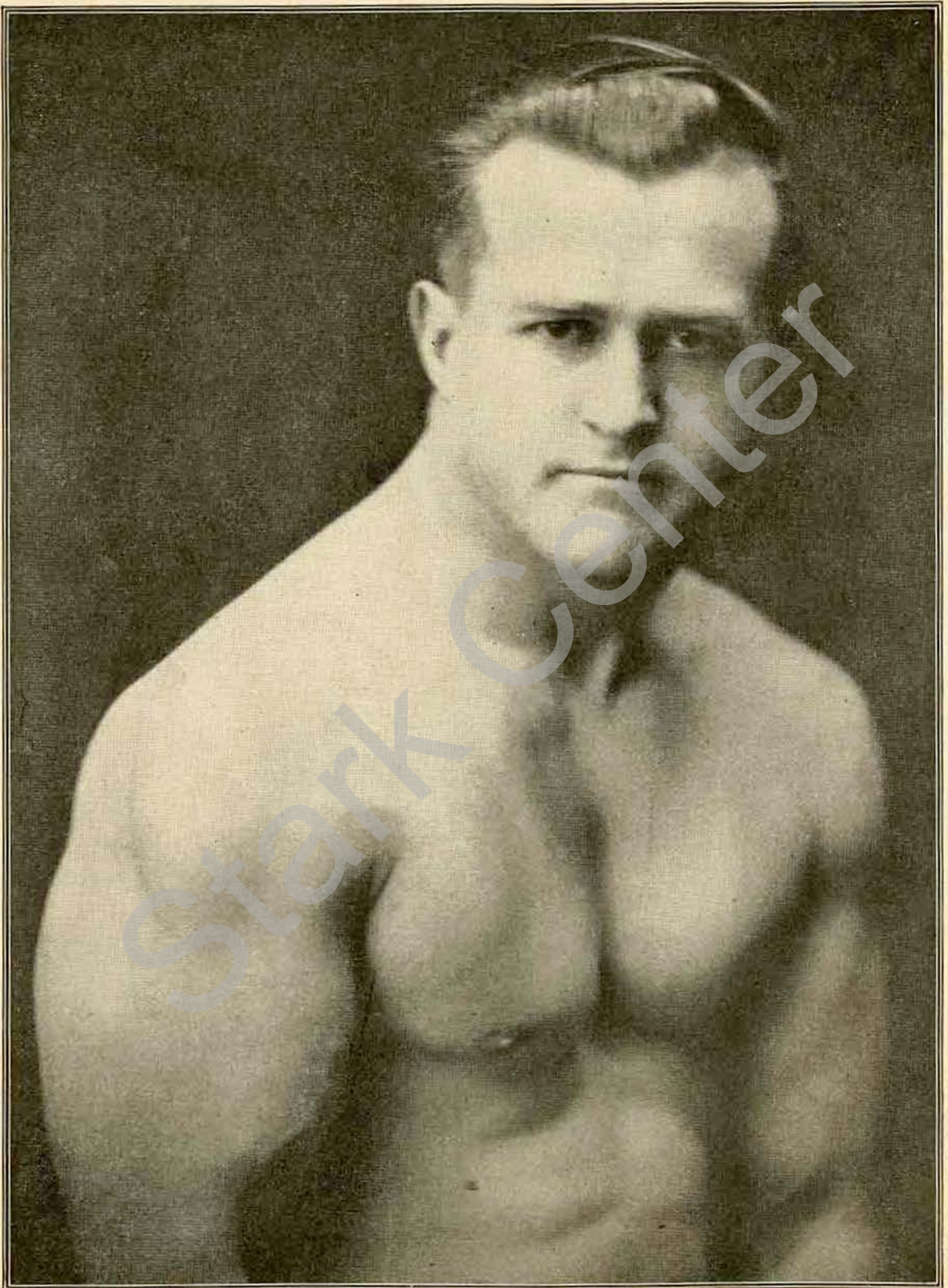
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EARLE E. LIEDERMAN
The Muscle Builder

A SLAP IN THE FACE WITH A CREAM PUFF

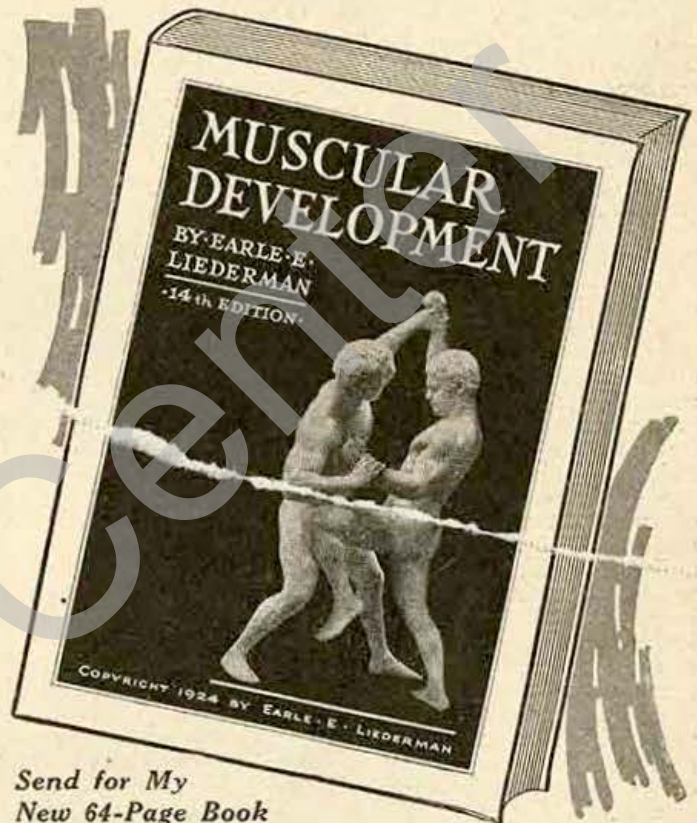
is not a man's way of fighting. Neither can you do a man's job with balls of mush on your arms where muscle ought to be. How long are you going to drag along this way? Don't try to kid yourself by saying: "Oh, I'll start regular exercise next week." I know a lot of fellows who kept doing that until—Zowie—it was too late. They couldn't make a comeback no matter how they tried.

This Is a Big Day for You

Don't put this off another second. If you want to make the best of your life, you'll have to start right now. Come on, let's go—you and I—and you're going to bless the day you read this message. I'm going to make you work—you can bet your old shirt on that. But you'll thank me for it, 'cause—oh boy!—what a different looking chap you're going to be. Just for a starter I'm going to put one full inch on those arms of yours in exactly 30 days—and two inches on your chest in the same length of time. But that's nothing. Then comes the real works. I'm going to build out that neck of yours and put a pair of shoulders on you that will bulge right out of your old coat sleeves. I'm going to fill out your chest with a perfect pair of lungs that will pump real oxygen into your blood, shooting a thrill over your entire body and sending a quiver up your old spinal column. I'm going to put a ripple of muscle up and down your stomach instead of that roll of fat that is now hanging over your belt line. And while I'm doing this, I am also going to build muscle in and around every vital organ. You will have a spring to your step and a flash to your eye. In fact, you will say to yourself, "What a terrible oil-can I was turning out to be; why didn't I start this long ago?"

Let's Go

Why waste time over these things? You want *muscle*. You want *strength*. You want *life*. What you want I can give you—it's yours for the asking. I don't try to kid you on with a lot of idle promises. I *guarantee these things*. You don't take any chance with me. Come on now and get on the job. Be the man you have always wanted to be.



Send for My
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"Muscular Development" IT IS FREE

It contains forty-three full-page photographs of myself and some of the many prize-winning pupils I have trained. Many of these are leaders in their business professions today. I have not only given them a body to be proud of, but made them better doctors, lawyers, merchants, etc. Some of them came to me as pitiful weaklings, imploring me to help them. Look them over now and you will marvel at their present physiques. I want you to have this book with my compliments—**absolutely free**. Fill out and mail the coupon or send me a postal today—before you forget it.

EARLE E. LIEDERMAN

Dept. 706 305 Broadway, New York City

Rules of the Earle E. Liederman \$2000.00 Prize Contest for 1924

CONTEST now going on and closes October 1, 1924. It is open to Earle Liederman pupils only and confined to pupils starting the Earle Liederman course before the date specified above. In order to become a contestant it is not necessary to send for book, "Muscular Development," but as this will be sent **absolutely free**, we suggest that you make request for same, if you have not already done so. The winners of the various prizes will be selected from the pupils showing the greatest improvement in their physique from the date of their enrollment until October 1, 1924. They will be judged from measurements taken by themselves. Keep a duplicate of your measurements as of date of enrollment and send it to Earle E. Liederman again not later than October 1, 1924, together with a photograph and new measurements as of that date. The winners will be decided by the actual improvements made, but not in proportion to the time devoted to their exercise. Thus a pupil enrolling at this time has a decided advantage over pupils entering this contest at some later date.

The Following Prizes Will Be Awarded

1st prize	\$1,000.00
2nd "	500.00
3rd "	300.00
4th "	100.00
To the next ten pupils, \$10.00 each	100.00

Total amount of cash prizes \$2,000.00

In case of tie for any of these positions, each tying contestant will receive the full amount of prize money offered for position where tie has occurred.

Over 1000 Gold and Silver Medals

In addition to the above cash prizes a 14 karat solid gold medal will be awarded to each cash prize winner, on which will be suitably engraved his name. Each man will also receive a diploma for having passed this physical test. These diplomas will be signed by each of the judges as well as by myself.

There will also be one thousand silver medals awarded for marked distinction to those pupils whose physical improvement comes next in order.

It Is F R E E	DONT	EARLE E. LIEDERMAN
	SEND ONE	Dept. 706, 305 Broadway, New York City
	PENNY	Dear Sir: Please send me absolutely free and without any obligation on my part whatever, a copy of your latest book, "Muscular Development."
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	NAME AND	Address.....
	ADDRESS	Street.....
	ON A	City.....State.....
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	WILL DO	(Please write or print plainly)

What Is Good Air—Live Air—Dead Air?

(Continued from page 44)

important factor in the maintenance of normal health. It is even more important than the state of Mind. If we were to subject a powerful man in perfect health to various abuses and strains, such as are met in our every-day life, it would be found that he would be very little affected. Lack of exercise, excessive use of tobacco, alcohol and narcotics would not shorten his life very much. He could commit gross indiscretions in his diet for years before his powerful digestive organs would finally become deranged. It might take even months of high mental and nerve strain to wreck his nerves and in turn wreck his vital machinery. But subject him to air of different temperatures and degrees of humidity, and compel him to breathe "dead air," and it is quite certain that in a few hours he will contract a cold, which by further and continued exposure to adverse air conditions, would result in pneumonia, the mortality of which is very high. It is my opinion that no one is absolutely immune from colds if he be subjected to severe enough exposure. And a cold may lead to tuberculosis or pneumonia, which if neglected, will cause death.

A careful analysis of the condition of health of the people in this country shows that the most common of all disorders is what is commonly termed "colds." Hence the reason that nine people out of ten constantly sniffle, sneeze and cough. It is a well known fact that in winter it is difficult to hear the performance in a theatre, because of the constant sneezing, coughing, hacking and nose-blowing by the audience. This widespread affliction of the respiratory tracts is due directly to adverse air conditions. In order to understand and apply the health inducing measures explained in this article it is necessary to understand certain simple laws in physics and certain facts in regard to the composition of air.

Air consists mainly of two gases—Oxygen about 21% and Nitrogen, 79%. The only other gas that we need consider is Carbon Dioxide, 1½%. Nitrogen is a gas, which as far as we know, has no important effect upon the body and need not be further considered.

Life depends mainly upon the Oxygen contained in the blood. The blood is the "stream of life." Oxygen is the "life element" of the blood. Maintenance of life, therefore, necessitates that the blood receive an abundant supply of Oxygen. The blood receives its supply of Oxygen in the lungs. With each breath, air enters the lungs where a certain amount of the Oxygen of the air is absorbed by the blood. Breathing is to the human body what a draft is to a steam boiler. The Oxygen we breathe burns the fuel (food) that is taken into the body. Shut off the draft to the boiler, and you soon kill the fire. Shut off the

supply of air to the lungs and you kill the internal bodily fire.

Just as gasses and ashes are formed in the fire pit of a steam boiler, so ashes and gasses are formed in the human furnace. The most dangerous of these gasses is Carbon Dioxide. It is the function of the lungs to carry off this poisonous gas. A human being exhales enough of this poison every twenty-four hours to kill a herd of elephants, so deadly is the poison. Death from strangulation is mainly due to poisoning by Carbon Dioxide, and not so much to Oxygen starvation, though of course, Oxygen starvation would also cause rapid death.

From the foregoing facts we can readily see that the human body requires large volumes of air to sustain life. It is evident that if we breathe the air in a room over and over again, it will soon contain very little Oxygen and will be heavily poisoned by Carbon Dioxide. Therefore it is of great importance that the air which we breathe be as nearly normal as it is possible to have it.

Air contains water in varying quantities. Water, in the form of vapor in the air, is termed Humidity. When the air contains the extreme amount of water vapor it will carry, the humidity is said to be 100%. We find this condition when it rains. Air containing no water is reckoned at zero, a condition that can be attained only to an approximate degree in a laboratory. Air in the driest desert at mid-day has a humidity of at least 25%, usually 28%. Therefore air always contains a considerable amount of water.

The condition as regards the degree of heat or cold is termed temperature, and is measured with a thermometer. The temperature of the air we live in and the air we breathe has a powerful influence upon the body and plays an important part in the composition of air. This country employs the well known Fahrenheit system of measuring temperature. I shall therefore use this system as a standard of measurement in mentioning degrees of heat and cold.

When a fluid evaporates it expands into a form of vapor and this expansion causes a drop in temperature.

We feel heat or cold through a great net-work of nerves which are in the skin. From and through these nerves, sensations are transmitted to the brain, and it is here we become conscious of what we term heat or cold. Our nerves, however, under certain conditions, deceive us as to the real temperature of the air or matter that touches the skin. For instance, a person may suffer severely from a chill, though having a fever and being wrapped in warm blankets. This proves that we cannot depend upon a thermometer alone to guide us in determining conditions that will keep the body comfortably warm or cool.

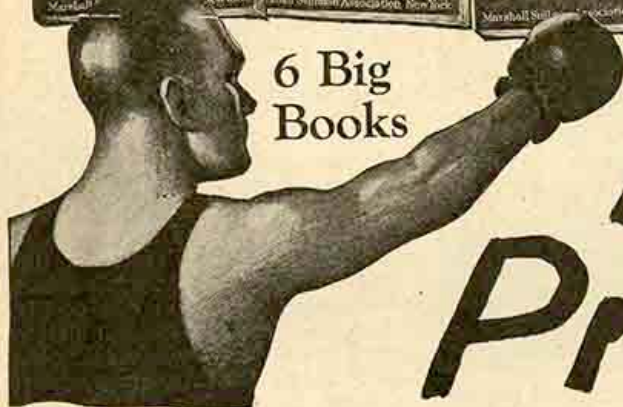
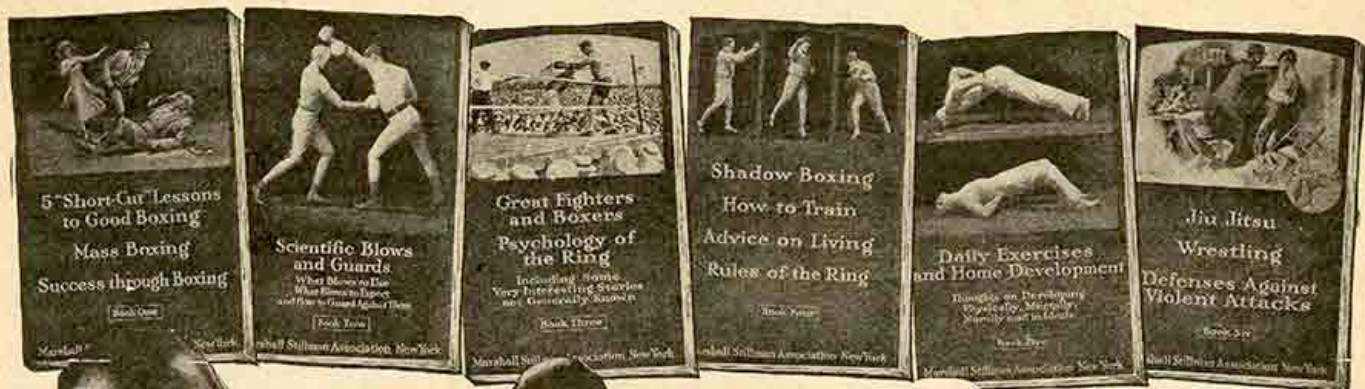
Three main factors are involved in

creating a sensation of bodily warmth or chill. The first is the actual temperature of the air or substance which comes in contact with the skin; the second, the humidity of the air, and the third, the presence of perspiration on the skin. The object of perspiration or moisture on the skin is to keep the body cool through evaporation. As stated, when a fluid evaporates, it expands and becomes cold. The more rapid the evaporation, the greater the chill. The less moisture there is in the air, the more rapidly it will take up moisture or cause evaporation. This last fact is exemplified by the well known phenomenon, that when wet clothing is exposed to the air to be dried, it will dry far more rapidly on a day when the humidity is very low, than when the air is moist, as is the case just before a rain. The chill caused by evaporation is demonstrated by moistening the finger and blowing against it. It will be noted that the side exposed to the breath will feel quite cold. By dipping the finger in alcohol or any other liquid that evaporates very rapidly and then blowing against the finger, an extreme chill will be observed.

With these facts in mind, it is simple to understand why one can endure a temperature of 120 degrees in dry climates, whereas people die by the score in our Eastern cities when the temperature is only 95 degrees, but the humidity perhaps 85 to 90%. In the one case the very rapid evaporation of perspiration keeps the skin comfortably cool, whereas in the second case, where the humidity is high and the perspiration cannot evaporate and cool the body, a temperature of 90 degrees is almost intolerable.

As stated previously, the human body requires large volumes of Oxygen and throws off Carbon Dioxide. The same is true of every animal. Just as a burning candle placed in an air-tight chamber will gradually consume the Oxygen contained therein and finally go out, so a human being or animal placed in an air-tight chamber will consume Oxygen until finally the amount of Oxygen in the air will become too low to sustain life. In the case of the human being or animal, however, death would result from Carbon Dioxide poisoning before the Oxygen supply becomes so low that it would not sustain life. As previously stated, normal air contains 21% of Oxygen. A candle will go out when the Oxygen drops to 18%. It has been generally believed that a human being cannot exist in air that will not "support" a candle flame. This is a fallacy.

[Editor's Note.—A second article on very vital facts about the air we live in, by the same author, will appear in an early number of STRENGTH, having reference, among other things, to how and why we "catch cold," and how to avoid doing so. Wait and watch for this second article.]



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You don't have to know a single thing about Boxing. We start you with the simplest movements. You practise these movements before a mirror and the instruction is so clear and simple that you can't help getting every point down pat. Before you realize it, you are striking punishing blows *with the weight of your whole body behind them*, feinting cleverly, ducking, blocking, side-stepping, etc., just as though you had a real opponent before you. You are taught how to strike straight blows,

swinging blows, cork-screw blows, straight jabs, and the pet blows used by champions.

Then, to give you **SPEED** and prepare you for your first bout, we put you through three rounds of **SHADOW BOXING**, the exercise used by all professionals when training for a fight.

BUT THAT'S NOT ALL—We teach you how to stop a thug who comes at you with a gun, club or knife, how to break his stranglehold on your throat, how to throw him if he

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You can't measure the value of this great course by its price. Some students write us that it is worth \$25. Norman Tompsett says, "I wouldn't sell mine for ten times what I paid for it if I couldn't get another."

SPECIAL OFFER: Without any obligation on your part, we will send the complete course for 10-day trial. Then you can **SEE FOR YOURSELF** what a wonderful opportunity we offer you. Simply fill in and mail the coupon. When you have the course in your hands, give the postman \$1.67 merely as a deposit. Then study the course for 10 days. We are sure you'll go on with it, and there will be nothing more to pay. But if for any reason you are not entirely convinced, return the course and get your deposit back at once.

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Send me on approval the Stillman Course. When I have the course in my hands, I will deposit \$1.67 (plus the actual postage) with the postman, with the understanding that if, after 10 days, I wish to return the course I may do so and my deposit will be instantly refunded. If I keep the course, there is to be nothing further to pay.

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The Mat

(Continued from page 68)

among bar-bell lifters where a man actually increased the size of his bones, even in cases where the man was thirty years old when he started training, and the bones actually got thicker and heavier, and the wrists, elbows, ankles, and knees got bigger. Teachers of "fancy dancing" claim that there are many young girls whose ankles do get thicker if they practice for several months at toe-dancing. In that style of dancing the muscles of the feet and the calves of the legs become very highly developed. The increase in the size of the ankle may be due to a slight increase in bone size, and possibly to a thickening of the tendons. If a girl should take up toe dancing and the girth of her calves increase from 12 to 14 inches, it is natural that the ankles should increase a quarter to half an inch in girth.

How Amateurs Compare with Professionals

Brooklyn, N. Y.

Editor of "The Mat."

Dear Sir:

I believe that the average young weight-lifting enthusiast, while trying to get an A No. 1 physique, is much more interested in comparing his records with the records of the men acknowledged to be the best in the game. The average lifter feels, however, that his records are small indeed on making comparisons with such men as Zottman, Sandow, Saxon, Milo, etc.

The average amateur, after he has strengthened most of his muscles with light weight work, feels that the only way to get more development is to increase the weights. He increases them, therefore, and for a while increases in strength and development. But on comparing his accomplishments with the records of such men as I have mentioned, he is apt to become disgusted, and ask himself, "What's the use of trying to get any stronger? I'm much healthier and stronger than the average now, but I can never get as big, or as strong, or as beautifully muscled as Sandow or Saxon. It's too much like work."

I feel that the standard of all the amateurs would be raised if STRENGTH would publish more about its amateur champions. "We amateurs" feel that if we work faithfully, we will be able to equal and probably surpass the amateur records, which are, in themselves, very appreciable lifts, but nevertheless seem dwarfed compared to the great professional records. For example, I can "side press" 180 pounds, but I cannot "get under" the weight as in a "bent press," so for that reason I feel that when I get the knack I will be able to do more. Now, if the amateur record is around 250 pounds (this is probably more than the amateur record, isn't it?), I feel that I will be able to beat it in time if I keep working faithfully. I have had the Milo bell only a short time, and can almost "press" it when fully loaded to 225 pounds. Now, when I compare this with Cyr or Milo, I almost laugh at myself. But I'll bet the amateur record isn't of such proportion that I won't "feel" that I can possibly equal it. I

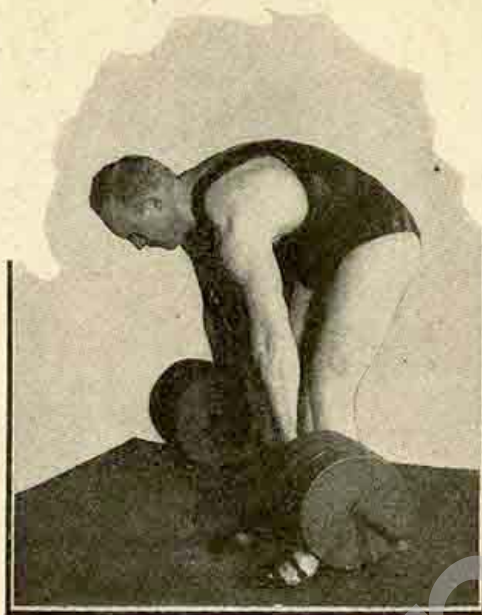


Fig. 5. The manner in which most people attempt to lift a weight from the ground, arching the back. Note the author's comments, pointing out that such a lift is best made by keeping the back straight or flat and bending the legs, the legs thus sustaining the great effort.

realize that I am not as good a lifter as a great many of your pupils, but I think I have it in me to be a top-notch amateur lifter. I am sorry that I have had to use myself as an illustration, but have tried to make my point in the best way at my command. Let's have the best records in

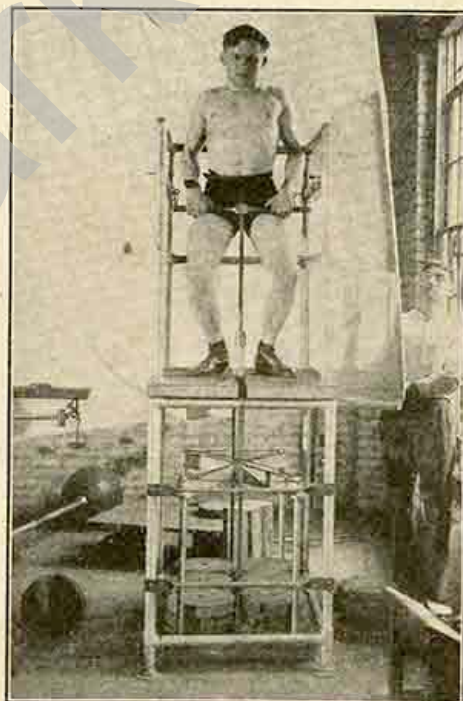


Fig. 6. A hand and thigh lift in which the weight is raised by straightening the legs. It is easier and safer to lift 1,000 pounds in this style than to lift 400 pounds as in Fig. 5.

every lift of our amateur champion or champions. Also, let's have more articles about other top-notch amateurs. I know that this will be appreciated by all of your lifter readers. I thank you.

Respectfully yours,

W. WEBER.

The answer to Mr. Weber would be something like the answer to Mr. H. B. Why should an amateur give up lifting in disgust because he thinks it is hopeless to equal the records of a Saxon or a Steinborn?

It is impossible for me to give Mr. Weber a list of amateur records such as he requests, because such records have not been kept. The British Amateur Weight-Lifting Association keeps the records of the English lifters, and then makes a mistake and calls some of them world's records. There has been an association started in this country, modeled after the English pattern, but I do not know whether they have compiled a list of American amateur records, or whether they recognize only the records made by members of their association.

Every professional "strong man" was at one time an amateur lifter, and the numbers of professionals is constantly recruited from the amateur ranks. I never heard of a man starting out with a fixed intention of becoming a professional lifter. What usually happens is that while still an amateur, he becomes so very strong that either his friends or some theatrical manager or promoter induces him to turn professional.

Some of the strongest men of my acquaintance are amateurs, but they could not be induced to become professionals for any consideration, monetary or otherwise. Some of them are so modest and retiring that I cannot persuade them to give a public exhibition of their strength.

It is true that Arthur Saxon made a one-arm "bent press" with 336 pounds, and that several other men have done 300 pounds or a little more; for example, Cabana, Inch, Aston, Joe Nordquest, and one or two others. When Louis Cyr created the world's record of 273 pounds in a one-arm "push-up," his friend, Horace Barre, could raise 278 pounds by what we call a one-arm "side press." Barre could do that as an amateur, and so far as I know, he never increased his record after he turned professional. Joe Nordquest as an amateur made a one-arm "bent press" of 277½ pounds, and after he turned professional he pressed more than 300 pounds on several occasions in practice, but he never made an official lift as a professional which beat his best performance as an amateur, although if sufficient inducement had been offered he would have undoubtedly made a record of over 300 pounds. Antone Matysek created an amateur record of 241 (Continued on Page 76)

56 Prizes For Pecan Recipes



\$25.00 for the best recipe for use of pecans in staple foods, salads, desserts, cakes, candies, etc., submitted before Sept. 1, 1924.

\$10.00 each for five next best.

\$5.00 each for fifty next best recipes.

\$1.00 package of perfected Keystone System Pecans, FREE for every additional recipe accepted.

The only condition is that these recipes shall be different from—or an improvement on—those found in our booklet, entitled

"FIFTY PROVED PECAN RECIPES"

This announcement will not appear again. Enter this contest today. Write for FREE copy of that booklet—coupon below for your convenience.

Pecans—the Miracle of Buoyant Energy—

the finest of all natural food products—have well earned their place as the crowning feature of the finest repasts.

Placed by nature in an airtight paper shell container—which is easily cracked by a slight pressure of the hand—the kernels come forth whole, delighting to the eye, alluring to the taste, satisfying to the appetite. Eaten raw, they supply the food elements needed by the human system in richest, purest, sweetest form.

But from many users of the finest paper shell pecans, we hear of so many varied uses, so many appetizing forms, so many unusual recipes of which pecans are the

foundation that we have determined to compile a more complete, more well-rounded set of PROVED PECAN RECIPES than can be found in any cook book or group of cook books.

A committee of capable judges, headed by Mr. Carl Easton Williams, formerly Editor of *Physical Culture*, now Editor of *Strength Magazine*, will pass final judgment on all recipes submitted.

Enter this contest. Tell us how you use pecans raw—in cooking—in baking—in candy making—in ice creams—in desserts, etc.

It is not a condition of this contest that you buy the Perfected Keystone System Pecans—but you will find that price for price our plan of selling direct from the plantation assures you greater value for your money, more big, rich kernels per dollar, fresher and fuller flavored.

To assure to every contestant a supply of pecans to use in connection with this contest, we have held a limited reserve supply of all varieties listed below—PROTECT YOURSELF by ordering at once.

If you want the very finest pecans for eating raw—the largest-kernelled, thin-shelled nuts, order PATRICIAN PECANS, superior to any pecans sold through stores anywhere.

If you want the same high quality as Patrician Pecans, but in the next smaller size, order Hess Brand Pecans which cannot be equalled at the price in stores.

If you want the most economical pecans for cooking, etc., on which kernels can be removed whole, although the shells are slightly thicker than on above two varieties, buy a carton of Keystone Assorted Paper Shell Pecans at \$1.00 per lb.

SPECIAL OFFER with each five or ten pound carton, ordered direct from this advertisement, we give absolutely free, a Nut Cracker—selling regularly for \$1.00.

Get that Nut Cracker FREE—
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Please send me your booklet, "FIFTY PROVED PECAN RECIPES," immediately.

Enclosed please find check for \$ for which ship me, satisfaction guaranteed, the following paper shell pecans.

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Patrician Pecans	\$1.50	\$7.50	\$15.00
Hess Brand Pecans	1.25	6.25	12.50
Keystone Assorted Pecans	1.00	5.00	10.00

(Place circle around variety desired, quantity and price)

Your Name

Street Address, or P. O. Box

City State

(Continued from page 74)

and a fraction pounds at the Y.M.C.A. in Baltimore. I know that he has done 250 pounds, and that he could lift that much before he turned professional, and has done no more since he turned professional.

According to some reports, John Y. Smith held for a time the American amateur record for a one-arm "bent press" of 275 pounds. I am not sure that Smith ever appeared as a professional bar-bell lifter, although I do understand that he appeared on the vaudeville stage for a while in a hand-balancing act. But John Y. Smith as a professional was no stronger than he had been as an amateur. The mere fact that some theatrical manager paid him a salary for appearing on the stage did not give him any bigger muscles or increase his strength, because he was already just about as strong as any man in the world of his height and weight. He was not as big a man as Sandow, but anything that Sandow could do as a professional, Smith as an amateur could match.

It sometimes happens that a professional will specialize on one or two lifts, and because he has lots of spare time for practice he will become very, very good at those lifts and improve his amateur records by 10 or 20 per cent. Arthur Saxon's record in the one-arm "bent press" has never been equalled, but in some of the other lifts his records have been beaten by amateurs, especially in the two-arm lifts overhead. Saxon's best record in a two-arm "jerk" is 345 pounds, and several years ago, in a competition in Vienna, there were four Austrian amateurs who raised more than 360 pounds in a two-arm "jerk."

I wish it were possible to have a complete list of amateur world records. Owing to the different styles of lifting prevalent in different countries, it is hard to compile the records. In the one-arm "bent press" all the records would go to American and English lifters, because amateurs on the continent of Europe rarely practice that method of lifting. In the quick lifts, such as the "snatch" and the "jerk," most of the amateur records would go to France, Germany, and Austria, because the amateurs in those countries practice those lifts continually, while the English and American lifters spend most of their time at the "bent press." It is no more possible to compare the lifting records of an American amateur and the French amateur than it would be to compare the respective abilities of an American baseball player and an English cricket player. In both the latter games a ball is used, but the games are entirely different. In both America and France bar-bells are used, but the methods of using them are different.

I heartily welcome any movement to enlist the American amateur records, and if the new amateur lifting association has such records this magazine will be glad to publish them.

Now, in regard to Mr. Weber. I know that he is very strong. The

picture on page 67 of Mr. Weber lifting two men shows a stunt that he did over a year ago. It is not that he is raising or holding such a great weight which proves his strength so much as the way he is doing it. If Weber can make a "side press" of 180 pounds, he has sufficient strength to make a "bent press" with 250 pounds, and 250 pounds is pretty good for a start.

More About Rupture

I continue to receive letters from men who have suffered from an abdominal rupture, and some of them ask me whether their rupture can be cured by exercise. I wrote on this subject in "The Mat" some time ago, and there seemed to be such a wide interest in the subject that I induced Dr. Randolph Faries to write an article about it. Apparently, many of the present readers of STRENGTH never saw either the editorial or the article.

A rupture is not a disease, but a break, and you can no more cure a rupture by exercise than you can cure a broken bone by exercise. In speaking of a broken bone it is customary to use the word "fracture," but when you speak of a broken blood vessel you say a "ruptured blood vessel," and if muscular tissues are parted, the word "rupture" would be used.

When a man tells you he is ruptured he usually means that he has a rupture in the lower part of the abdominal wall. Occasionally men are ruptured at the navel, but in most cases the rupture, or the parting of the abdominal wall, takes place at two points in the groin, one on either side. At those points the fibers of the muscles are so arranged as to leave two small openings, and through these openings pass the cords to which the testicles are attached.

When the abdomen is compressed from above, the intestines push outward against the abdominal wall, and if the pressure is very intense and very sudden it sometimes happens that the openings referred to are dilated, and that a small piece of the intestines will push through the abdominal wall. If a large section of the intestines is pushed through the opening, the muscles may close again with such force that they prevent the passage of matter through that part of the intestines. That is called a "strangulated hernia," and unless it is immediately reduced by an operation, death or blood-poisoning will occur. In most cases the hernia is a small one, and some men who have hernia, that is, who have been ruptured, wear trusses for the rest of their lives.

The proper thing to do for hernia is to have an operation. A great many men who have a hernia were ruptured when they were small boys, as a result of a fall. A number of stout men become ruptured in middle-age, and the causes of rupture are manifold. In a man with weak abdominal muscles, a rupture may occur from falling on the ice, from stepping off the bottom step in a flight of stairs when you think you have already reached the floor, and from attempting to lift or carry

some object so heavy that it would take a well-trained man properly to manage it. I have known cases where a stout man ruptured himself by sneezing or coughing violently. You should remember that when a man becomes very stout in the abdomen; that is, when he develops what is called a "bay window" all the surplus fat is not on the outside of the abdomen. A very fat man has a layer of fat between the muscles and the skin, and furthermore, fat accumulates in the abdominal cavity. In such condition, the muscles which form the front wall of the abdomen are stretched far beyond their normal space, and this constant stretching weakens them. They become so infiltrated with fat, that they lose the power of contraction.

As a man grows stouter, and accumulates more weight inside the abdomen, the abdominal muscles become weaker and weaker, and then a misstep or a fall can easily cause a rupture. A man who suffers from dropsy is very liable to rupture, because when in a dropsical condition, there is a great accumulation of fluid in the abdominal cavity, and this fluid weighs a great deal.

Many people have asked me whether it is possible for a man suffering from abdominal hernia to practice with bar-bells. I could give you off-hand a list of names of three dozen such men, every one of whom had been ruptured before they ever saw a bar-bell, and who, notwithstanding the handicap imposed by the rupture, have succeeded in getting a fine all-around development.

I have heard stories about men who were ruptured while lifting, but I have yet to meet the man who was ruptured while in the act of using a bar-bell. When practicing developing exercises with graded weights, a rupture is not as likely to happen as though you were doing stunts on gymnasium apparatus.

Correct Position in Lifting

The reason a bar-bell lifter never ruptures himself is because in the first place he knows in which bodily positions rupture would be apt to occur, and in the second place, he has a very definite idea of the limitations of his own strength. I admit that it is quite probable that an untrained man lifting a heavy dumb-bell for the first time in his life might easily rupture himself; partly on account of lack of strength, but more on account of lack of knowledge and experience. If a group of young fellows see a trained lifter doing a one-arm "push-up" with a 100 pound dumb-bell, every one of those fellows will insist on trying to do the same thing; even if no one of them is strong enough to push up 50 pounds. On the other hand, the same trained lifter might have the ability to push up 150 pounds quite easily, and 160 pounds might be his limit. You would not be able to get that man to even *try* a "push-up" with 175 pounds.

Any position which causes a compression of the abdomen, is liable to cause rupture, unless the abdominal

muscles are strong enough to stand the pressure from within. The ordinary way of lifting a heavy weight from the ground is to lean over, arching the spine, and keeping the legs almost straight as in Figure 5. When you arch the spine, the abdomen is bound to be compressed. Therefore, lifting a very heavy weight in that manner is dangerous for an untrained man, although a trained man might be able to lift the weight without the least danger of strain.

On the contrary, if the lifting is done with a flat back, and the force which raises the bell comes from straightening the legs as in Figure 6, the liability of rupture becomes almost nil. All bar-bell users know that. Also, they know that it is possible to lift twice as much weight in the second and safe style, than in the first and risky style.

When a ruptured man starts to use bar-bells as a means of increasing his size and strength, he naturally has to avoid exercises and lifts which cause the compression of the abdomen. He may even have to work well within his limit in the biceps exercise known as the two-arm "curl," because in the act of curling a very nice heavy bar-bell there is a distinct downward thrust on the diaphragm, and a resultant pressure against the abdominal wall. The ruptured man can get a fine biceps development, but it is necessary for him to use a moderate weight, and make a number of repetitions. The ruptured man has to avoid advanced abdominal exercises, and he must learn to do his lifts with a flat back. He never can become a star at the one-arm "bent press," but he can make fine records at all the other over-head lifts.

I have a friend who was ruptured at the age of eighteen. At the age of twenty-eight he started to train with bar-bells. He was of moderate size, and had no more strength than the average desk worker. Inside of a year, he had increased his chest 6 inches, his bodily weight 30 pounds, and had acquired a fine muscular development, and was able to make very creditable lifts. He had a double hernia; that is, a rupture at each side of the groin. He was able to lift hundreds of pounds from the ground without the least strain in the abdomen, and to play such games as tennis; but if he felt that he was going to sneeze, he had quickly to place his hands under the groin to keep the intestines from protruding themselves. If he had been operated on before he started training, he could have, after a short rest, practiced mild exercises for the abdominal muscles, and by gradually increasing the vigor of those exercises, he could have made his abdominal muscles so thick and strong that a recurrence of the rupture would have been almost impossible.

I have recently seen in print statements that men have cured ruptures by practicing with bar-bells. How it was done, I cannot say, although I have a theory which would account for one of the reported cases.



T. D. Wick of Ohio was making \$4.60 a day in an office. By taking orders for Comer Coats he made \$13.60 profit in two hours.



J. C. McCardell lives in a medium-sized town in Pennsylvania. In two days' time he made a clean profit of \$58.20 just by taking orders for Comer Coats.



R. A. Prentiss was working in a factory at small pay. He has made as high as \$945 in a single month selling Comer Coats.

Will You Give Me a Chance to Pay You \$100 a Week?

I want to make an offer whereby you can earn from \$100 to \$1,000 a month, cash. You can be your own boss. You can work just as many hours a day as you please. You can start when you want to and quit when you want to. You don't need experience and you get your money in cash every day when you earn it.

These Are Facts

Does that sound too good to be true? If it does, then let me tell you what R. A. Prentiss of Massachusetts has accomplished. Prentiss was working in a factory. His hours were long, his pay was small. He accepted my offer. I gave him the same chance I am now offering you. At this new work he has made as much as \$945 in a single month. If that isn't enough, then let me tell you about J. C. McCardell of Pennsylvania. He didn't know anything about selling. In his first month's spare time he made \$308 profit. Since then he has made as high as \$58.20 profit in two days.

T. D. Wick is another man I want to tell you about. He was working in an office at a pay of \$4.60 a day. But with this wonderful new work he has made as much as \$13.60 net profit from two hours' work.

Yes, and right this very minute you are being offered the same proposition that has made these men so successful. Do you want it? Do you want to earn \$40.00 a day?

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Have you ever heard of Comer Coats? They are advertised in the leading magazines. Think of a single coat that can be worn all year round. A good-looking, stylish coat that's good for summer or winter—that keeps out wind, rain or snow, a coat that everybody should have, made of fine materials for men, women and children, and sells for less than the price of an ordinary coat.

Now, Comer Coats are not sold in stores. All our orders come through our own representatives. Within the next few months we will pay representatives more than three hundred thousand dollars for sending us orders. And now I am offering you the chance to become our representative in your territory and get your share of that three hundred thousand dollars. All you do is to take orders. We do the rest. We deliver. We collect and you get your money that same day you take the order. You can see how simple it is. We

furnish you with a complete outfit and tell you how to get the business in your territory. We help you to get started. If you only send us four average orders a day, which you can get in an hour or so in the evening, you will make \$100 a week.

Maybe You Are Worth \$1,000 a Month

Well, here's your chance to find out, for this is the same proposition that enabled Fred Roberts of Ohio to make \$56.00 profit in a single day's work—the same proposition that gave William Bernsheim \$15.00 net profit from a single morning's work. It is the same proposition that enabled James A. Wilson to make \$654 in his spare time.

I need 500 men and women, and I need them right away. If you mail the coupon at the bottom of this ad I will show you the easiest, quickest, simplest plan for making money that you ever heard of. If you are interested in increasing your income from \$100 to \$1,000 a month and can devote all your time or only an hour or so a day to my proposition, write your name down below, cut out the coupon and mail it to me at once. You take no risk, and this may be the one outstanding opportunity of your life to earn more money than you ever thought possible.

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Find Out Now!

Remember, it doesn't cost you a penny. You don't agree to anything, and you will have a chance without waiting—without delay and without investment—to go right out and make big money. Do it. Don't wait. Mail the coupon now.

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MAIL THIS SPECIAL COUPON NOW

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Please send me, without expense or obligation, your special proposition, and tell me how I can get a Buick Touring Car free.

Name.....
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(Write Plainly)



Ida Lang Gained 27 Beautiful Pounds

(Continued from page 37)

will bring quick returns. It is best to start it close to a wall to get your balance. It is not as difficult as a handstand and can be easily learned. This exercise will also flush the face and help to bring a good complexion.

First try the "dip" leaning against a wall and gradually make the push-off a little harder by standing further away. Use the fingers as well as the arms and try to increase your distance a little each day.

The dip on the floor is fairly hard and is a splendid exercise for strengthening arms and shoulders. Do not let the body touch the floor.

The advanced dip is still harder, and is done with the feet on a chair; yet with practice even this can be done easily. Each week try to add several more dips to your record.

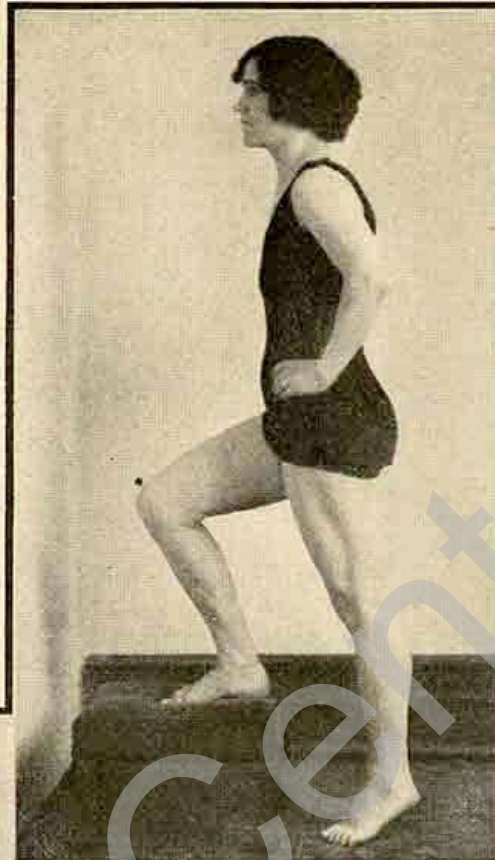
A good start for a leg exercise is shown in the stepping up exercise, and if you have trouble in keeping your balance, place your hands against a wall. Work slowly and be careful at first, no matter how many times you try it.

The advanced leg exercise can be

made very hard if you will let the toes do most of the work. Try to lower yourself as much as possible, then lift as high as you can.

Place a book or a box, just under the toes and then lift up as high as you can. A good calf, ankle and general foot strengthener. It can be made still harder, by pulling up with the hands on some object, as you lift with your toes.

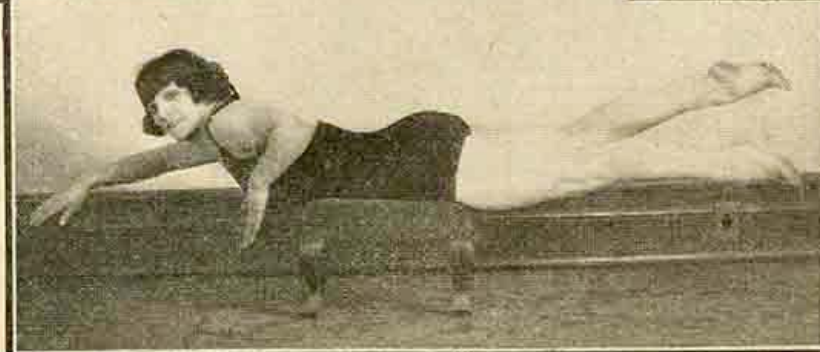
The last is a splendid all-around exercise and a wonderful strengthener for back, stomach and legs. As a reducer it will show quick results, while at the same time you are learning a famous swimming stroke, the crawl. It is much harder this way, than in the water as the body here has little support. As you thrash the legs up and down, move your arms in a circular movement, and roll the body.



In the two photographs above and at the left are presented two leg exercises, one of a simple character and the other decidedly an advanced exercise. It is understood that you can use a much higher chair than the footstool in the illustration. The higher the chair or bench the more effective the exercise. Place your hands against the wall if necessary to maintain easy balance. In the second exercise at the left, you will note that the other foot is held entirely free from the floor while the body is lowered to the complete squatting position, resting on the heel. Exercise for the legs must necessarily give muscles more vigorous effort than that ordinarily secured in walking or climbing stairs.



Dry land swimming with the crawl stroke is a particularly good exercise for the back, stomach and legs, but when performed on a footstool, as illustrated, it is particularly valuable for strengthening the region of the stomach.



For strengthening the calves and ankles one should place the toes upon a small box or a book, then raise the heels as high as possible.

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By the Greatest Swimming Coach in America
For Less Than 10c a Lesson

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"Life Feels Like a Fight"

(Continued from page 63)

Thomas turned on him with a look of pain.

"Say, you don't want to keep worries off Miss Mary as much as I do," he said. "You don't need to warn me about that!"

Mary flung herself from her horse, dropped the bridle reins, and ran in, fumbling in the jacket she wore. Gantry saw that it was his own—remembered that he had flung it over her shoulder on the afternoon of the funeral as they were going up to her rock. She came in flushed, vigorous, and smiling. There was always a look of sadness on her face now, but her smile was still kindled easily, and her courage was indomitable.

"Two letters and a telegram for you, Craig," she said. "Hello, Noel. You two look as solemn as owls! Don't go, Noel; we'll have dinner in jig-time. Stay along."

"Don't know as I ought," Thomas said.

"Sure you ought. I'll invite Mr. Gantry, too, if he'll be nice, and Mrs. Bannister will give the meal an air of respectability."

She bustled away. Craig, tossing the letters aside, saw that one was in a woman's hand. With his mind half on that unusual fact he ripped open the telegram.

He skimmed it—returned and read it carefully. Then he threw it across to Thomas.

"We're that close to making a success for Mary," he said. "Read it."

The telegram ran:

Craig Gantry,
Castlemont, California.

On suggestion, Parker Forbes would like to take up with you matter of manufacturing box-shook. Could give you a contract for quarter-million feet spring deliveries immediately with million more in sight. If interested, wire and meet me San Francisco Monday.

A. M. MICHAELSON,
Pacific Pine-Shook Distributors.

Thomas straightened as he read; his eyes began to gleam.

"Box shook would certainly clean up your small stuff and double your profits," he exclaimed. "The Pacific is the shook organization of the fruit people of the state, and they use an awful lot of box pine."

"I thought Thurston had a big contract for fruit-box shook."

"He has. But I've heard there's a war on against him and the other millmen who have been hogging the shook business. I wouldn't be surprised if the fruit growers' associations are trying to break away. It's a big lead." Then his face fell.

"But we're blowing soap bubbles," he said, dejectedly.

"Because we have to truck our logs and lumber?"

"Yes. No use fooling yourself, Mr. Gantry. If you could shoot those logs down instead of trucking—"

Gantry uttered an exclamation.

"Shoot them down!" he cried. "Of course." He jumped to his feet. Probably in his life he had never been so suddenly transformed before. "Mary!" he cried, "let dinner go. Come here!"

Mary, flushed from the heat of the kitchen, her apron dashed with flour, her hands sticky with dough, came in.

"What is it—fire?" she asked, laughing at him.

For answer, Craig Gantry seized her in both arms, waltzed her twice around the room, her skirts flying, and then swung her up to the table.

"Remember where we threw my besetting sins over, like the hogs of the Gaderene country? From your rock into Samson's Gulch? And the dead hog pitched down with the slide? Yes! It was an omen! That's where our logs are going down to Pack's! Noel, drag a donkey up there tomorrow and high-line everything to the head of that chute. Send the trucks back to Walkers. Mary, where's a time-table? I'm going to San Francisco tonight—to make your fortune! Has anybody seen my necktie? I'll be back Tuesday. Great snakes, why didn't we think of it before? And somebody send word to Pack and Defoe Brant to double the size of their log-pond, because they're coming, Father Abraham, a hundred thousand strong!"

IV

Old Sairey Gamp, the setter bitch, and Romp, her half-breed son, slept on the porch under Mary Clyde's windows. On rare occasions Romp would raise a wild alarm on scenting a coyote or a bob-cat, or on hearing some distant, vague tumult from the bear-hounds on Killingsworth's place. They were usually false alarms. Mary had long since ceased to be awakened by them.

On that Sunday night, with Gantry on his way to San Francisco, and his cabin vacant, with Noel Thomas gone, unwilling to meet her eyes and stammering his good-bye, and with Mrs. Bannister excused for the afternoon and night to go down to Granger to visit her half-grown brood, Romp's sharp, sudden outcry, and the growling of Sairey penetrated to the girl's consciousness slowly; in fact, it was only a pitiful, shrill cry of pain from the older dog that fully awakened her. She heard Romp growling and barking in a rage—the bitch crying piteously and trying to add her protests in admonitory growls.

"What is it, Romp?" Mary called, raising herself in her bed. "What's the matter, Sairey?"

A man's voice uttered a furious imprecation and Romp yelped loudly. The front door was opened and violently closed.

"Who's there?" Mary demanded, her heart thumping.

"It's all right, honey," the man said, soothingly. "Damn that cur of yours—he got me in the leg." A hiccoughing laugh interrupted. "Be fierce if I'd break out with hydrophobia just when everything's getting comfortable, wouldn't it?"

He struck a match, that flickered and flamed up. He found and lighted a lamp.

"There we are, little girl!" he said, turning. And Mary saw Defoe Brant, the mill foreman.

For a moment she sat huddled in the bed clothes, frozen with terror. Steady as her nerves were and resourceful as she had learned to be in fifteen years in this mountain country, Mary still had to fight a woman's instinctive helplessness of fear of a skulking and predatory brute. Brant laughed again, unwound the muffler he wore, threw his hat aside, and sat down to examine his wounded calf. It was bleeding freely—Romp had not only bitten but torn the flesh. Brant's hand came away covered with blood. A flash of fright swept over his face; true to type, he was superstitiously terrified of the fangs of animals.

It was that evidence of weakness in him that restored Mary's wit and courage.

"You'll find bi-chloride tablets over the sink in the kitchen," she said, in a voice she tried to hold steady. "I'd advise you to wash that wound out well and then start marching."

"You ain't going to do it for me?" Brant asked, wheedlingly.

"Go out and get started," Mary returned. "I'll help you when I'm dressed."

Brant rose.

"You're a sensible little kid, ain't you?" he said. "I always knew you was worth any ten of these hill-girls. I'll take a kiss, and then I'll go—"

"You go now!"

Brant hesitated.

"All right," he said, ruefully; "but I ain't used to being yelled at."

Mary waited, looking him in the eye. He muttered a half-drunken oath, or threat and went out. The girl had won the first victory.

She was stumbling into her clothes in a moment, fighting with weakness and tears, when Brant returned.

"Can't find a lamp," he complained. Then he stopped, his eyes widening and narrowing. He leaned against the door frame. Mary, half-clothed, flaming with shame, loathing him with all her heart, snatched at a big bath-robe. The cord caught and the robe fell. Brant, with a hoarse cry, stepped forward.

Mary's hand fell on a heavy water pitcher on the stand at her side. She raised it, the water spilling out on her leg. Brant ducked but came on.

The man threw up an arm as the vessel descended and knocked it from her. One heavy hand gripped her bare shoulder. She screamed, clawed like a tigress.

Then Romp's throaty warning rose again outside—someone ran swiftly up the path and crossed the porch.

Noel Thomas stood in the door of the room.

"I guessed right," he said, in a voice that was choked and taut.

Brant swung about, dragging Mary against him as a shield. He reached for the lamp, swore violently, and hurled it straight at Noel Thomas's face. The younger man staggered. The light went out.

There was a crash of window glass—a heavy thud—the renewed barking of the dogs—the footsteps of a heavy man in full flight—then silence.

V

Craig Gantry, his mind tumbled with racing thoughts and plans that sped ahead of him and grew in scope momentarily, turned his pillow impatiently in his berth and felt papers there. For the first time he remembered the letters Mary had brought with the telegram from Michaelson; he had taken them from his pocket intending to read them, and the schemes that were unfolding had driven them from his head.

He touched his light button and pulled the letters out. One was from Parker Forbes, highly commending him to the enterprise Michaelson had on foot.

The other was from Kathleen Maynard.

He stared at it. It brought back his days in the eastern home—the Gantry Mill Machinery Company—the wrist-watch Kathleen had given him—the half-made promises between them—her beauty, dignity, fineness—all that might have been his from an incomparable woman if he had reached out his hand to take it. For two years he had put her out of his mind; now she rushed back and claimed a place there so large that his heart beat quick with apprehension.

He opened the letter; it was characteristically forthright:

My Dear Craig:

I wonder if you have cut yourself off from all your old friends with deliberate intention to forswear us. For the sake of other days I am risking a rebuff to send you this word.

Mother and I will be in California all winter. Father died in the spring and mother isn't at all well, so that we travel for her sake a great deal.

Jere Broadhead, who is manager of your father's old company, told me where you were. He is interested in lumber with a man named Thurston out there, and I understand will be there soon. I think you never liked him. But I am asking him to bring us back some word of you, if this letter fails to earn me at least a note of acknowledgment.

Always your friend,

K. M.

(You will see that our story is like human life, in that there is plenty of trouble. There is more trouble coming, for all concerned. See what happens after this. Some surprises next month.)



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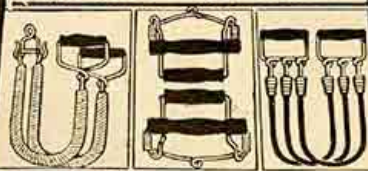
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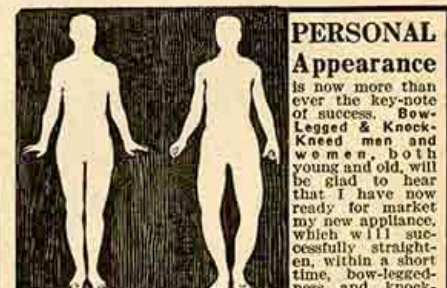
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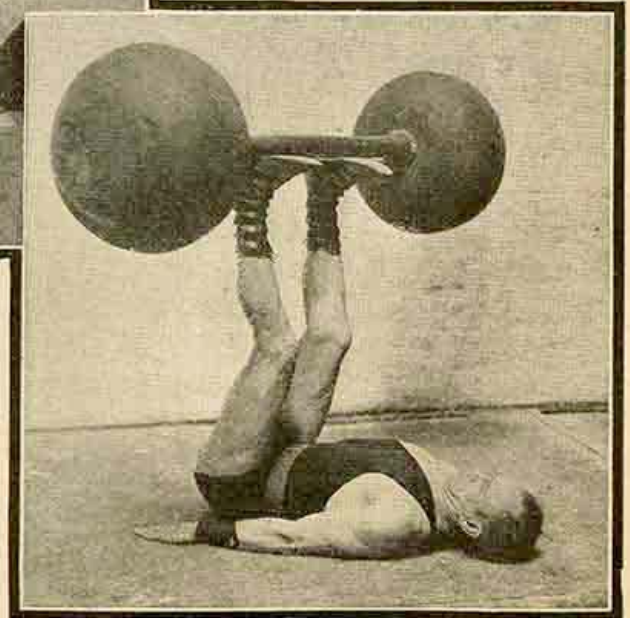
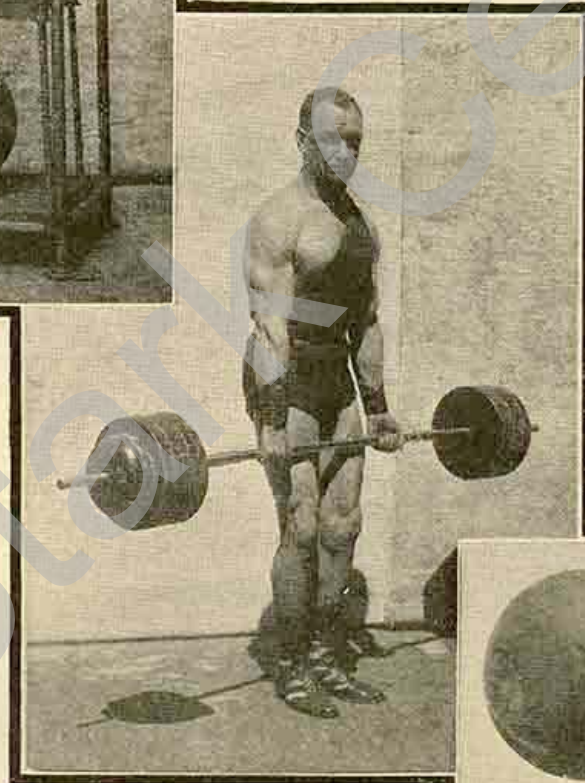
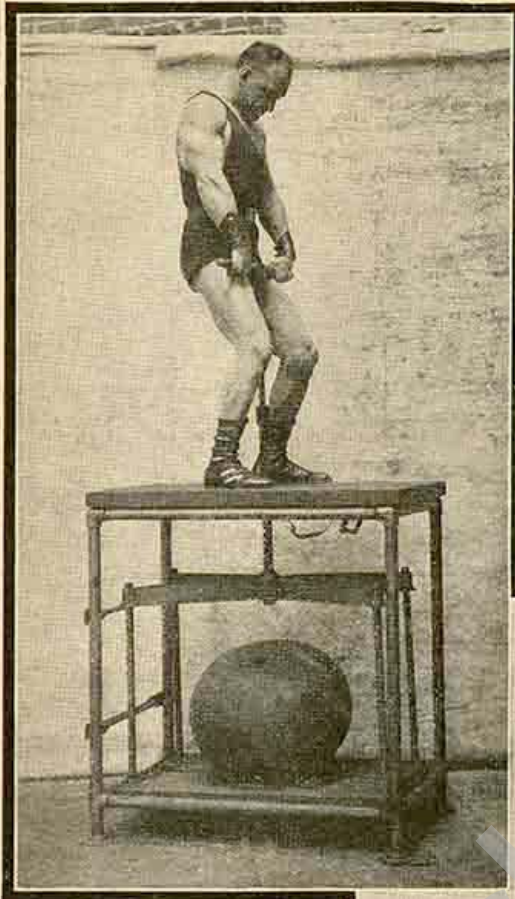
It is with the greatest pleasure that we announce the publication of a new book by Mr. Alan Calvert. The title of the book is **SUPER-STRENGTH**. Every reader of the **STRENGTH** Magazine is familiar with Mr. Calvert's work. For the last twenty years, his name has been intimately connected with the subject of body building exercise, and he is rated as the greatest authority on weight-lifting and bar-bell work.

This volume deals comprehensively with the whole subject. It tells you how the different lifts are made, and the records in those various lifts. It describes "feats of strength" of all kinds. The most important feature of the book is that **it shows how the average man can acquire super-strength**, and how, while doing so, he can develop a most beautifully proportioned and exceptionally vigorous body.

The book is just about the size of the average novel; contains 272 pages and nearly 150 illustrations—many of which were taken especially to illustrate this volume. Besides the 100 pictures which are necessary to illustrate the different lifts and exercises contained in the book, there are nearly 50 more pictures of the world's most celebrated lifters and "Perfect Men." No expense has been spared in preparing this book. Every one of you who has been inspired by Mr. Calvert's articles in the **STRENGTH** Magazine, and who has read his monthly department, called "The Mat," will find this book even more fascinating than his magazine articles. Nothing like it has been

published before. This is a book which will not only interest the skilled lifter, but which will also be a mine of helpful information to those thousands of undeveloped men and boys, whose greatest desire is to become far above the average in strength, muscular development, health, vitality and beauty of figure.

Mr. Calvert holds the theory that it is necessary to do more than just take exercise. He claims that when a man does a certain exercise, he should know how to do it and why he does it. This book is written in the familiar, intimate style which has made his articles so popular with the readers of this magazine.



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"And he who made the 'dumb-bell corner' possible is Alan Calvert, of Philadelphia. Mr. Calvert was the first man on this side of the Atlantic to suggest and popularize the idea of progressive weight-lifting. He fought valiantly and passionately for the recognition of this idea, and the criticism that a thousand fossilized physical directors heaped upon his head failed to daunt him.

"Fired by his teachings, a handful of strong men started the 'dumb-bell corner' and dedicated it to his fighting spirit. In this corner, where collars fade and muscles grow, the name of Alan Calvert is almost sacred. In his honor, the students are determined to turn out a Hercules or a Thor and then tell the world that he was built on the foundation laid by that illustrious Philadelphian."

Every reader of **STRENGTH**, every lifter, every man who has ever practised bar-bell exercise, and every one who is seeking health and strength, will be richly repaid for his investment when he buys a copy of this book. The first edition will be ready by the time this Magazine reaches you, and you should get in your order at once, as a large part of the edition has already been ordered in advance by Mr. Calvert's admirers.

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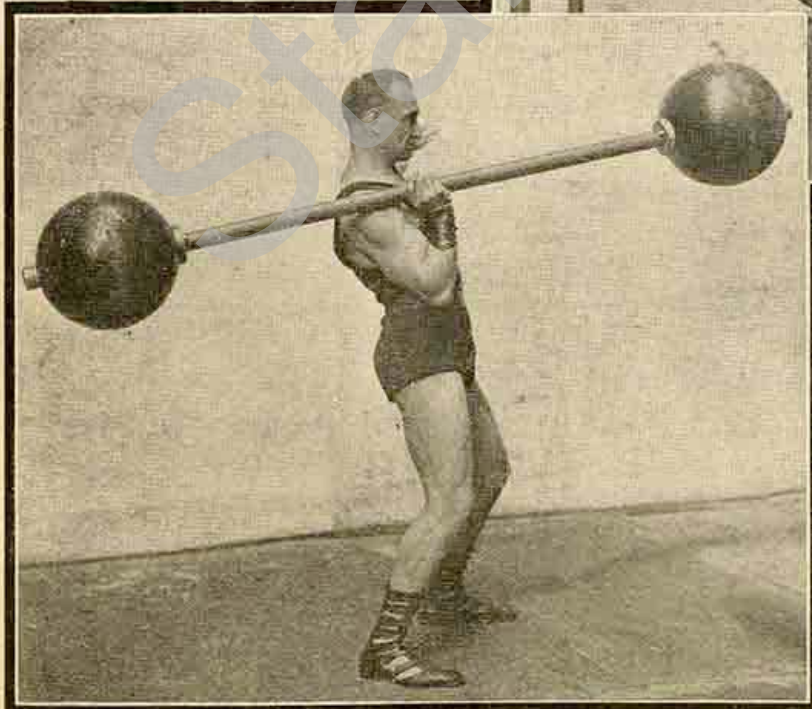
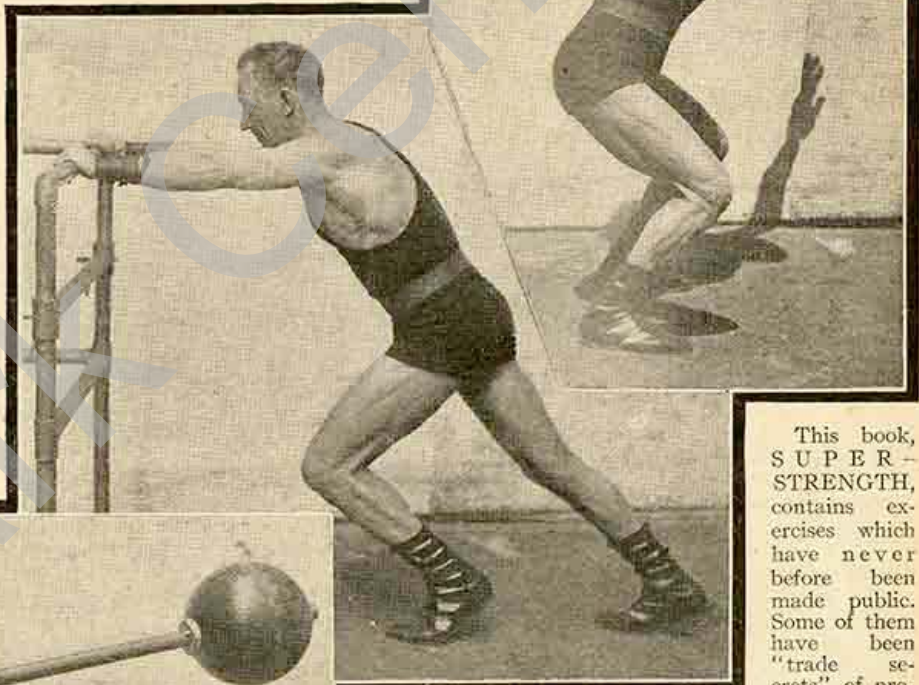
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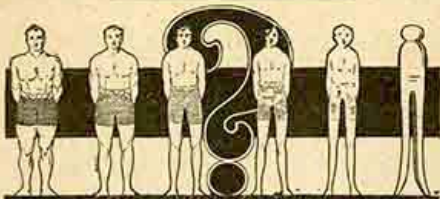
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Have you ever seen a clothespin? Do you see in yourself any resemblance to it in the mirror when you look at yourself? Well, you are about as useful as a clothespin if you don't keep yourself in the best of condition. You hold down a name in this world and that is about all.

Have you ever seen a jelly fish? It has no spine and no muscles and all it can do is to roll over and over on the sand. Do you wish to be classed as a jelly fish? Come on now, be a man, stick out that chin—grit those molars and dig in hard. Resolve that from now on you are going to learn how to be a MAN with big powerful muscles, strong body, perfect health, with a personality which is all surpassing, and you can do it, too.

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The Athlete's Ideal Diet Should Be Your Diet

(Continued from page 27)

proper subjects for the high-priced specialist and ought not to postpone too long a good business talk with the undertaker in order to save our prospective heirs from an overcharge for the funeral services about to be rendered.

It is quite sufficient to remember that the chief acid-yielding foods are meats of all kinds, fish, the whites of eggs, refined starches, refined sugars, refined syrups, cheese and white bread.

The foods which yield an abundance of alkaline tissue-sweetening salts and which prevent acidosis by counteracting the poisons of acid-yielding foods are milk, buttermilk, beans, peas, oranges, lemons, grapefruit, ripe plums, prunes, ripe peaches, ripe apricots, ripe cherries, apples, pears, ripe bananas, rhubarb, unsulphured dates, unsulphured apricots, unsulphured figs, unsulphured raisins, currants, cranberries, ripe raspberries, ripe strawberries, grape juice, almonds, coconuts, chestnuts, celery, radishes, ripe olives, beets, onions, ripe tomatoes, cucumbers, potatoes, turnips, parsnips, pumpkin, squash, carrots, cauliflower, cabbage, lettuce, spinach, asparagus, greens of all kinds.

These foods, together with whole grain breadstuffs consumed in the form of muffins, toast, biscuits, cakes or unrefined breakfast foods, contribute elements that must be considered in the preparation of any diet deserving the name of "balanced."

They furnish a plentiful supply of alkaline salts, the tissue sweeteners so essential to the normal constituency of blood and the normal composition of all the other internal secretions of which there are many, each of them performing a necessary function in enabling the body to resist disease.

The best idea of a "balanced meal" consists not in a picture of certain percentages of protein, carbohydrates and fats, but on a picture of acids balanced by alkalines or bases.

The more one consumes meat, fish, eggs and cheese, the more necessary it becomes to consume an excess quantity of fruits and vegetables. A half pound of baked potatoes will provide approximately the quantity of alkalinity to offset the acid elaborated during the digestion of a half pound of roast beef.

Obviously when a half pound of roast beef is served, two or three ounces of potatoes is entirely insufficient. Nevertheless, when one enters

a restaurant and orders a steak there is no little probability that it will be served with a few potato chips on the side, or a spoonful of fried potatoes saturated with grease. There is no "balance" in such proportions.

When rice is substituted for potato the upsetting of the "balance" is even worse. Rice is an acid food and does not provide the alkaline bases provided by the potato or other vegetable.

The custom of serving vegetables with meats is a wise one, although its potential virtues are not always appropriated to the advantage of the glutton. The man who eats excessively of meat has little appetite for the foods he needs to neutralize the meat acids.

It is a mistake to assume that because the potato is classified as a starchy food that therefore it contains no protein. As a matter of fact, the potato is a very cheap source of protein. The percentage is low, it is true, amounting to but a little more than two parts in a hundred, but these two parts have been demonstrated by Hindhede to supply sufficient muscle-building material to take care of the actual daily needs not only of a single individual, but of an entire nation, during a period not confined to a single day but, as in the case of the Danes during the war, a period covering an entire year.

The potato by itself is sufficient to prevent any repetition of the dreadful famines that have scourged the world in the past. The only consideration it asks of humanity is that its soluble alkalines be not thoughtlessly boiled out and drained off into the sink.

The custom of serving vegetable soups is to be encouraged for the very reason that the water of the soup contains these alkaline vegetable extractives in abundance, and brings them to the table where they get a chance to perform the functions intended for them by nature.

Beef broths are acid; vegetable soups are alkaline. This is another picture of the "balance" which helps to make understandable just what the word "balance" ought to mean in the diet of humanity. There are no other mysteries of importance in considering that word "balance." When its significance is applied to the daily diet of America many infirmities that now plague our people will automatically disappear.

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Drug stores do not sell our nearly universal form of slow poisoning, but they prosper by selling pills and oils to correct it. Yes, you have guessed it. It is constipation. You can avoid it by right eating and right living. A comprehensive article on the subject in STRENGTH next month will tell you how.

The Dinner Table

(Continued from page 65)

included in salad, and some of which ought to be there every day.

Try This French Dressing

French dressing made by the following recipe is my standby. I make it in a mason jar. You put on the rubber, clamp down the top and shake it. It will make a perfect blend.

1/2 cup lemon juice.

1 1/2 cups olive oil.

5 teaspoons salt.

1 teaspoon sugar.

Paprika to taste or till dressing is well colored.

1 teaspoon mustard if you like.

Some people prefer less olive oil and more lemon juice, in which case more sugar must be added according to taste. And some people prefer it the other way round, more oil and less lemon, with sugar in proportion. The dressing is very good made with vinegar instead of lemon juice, and a good vegetable oil instead of the olive oil, but neither substitute is as good or as wholesome, especially the vinegar. Tarragon vinegar, by the way, has a flavor of its own.

"Where Can I Get Whole Wheat?"

In any conversation having to do with health foods, and making reference to whole wheat and whole wheat bread, one is almost invariably asked the question, "Where can I get whole wheat bread or even real wheat?"

Even when you ask for whole wheat flour specifically it is doubtful if you can get it in the first store you come to. It is for this reason that in the April number I gave the names of the Paoli Mills, Paoli, Pa., the F. H. Bennett Biscuit Company of New York City and Francis H. Leggett & Company of New York City, the latter a wholesale house, all of whom market whole wheat flour and whole wheat products.

There is another way out of the difficulty, however, which enables you to serve your family a natural whole wheat as a cereal food without trouble and fuss. The Whole Grain Wheat Company, 1905 Sunnyside Ave., Chicago, Ill. (Canadian address, 26 Wellington Street, East, Toronto, Ontario), have made a business of selling a ready-cooked and ready-to-eat natural whole wheat which may be used as a breakfast cereal, or used with a serving of other foods at dinner in much the same manner that the conventional housewife now serves rice. It may be used in soups as rice is used. The "Whole Grain Wheat" is ready-cooked in a manner that has not impaired its nutritive value, is packed in eleven-ounce, hermetically sealed tins and is sold on a basis of a twenty-four day supply for a family of four for \$2.00 east of Denver, \$2.65 west of Denver, foreign, \$3.50.

Making whole wheat bread at home is quite an art and will be discussed in this department later.

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Muscle Control—Have You Learned It?

(Continued from page 53)

in this pose; and when he does so the middle of the upper-back is covered with mounds of muscle. If he stands up in this position, and first spreads his shoulders, and then squeezes them together, and repeats the motion a dozen times, he is getting some valuable exercise for those muscles in the upper-back which control these two motions. But again, the reason he can make himself so extraordinarily broad is because in the first place he has a big rib-box, and in the second place his upper-back muscles are unusually big and powerful.

If you can induce some thin man to try this stunt, you will find that by pressing his shoulders together, then spreading them apart, the width of his back will be altered only an inch or so; that is, when he spreads his shoulders, his back is only an inch wider than when he squeezes them together. If you are lucky enough to get hold of an amateur "Strong Man" and bar-bell user (one of these chaps with a 44-inch normal chest), you will find that he can make a difference of six inches in the width of his back, according to how he holds his shoulders. The star at this stunt was Joe Nordquest. Fig. 99 shows his extraordinary ability voluntarily to broaden his upper-back. You must remember that Nordquest's chest measures 46 inches normal, and that his upper-arm measures nearly 18 inches. So, if your chest measures only 36, and your arms only 13 inches, you must not expect to duplicate the effect that he gets. Most advocates of "muscle control" confine their practise entirely to the arm-muscles and the abdominal-muscles; whereas they could get very good all-round exercise if they devoted part of their time to getting control of the muscles on their back, their sides and their legs.

Control of the Thigh Muscles

If you stand squarely on both feet and then lock your knees back, you can harden the muscles on the front and outside of the thighs. If your thighs are of a fair size, when you harden the muscles, the thighs will assume the shape shown in Fig. 91; but if your thighs are thin, when you harden the muscles, the shape of the thighs will hardly be altered at all. Mr. Max Unger, when doing cabinet-posing, could do more with his thigh muscles than any other man I have seen; that is, he could flex the thigh muscles in different ways, make them apparently jump up and down, and also move them from side to side, without the slightest movement of the limbs themselves. He would stand squarely on both feet and make his thigh muscles move in a most extraordinary way, so that it seemed as though the muscles were being flexed by some outside power; whereas it was entirely a matter of muscular control. If Mr. Unger's thighs had been thin, the movements of the muscles would hardly have been percep-

tible; but his thighs were of extraordinary size and power and beautifully shaped.

It would take too much space to describe the several dozen positions which you must learn, if you wish to get complete mental control of all the muscles in the body; but if you will observe the rule that you must first put yourself in a position that causes any one muscle to contract, it is then easy to get control of that muscle. Some of you may have trouble in hardening the muscles on the front of your thigh when standing erect, although most of you will be able to do so if you make your legs perfectly straight and push the knees as far back as possible. If, however, you stand in front of a chair and raise the right leg, and place the heel on the side of the chair (with your leg straight), you will find it very easy to harden the muscles on the front of the thigh. This is because one function of those muscles is to raise the leg forward. Similarly, if you want to get control of the muscle at the right side of the waist, you must bend the body over to the right, which contracts that muscle.

Contraction Without Bending

After a few weeks' practice, you will find that you can flex many of the muscles on the body without the necessity of bending the body from side to side, or of altering the position of the limbs. While seated in a chair, you can, by a simple effort of the will, flex the breast muscles; or you can just as easily flex the big muscles on the upper-back which lie close to the armpits. You will be able temporarily to change the shape of your upper-back through your control of the muscles which move the shoulder-blades; but you must always remember that it is far easier to learn mental control of a well-developed muscle, than of one which is thin and undeveloped.

I believe that one reason why bar-bell users have such "muscle control" is that their practise of lifting has developed extreme speed. This statement will come as a revelation to some of you who think that weight-lifting stiffens a man's muscles and makes him slow in action. That may have been true of the old-time lifter; but the modern lifter has to be as quick as a boxer with his hands and with his feet. In making what we call the "quick lifts," the lifter has to learn entirely to change his position in a fraction of a second. This would be impossible unless his muscles responded instantaneously to the message telegraphed from the brain through the motor nerves to the muscles themselves.

Recently I had occasion to take some photographs to illustrate some details of lifting. I had only an hour in which to get a model. The photographer happened to know of a hand-balancer who in his youth had secured a fine development by using bar-bells. We telephoned the man and asked him if he

was in shape to pose. He replied that although he had retired from the stage, and that it had been twelve years since he had seen a bar-bell, nevertheless, he was in perfect shape. A few minutes later he reported for the job, and stripped so that we could see his development. In order to prove that he was in condition he held up his right arm with the elbow slightly bent. There was not the least tension of the muscles of his upper-arm, and the upper edge of the arm was perfectly smooth. He quickly flexed his muscles, and his biceps simply leaped into a high curve. He did this several times in succession, contracting and releasing the muscles with such speed that the eye could hardly follow the movements of the muscles.

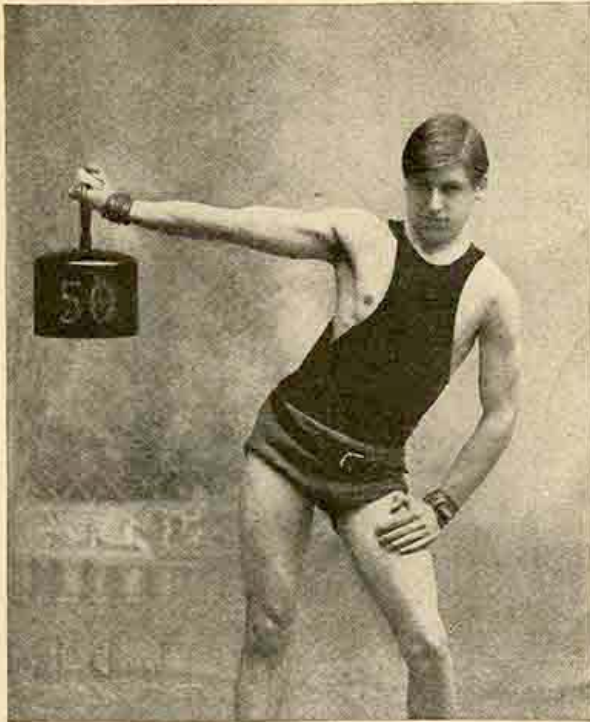
When the upper-arm is held out to the side and the muscles relaxed, the muscles will sag a trifle of their own weight, so that most of the muscle seems to be below the bone. That was the way this man's arm appeared before he flexed his muscles; but when he did flex his biceps, the lower edge of the arm became taut, and the upper edge (the biceps) mounted in so high a curve that his arm was apparently two inches thicker than before. This man had never even heard the phrase "muscle control"; but the bar-bell training which he had done in his youth had given him a development which he had never lost, and a mental control over his muscles which he still retains, and which enables him still to flex any muscle in his body simply by concentrating his mind on it.

Development—the Supreme Essential

I don't want you to take my word for all this; I would like you to try it. If you have no development, you will be sadly disappointed by your efforts at "muscle control." But if you have big and powerful muscles, developed either through the use of bar-bells or by other kinds of vigorous exercise, you will find that in a few weeks you will be able to do almost any stunt of "muscle control" that you have seen in a picture or seen actually performed by a "strong man."

I have at various times been paid visits by lifters and bar-bell users who were interested in the subject of "muscle control," and invariably, in the course of half an hour, I have been able to show them how to learn to control their muscles. Those men already had the development and the mental control, and all I had to do was to show them the positions. On the contrary, I have never been able to do this with an undeveloped man, because such a man is handicapped by the fact that he has no muscle to speak of, and cannot control what little muscle he has. "Muscle control" is a thing that comes to you while you are developing the muscles; but it will not create muscular tissue, nor will it make you any bigger or stronger.

Use a Bar-Bell and Watch Yourself Grow



MANY of our pupils report the most fascinating thing about our training course is, that while they are practising bar-bell exercises, *they can actually see themselves grow* from week to week, in size, in strength, and in development. There is no other form of exercise, which produces results as *rapidly* as does graded work with adjustable bar-bells; and there is no other form of training, which produces such *lasting* results. By a few months' practise, a young man can acquire an heroic development and tremendous strength, which will stay with him for years after he has ceased training. Middle-aged men, who have become sickly and slender, or else stout and flabby, can get athletic figures and far more strength and vitality, than they had as young men.

This Is a Former Pupil

The upper picture shows Mr. Robert Ruckstool, when he was 16 years old; and after he had been training for a few months with bar-bells. At that time, he weighed about 135 lbs. and had already gained several inches in chest-measurement, and about 20 lbs. in bodily weight. A few months later, he had made considerable improvement, and was the champion lifter of Pennsylvania in the 140-lb. class. The picture in the lower right-hand corner, shows him at the age of 18. By that time, he had increased to about 160 lbs.; was one of the strongest men in the world at that weight, and had acquired the wonderful development shown in this picture. At that time, which was a dozen years ago, he gave up his regular training; and since then, he has used his bar-bells only occasionally; and yet, he has retained every particle of his development, and is today *even stronger* than he was when he was making records and winning championships.

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We could tell you of dozens of other cases like this. We never lose touch with our pupils. A man who bought his bar-bell in 1904, or in 1914, is just as much entitled to special advice and training suggestions, as is the new pupil, who bought his bell at the beginning of 1924.

OUR SUCCESS IS DUE TO THE SERVICE WE GIVE

We are never through with a pupil until he gets the maximum results possible in his case; and, frequently, we amaze our pupils by showing them how to get more development, greater strength, and more health and energy, than they expected, or even thought was possible.

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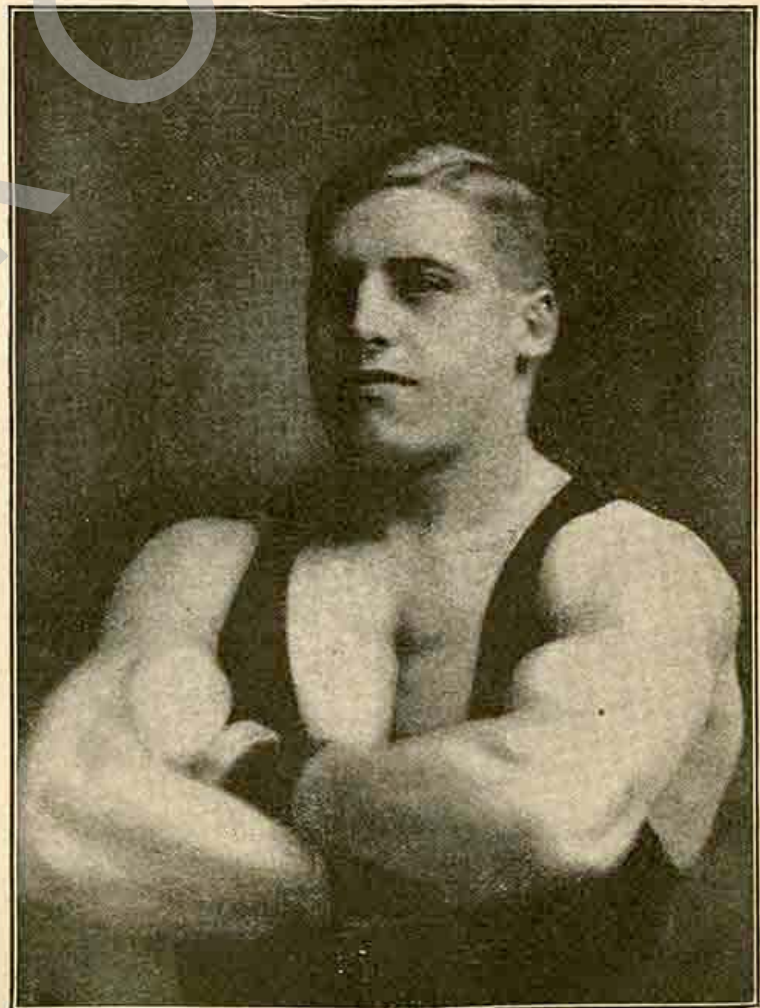
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"On Your Marks—Get Set—"

(Continued from page 33)

way I had run, a thing which I have never really felt so completely before or since. I thought the time was 21 1-5 seconds, and when the timers announced that it was 20 4-5 seconds, one could have knocked me over with a feather.

Three days later I was to face Morris Kirksey in the Stanford stadium. My showing at Berkeley had convinced me that I was at the top of my form, and I feared that three days more of intensive training would perhaps take away the edge. So I did not think of track for three days. I did not put on a shoe. I did not train. I ate what I liked. I slept when I liked, and I lived as a young college student off on a lark would have lived. And the result. I was dead tired when I donned my track suit for the Kirksey dual. I did not feel in the least like running and the race was sixty yards gone before Coach Dean B. Cromwell yelled across the field for me to run. Kirksey was then a yard ahead. The cry of Cromwell awakened me, and I flew toward that tape as I had never done before. I passed Kirksey and beat him by two feet. The Stanford star afterward told me that he was better that day by two yards than he had ever been. And the time was again 9 3-5 seconds. The 220 found me in the same form as I had been in at Berkeley, but the last 20 yards found me still more tired, if that could be, and the time was 21 seconds, a fifth under the old record, but a fifth slower than my Berkeley performance.

LeRoy Campbell, famous brother of the equally renowned Tom Campbell of Yale, once had told me that if ever I reached a place where it was possible for me to break records, that I should seize the opportunity and make the most of it. For LeRoy pointed out that the golden days of record-breaking were few and far between. Following his excellent advice, then, I had arranged with President Robert S. Weaver of the Amateur Athletic Union to run the 100 yards, the 100 meters, the 200 meters, the 220 yards, the 300 yards and the 300 meters in two races at Redlands against the best competition of the Southland. And there was a high school boy named Vernon Blenkiron who was later to make his mark in the Nationals of that same year, who furnished all the competition anyone could desire. The day was cold, but the track was fast, and my lay-off made me feel fine. The following times were recorded for the distances I had set myself to run that day: 100 yards, 9 3-5; 100 meters, 10 2-5; 200 meters, 21 1-5; 300 yards, 30 1-5; and the 300 meters, 33 4-5 sec; and these were all new world records with the exception of the first, which equaled the record.

Three hundred meters had seemed a fearfully long distance to run that day, particularly as I had striven for records in the shorter distances all along the way. Agitation was started for me to try for the 440-yard record, which

had been set in such excellent fashion by Long and Meredith. However, those who desired me to try that distance certainly had never run that race themselves. To go that far requires altogether a different kind of stamina and the use of different muscles, that had never been called on for sprint running. If I should ever attempt the distance, which is very unlikely, I would run the first 220 in 22 seconds, as that pace can be accomplished without the expense of great energy, when I am in proper condition and when the track is good. In heats I have done that time and not been fatigued. However, the question, of course, would naturally be, "How much farther could I go at the same rate?" and the answer to this question would, of course, prove whether I could really cover the quarter-mile in record time. Another big obstacle is, of course, the ability of the muscles, trained for shorter work, to withstand the strain of the long distance, and still not tie up. Three hundred and fifty yards might be managed at the 22-second pace, if the proper training had been undergone, after which the momentum obtained and the strength and fighting heart of the runner would have to be responsible for the rest of the way. Such a pace would mean 350 yards at approximately 35 seconds for the rest of the way, if a new record was to result. It seems easy enough to say that the final 90 yards could be run in that time when the record for the same is 8 4-5, or exactly 3 seconds better. But time slips by with great rapidity when one is dead tired.

One might assume that during these years I had been developing my speed. But such was not actually the case. Though I was able to run faster now than ever before, and was capable of setting records, still my speed was about the same. I did not possess a greater quantity of it than I had back in 1916. Indeed, my start and my finish were the same in the Olympics of '20 as in '16. But up to that time I had made no real records.

Whence came the change? My start today is no better, and my finish is the same. But my stride has been improved. And herein lies the secret of record-breaking. All of us are born with a certain amount of natural speed, some with a great deal more than others. In increasing the length of my stride, I discovered the way to run faster. For I was making the mistake which I feel sure most athletes are guilty of, namely, that I was taking too short a stride, and too many steps in running the 100 yards. I found that by lifting my knees higher, I could take longer steps and still not cut down the rapidity with which my feet hit the ground. For it is the length of the stride which determines record-breaking speed.

(To be concluded)

Does Smoking Make You Thin?

(Continued from page 49)

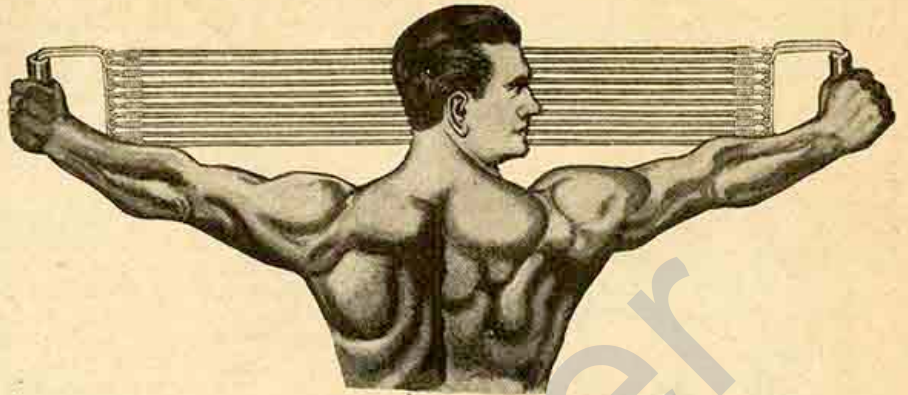
male of the species as a result of his extensive addiction to smoke. He is withered, perhaps, because he is smoke-cured. Not so much smoke-cured as poisoned and depressed by the action of nicotine.

In this connection it is interesting to note the present vogue of the skinny woman in conjunction with the up-to-date fad of smoking among women. Statistics of cigarettes consumption show an increase of seven billion cigarettes last year over the year before, this increase being attributed practically in its entirety to women smokers. Women never take hold of addictions by halves, and these girl smokers who pride themselves upon looking as tough as they can in public places are obviously trying to out-do their brothers in showing how cleverly they can inhale smoke and exhale it through their noses. Perhaps they start smoking as an affectation and end up by making it an addiction. In any case the practice is co-incidental not only with a wide prevalence of sub-normal weight among women, but even with the fashionable ideal of bony undevelopment.

Of course there are also plenty of fat men who smoke. Even if tobacco has a general influence in the direction of impaired health, shaky nerves, deranged heart action and loss of weight, there are obviously great hosts of men who can "get away with it"—more or less. Indeed it occurs to one that this matter of loss of weight might possibly be a criterion as to whether or not one's smoking is seriously doing him harm. But perhaps it is not quite so simple as all that, since tobacco might do one just a little harm, affecting his nervous condition or his heart without actually making him thin. In short, the failure to lose weight through smoking does not necessarily mean that it is not hurting one at all, though it may indicate that it is not hurting him much. On the other hand, if one is seriously under-weight he may very well raise the question as to whether or not tobacco is responsible, partly or wholly.

The truth about tobacco, as with alcohol or coffee or tea, is that some people can stand more than others. Some persons have a large measure of "tolerance," as the doctors call it, others very little. Some people are almost proof against mosquitos. Some people don't catch diphtheria, even with a nice collection of the germs in their throats. On the other hand, some people cannot eat strawberries, and a few cannot eat cucumbers. However, the fact that an occasional hard-boiled individual can drink a pint of whiskey without showing the effects of it, or without thinking that he shows the effects of it, does not mean that it does not hurt him. It only means that he is temperamentally tougher, in that particular respect, than his neighbor who

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is seriously affected by two or three drinks.

Here is one good way to look at this tobacco question, taking as an example my friend C., who loses thirty pounds if he smokes cigars, but who can smoke cigarettes in moderation without feeling that they have any material effect. Nearly everyone, we may say, has more or less strength to spare. That is, he can carry not only his own weight but a little extra load besides, just as a horse carries his rider and seems not to mind it, or just as a soldier or a hunter carries a pack on his back.

In many cases the load is not enough to produce a loss in weight and sometimes it may not mean any material loss in efficiency. Take my friend C., for instance. He finds that a few cigarettes is such a trifling load that he can carry it. Even with this small handicap he is a better man, more efficient and stronger than some who have no load whatever. But if he smokes cigars the load becomes too heavy and he loses thirty pounds of weight in the course of some weeks.

I remember the case of my friend D., who was a little fellow of about five feet six inches. He married young, his wife being about seventeen or eighteen, and of the same height, and together they then made a very pretty pair. Their mother said they made a "cute couple." D., however, was a perfect cigarette fiend, smoking continually and always having with him the makings to roll his own when his pack was exhausted and it wasn't convenient to buy another. D., naturally of a slender type, got thinner and thinner until he was a mere wisp of a man. Meanwhile the girl he married

so young continued to grow, gaining two or three inches in stature and with maternity took on weight. She didn't get fat or stout in the usual sense, but attained merely the plumpness of healthy, full-blooded womanhood. The contrast between D. and his wife was a very conspicuous one. He was the typical human smoked herring, the picked chicken so dearly loved by the cartoonists. I am satisfied that if D. had kept away from cigarettes and had followed an athletic life he would not have presented such an incongruous picture to his friends. He would have looked like a man, and not so much like a mere husband.

Of course in any proper manner of approaching this subject it is not a question as to whether one can indulge and "get by." It is a question as to why one should wish to indulge. One must be hard up for a source of interest to depend upon such a trivial satisfaction as he can get from smoking, even granted that it is mildly narcotic or sedative in its effect, and even though the satisfaction consists in part of its being a survival of the baby impulse of suckling. There are so many things in which one can find a real kick—in athletics, in music, in motor-ing—in business achievement, and what not. Any stunt which is in the nature of a challenge and calls for a real effort, has a kick for those who have learned how to secure some real satisfaction out of this business of living. Anyone seriously interested in his personal efficiency is not even tempted by the idea of a smoke. There is nothing to it. It is childish. It is silly. And at the present time it is distinctly effeminate.

Exercise Cured His Spinal Curvature

(Continued from page 43)

of the night, but I liked my work so much it was more like play than work. It is the distasteful work that saps our energies." He also made his greatest gain in health while doing this work, and having completed his course he was offered a permanent position in the College; but still pursuing his idea of enlarging his experience, he preferred to go to New York, where he remained several months and filled two positions as student-teacher, one in a school of Naturopathy and the other in a school of Chiropractic. Then three years ago he found the opportunity to come to California, an old lure which had long beckoned, and for almost three years he has been resident physician in one of the small, yet well-appointed sanitariums of this section, on the outskirts of Pasadena.

While giving full credit to the physical factors which entered into his recovery—diet and exercise—Dr. Faulkner counts mental suggestion his greatest aid. The full force of this had never dawned on him, he says, until it was revealed in a talk on applied psychology by a woman lecturer he heard about five years ago. He immediately began applying it in his own

case, with amazingly good results. To assist his "visualizing," he hung his walls with pictorial specimens of physical strength and manly sports, and after long continued "seeing himself" in these vigorous poses, he found himself able to hike and sprint with the rest. Of his exercising during his period of weakness he relates: "When my vitality was so very low, walking just a short distance would exhaust me, my breathing would come heavy, and my heart pound against my ribs like a trip-hammer. But I would walk until fatigued, then rest and walk further. By using the strength I had, more strength was given, and keeping this up week after week and month after month, I built up enough vitality to go on long hikes. . . . I like to take short runs, and do so as often as I feel inclined—whether in the city or country. By looking ahead as if I were chasing a street-car, or running to catch a train, I get this exercise without appearing too conspicuous. . . . I found the vito-breathing exercises, the tensing and relaxing which we can learn from the most supple animals, the most helpful in developing my chest and strengthening my spine. Three

months of these made such a difference in my neck that I had to wear a full size larger collar. . . . It is now 12 years since I left the Ozarks, a physical wreck and a life failure. No one today would know me for the same person. The upper half of my spine has been loosened up, and one section of the lumbar region—which the best diagnosticians in the country said would never move again—has become movable within the last year. I still carry some slight physical handicap as the result of those two falls; but I am full of pep and enthusiasm, and my experience has taught me you can get most anything out of life you want if you will only visualize it and work hard enough!

Then the optimistic little doctor told me how romance came also to assist his conquest of physical infirmity by this same mental process of intensive visualizing and desire. "At the age of 30," he said, "I felt a reasonable hope that by the time I was 35 I might make myself presentable to the girl of my choice, and I began to lay down plans for myself and specifications for the girl; though the girl specifications had been formulated long before, but had lain dormant and unnoticed during those dark years when because of my affliction I studiously avoided all feminine society."

I learned that the girl who was to meet the "specifications" and realize the day-dream of this doughty apostle of Nature Cure, was a young school ma'am from Oregon, who had come to the Health Home with which he was associated in quest of rest and recuperation two years before. The spark of divine pity in every true woman's heart ready to spring into life at any tale of misfortune, coupled with admiration for his plucky struggle, produced in the pretty Oregon school ma'am a lively interest in the young doctor, which later developed into something warmer, closer. They were married less than a year ago, and are the most radiantly happy couple you will meet in a day's travel in California, where married happiness is not the rule and the divorce courts work overtime.

How Weismuller Gets His Speed

(Continued from page 21)

faculty of all great swimmers, the supple joints. He can flop his wrists and fingers and feet around like a scarecrow. That is a secret of relaxation that is important in swimming.

"The muscles developed by a swimmer are different from those of other athletes. Whereas other athletes build up a short, snappy set of muscles, useful in sudden starting and stopping and in great tensivity of effort, the swimmer develops the opposite type.

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How to Paddle Your Own Canoe

(Continued from page 25)

sometimes occurs in the excitement of fast going when a double blade paddle is being used. With a single blade paddle it seldom happens. To "crab" a stroke means to grasp air with the blade of the paddle when your intention has been to grasp water. Not infrequently this results in toppling one over backward, which sometimes upsets the canoe.

Your paddling position in the canoe is important. It is desirable that the craft travel upon an even keel and your weight be kept sufficiently low to prevent top-heaviness. At the same time your position must be high enough to permit free use of the paddle without striking the right and left gunwales with each respective stroke. The high cane seats with which many canoes are fitted are not the best positions for the swinging of a double blade paddle. They are more suitable for single blade work.

The most comfortable seating position for double blade paddling is six or seven inches above the floor of the canoe. Either a small box seat or a couple of cushions laid upon the floor of the craft may serve very well. If you paddle alone, take a position amidships so that the canoe may ride upon an even keel. With two people paddling, their weight is distributed fore and aft.

The action of steering with a double blade paddle is more or less automatic. On smooth water with neither tide nor wind exerting undue pressure upon one side of the canoe, the amount of steering necessary is slight.

Tide and wind, however, are another matter. These do their best to swing the bow of your craft off the desirable straight route, and you must know the knack of outwitting them. There are two ways. One of these is the simple process of easing up with the stroke on the side which is being attacked and exerting increased power on the other side.

The remaining method consists of paddling on each side with the same amount of power but changing temporarily your grip on the paddle so that long sweeps are made on one side of the canoe and short sweeps on the other. When using either of these two methods there need be neither a breaking of the strokes nor an appreciable lowering of the speed. Turnings to the right or left may always be made by these methods.

As to what constitutes the proper timing of a double paddle stroke is largely a matter of argument and personal choice. Ratliff during his New York to Albany trip never dropped below sixty strokes to the minute, and at times he mounted to eighty-five. This means astoundingly short and quick work. The average canoeist who swings a double paddle rarely goes above forty-eight.

The foregoing suggestions are, as I have indicated, essentially applicable to

the use of the double blade paddle. In a number of sections such as the Hudson River with its hundreds of canoeists you rarely find any other type of paddle being used. On the other hand, when you get back into the North Woods you never hear of a double blade; single blade paddling in this case has the call. This method is the way of the Indian.

Ordinarily, in single blade work, two people paddle, one sitting upon a cane seat in the bow, the other on a similar seat in the stern. In case yours is the bow position you set the stroke and the stern man paddles in rhythm with it. He, for his part, has a certain added responsibility in that he must keep the craft in a straight line by steering. This he accomplishes by means of turning the paddle edge-on to the bow toward the end of his stroke.

The stroke of both paddlers should be smooth and easy all the way through; there should be neither a spasmodic plunging of the blade into the water at the start nor jerk at its finish. The paddle is held with one hand arched over its upper end, the other grasping its shaft at a point just above the blade.

The paddle is dipped into the water and pulled straight backward with the lower grasping hand. There is simultaneously a certain amount of push with the upper hand, although not to the same extent as with the like action in wielding a double blade paddle. The upper arm should be kept slightly bent; not rigid as some canoeists believe. The important point to remember about this stroke is that it is considerably more than a push and pull with the arms. The power of the shoulders and body should be brought into it as well.

A common mistake is that of using the paddle like a broom; sweeping the water instead of gripping it firmly with the blade. A person who has been accustomed to double blade paddling sometimes falls into this mistake for the reason that there is a tendency toward the horizontal in the position of the paddle shaft during the double blade stroke. But with the proper single blade stroke the position of the paddle shaft tends to the vertical. You want to pull the canoe up to and past the paddle in as straight a line as possible, for otherwise, especially so in the case of the bow paddler, the bow will be thrown off its course. An inexperienced bow paddler is likely to describe an arc in the water instead of the desirable straight line.

Single blade paddling differs from double blade work in that it is more of a one-sided activity and therefore perhaps not quite so conducive to all-around physical development. The strokes of the respective paddlers are of necessity confined for varying periods to one side of the craft. This one-sidedness can be obviated to a great extent by taking the slight trouble of changing paddling sides now and again.

Uncle Sam to Promote Outdoor Life

(Continued from page 22)

upon the recreational facilities open to our people."

The late war opened our eyes to the fact that, while we have certain athletic groups and vigorous classes, yet as a nation we are soft.

We are coming to see that national strength lies not in arms and armies. We are not at all sure that we want soldiers. But we do want soldier-like fitness of all citizens. Preparedness means not fire-arms, but good flesh and blood arms, together with sturdy legs, strong backs, full chests, stout hearts, sound lungs, red blood.

England found very early in the great war that her difficulty lay not in teaching her recruits the tricks of war. Men could be drilled into that sort of thing in a few weeks. But it took a year to "condition" them, so that they could endure the strain of a campaign.

The draft showed that of our own young men of best athletic age, from twenty to thirty, some sixty per cent were found wanting, unfit to fight. That means, also, more or less unfit to work.

But if we consider the condition of our citizens of middle-age, rusty, flabby, breaking to pieces and dying prematurely through degenerative diseases of heart, arteries, kidneys, liver and nervous system, the situation is even more alarming. Although "saving the babies" has lengthened the average of human life, modern conditions of living have shortened rather than lengthened the lives of our middle-aged men, for they now die at fifty twice as fast as do men of the same age in Europe, and twice as fast as did their fathers and grandfathers of the nineteenth century.

Without modern medicine, and lacking modern sanitary conveniences, our first ten Presidents were practically octogenarians, as Mr. Cleveland Moffett pointed out in his article on "Statesmanship and Health" in the January number of STRENGTH. The average age at death of the first ten Presidents, he showed, was seventy-eight years. The ten Presidents from Lincoln to Roosevelt lived an average of sixty-two years each, or eliminating the three assassinated, only sixty-five years each. If our statesmen and business men need to modify their living conditions so as to promote health and length of life, the same is true of our people as a whole.

There is already much camping, hunting, fishing, canoeing and hiking by individuals and there are many clubs devoted to various phases of outdoor life. The trouble is, as the President sees it, that these various opportunities are largely confined to the well-to-do and that the busy middle classes and the poor, who need them most, do not enjoy the facilities for getting back to nature. The present movement is intended to find a way to make these blessings available to all.

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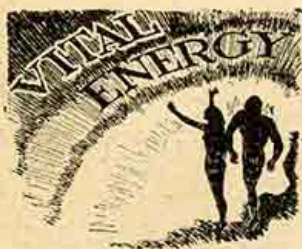
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What Is the Keystone of a Baseball Team?

(Continued from page 55)

thing pretty sweet in Eddie Collins at second but they're lacking at short and in the box. You can go right on down the list through both leagues and find the secret of weakness in any of the camps by looking at three positions, the box, second base and shortstop. Those are the spots where champions are made.

* * *

The average man's opinion of a champion, speaking abstractly, is one who is willing to step out for a meeting with anybody and everybody who craves action and also has some vestige of a look-in.

That is humorous. We're referring to champions of things fistic, of course. To bring up that ancient line of talk once again—champions in the old days used to be the fighting boys; at least, most of them did, although some of the heavyweight champs didn't fight much oftener than Dempsey does. But in the other divisions they invariably got plenty of action.

It is a certainty that we'll have a few big bouts during the coming out-door season where enough can be packed in past turnstiles to pay the price of a champion, but there certainly is enough room for some of our best known champions to do their stuff.

Dempsey has made a million dollar a year business out of the heavyweight championship, and Mike McTigue, who possesses the light heavyweight title is somewhat to the camembert as a ring ruler. He's nursed that old crown for about all it's worth and there are only a dozen or so of contenders who are better endowed to be champions than he is. The chances are that the first good man who gets him in a ring where decisions really count for something will spoil Mike's whole fistic future.

Harry Greb is a willing enough middleweight ruler and even ambitious, since he's one of those who wants to get a crack at McTigue for the light heavy diadem. As for the rest of them, with the exception of Benny Leonard, there is little that smacks of willingness to risk anything in connection with their titles.

That's where we hand it to Leonard as one of the greatest champions the ring has seen. There are a lot of good lightweights today, just as good men as there were at any time in the past and Leonard has never evaded any of them. Lew Tendler was the one man who seemed to have a chance with Leonard and Benny finally met him a couple of times and proved that he didn't.

As for the other rulers it is the belief of most of those in touch with the ring that they're all side-stepping somebody and keeping the crowns locked in the camphor chest.

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What Improvement Do You Want Most

(Continued from page 41)

resistance to develop every muscle in the body to the limit—providing you know the different movements which bring into play the different muscles of the body. A perfectly developed man is always shapely, and the shapely man is the one who has superabundant health. When the ordinary man loses his health, he loses his shape at the same time. A very stout man has one kind of digestive disorder, and a very thin man has another kind. The well-shaped, beautifully proportioned, and finely developed man escapes digestive and assimilative troubles, because he keeps his shape and proportion by virtue of the activity of his muscles. In my opinion, shape is more closely related to health than is either strength, development, agility, endurance, or suppleness.

And yet you cannot get away from the fact that shape is created by proportions and development. The thoroughly exercised man has a good-sized chest because he constantly uses his lungs. His waist is trim because he constantly uses the muscles of the abdomen, sides, small of the back, hips, and thighs. The regular use of his arms and leg muscles bring them to a high condition of development.

As has been already said, the beginner will notice an improvement in his health within a few days after he starts to take regular exercise. The next thing he notices will be an increase in his muscular strength, and along with that will come a greater ease in the management of the body. The added strength will enable you to carry the weight of your body more easily. You can feel an increase in strength before you can actually see any change in the size and shape of your muscles. Even when a muscle is growing very rapidly, you cannot see the difference from day to day. To increase the girth of your upper arm one inch in a month would be rapid progress, and yet that would mean an increase of only one-thirty-second of an inch each day, and such a slight difference would be imperceptible to the naked eye. At the end of a month you would be able to notice a marked difference in your development, not only in your arms, but in every part of your body. Because you cannot see the difference from day to day does not mean that you are not improving.

You will not notice any increase in your suppleness until after you have gotten rid of the stiffness and soreness caused by the first few days of exercise. It is easier to become supple than to become strong, and two minutes a day

spent at stretching exercises will promote thorough suppleness; where it may be necessary to spend fifteen or twenty minutes a day at developing exercises in order to keep increasing your muscles in size and strength.

Endurance is a thing that will come to you in progressive quantities. At the end of three months of proper training, you will be able to exercise for forty-five minutes at the hardest kind of stunts, and finish feeling fresh and ready for more; whereas, when you began training, five or ten minutes of much less severe work was enough to exhaust you.

Agility is what might be called an "advanced product" because it is a result of surplus strength and energy. You are not really agile until you can move about very quickly, and until you have developed a certain amount of strength in the legs and back it is impossible to shift your body quickly from one place to another with ease, grace, and sureness. No class of athletes are so agile as tumblers and fancy dancers, and the most famous performers along those lines are noted for the strength of their backs, and the beautiful development of their legs.

Shape is a thing you get last of all, because your shape depends upon your proportions and the perfection of your muscular development. When you have finally molded your body into the best shape of which it is capable, you will no longer have to worry about your health. If you create for yourself the seven physical qualities I have named, it is impossible to conceive of you to be either unhealthy or unsound. Your shape alone is an indication of the perfect working of your internal organs. The fact that you possess endurance is a guarantee that your heart and lungs are in the best possible working order. The fact that you are agile and supple proves that all your muscles are elastic, and thoroughly under your mental control. Your strength is a guarantee that you possess surplus energy.

Any training system worthy of the name should produce all seven results. You should not be satisfied with anything less than bodily perfection. If you are going to spend half an hour a day at exercising, try to get all you can out of it. It is easy, if you know enough, to select a program of varied exercises, which will increase your strength, your suppleness, and your agility at the same time; which will add to your development, and give you endurance, and which, last of all, will give you the perfect shape which is the best indication of perfect health.

PAUL von BOECKMANN

Author of *Nerve Force* and various other books on Health, Psychology, Breathing, Hygiene, and kindred subjects, many of which have been translated into foreign languages.



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By ALOIS MERKE

Founder of the Famous Merke Institute, Fifth Avenue, N. Y.



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This new invention—the result of an experience gained in treating thousands of cases of baldness—is in the form of a new kind of hat. It is worn on the head just 10 minutes a day. No unnecessary fuss of any kind. Just put the hat on your head. Wear it 10 minutes. And that's all there is to it.

Sounds impossible, doesn't it? All right. Then let me emphasize this fact. I don't care how thin your hair is. I don't care how many treatments you have taken without results. Unless my discovery actually produces a new growth of hair on your head in 30 days, then all you need do is tell me so. And without asking one question, I will instantly—and gladly—mail you a check refunding you every penny you have paid me.

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My invention is entirely different from anything known or used before. It proves that in a big percentage of hair troubles the hair roots are NOT dead, but merely *dormant!*

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invention, these results may be secured in any home where there is electricity—for just a few cents a day!

Remember—I don't ask you to risk a cent. I realize that my treatment will not grow hair for EVERYBODY. There are some extreme cases of baldness that nothing in the world can help. But my new invention has already grown new hair for

so many hundreds of others who had long ago given up hope that I am willing to let you try it entirely at my risk, and if it fails, then I lose—not you.

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If you will merely fill in and mail the coupon below I will gladly send you—without cost or obligation—an interesting 32-page booklet, "The New Way to Make Hair Grow," describing my new invention in detail.

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Your "Muscular Habits" Make, or Mar, Your Figure

Mr. Edwin Checkley made a more thorough study of the effect of habits, than any other man during, or since, his time. His picture appears on this page. It was taken at the age of 55. He died of an accident at the age of 75, and up to the time of his death, maintained his almost perfect figure and his tremendous strength.

His chest was of tremendous size. The muscles on the outside of the chest were not abnormally large; but his lung-capacity was phenomenal. Although his arms and legs were not loaded with muscle, he could perform the most surprising feats of strength, and he ascribed his unique power largely to the vigor he derived from his exceptional lung-development.

The curious thing about Checkley was that he never took exercise. He depended on his muscular habits to keep himself in shape. As a young man, he was weak and sickly, but brought himself to perfect health and acquired an enviable physique through the adoption of these muscular habits.

The Checkley Principle

He claims that muscles are developed by continual use, and that if you learn and adopt certain habits of walking, standing, bending, and breathing, your body will practically develop itself. He claimed that practising deep breathing for five minutes a day, would produce no noticeable effect, and he was very much opposed to "forced deep breathing." He claimed, and proved, that if a man would learn to breathe correctly (that is, with the upper part of the lungs), and make a habit of breathing *that way*, his chest would become larger automatically; that is to say, the chest would have to get bigger to accommodate the growing lungs. He also proved that as the rib-box (which contains the lungs) gets larger, the shoulders readjust themselves, and that a gain of 6 inches in chest measurement *should* be accompanied with a gain of at least 2 inches in shoulder-breadth.

Checkley applied these principles to everything he did. If you will look at his picture, you will see that on the front of his abdomen, he had a set of muscles just as prominently developed as the abdominal muscles of Eugene Sandow, or any of the professional "Strong Men." These other men developed those muscles by practising the hardest kind of bending exercises. Checkley's abdominal muscles were *created* by the way he carried his body. In his book, he tells how to carry the body in a certain way that causes a slight, but continual, tension in the muscles along the front of the abdomen, and along the lower part of the spine. He calls this the "balanced hip position." He further states that this method of bodily carriage *absolutely prevents the accumulation of fat* on the front of the abdomen, and in the abdominal cavity itself. Furthermore, he says that any stout man can rid himself of his "bay window," simply by adopting this position, without the necessity of doing any tiring exercises, or the adopting of a distasteful diet.

Checkley's legs and back were so strong that even when he was 70, he could take a weight of 450 pounds on his shoulders and *trot* with it for 100 yards. This strength was created by the way he walked. In his book, he describes a certain method of walking which develops not only the calves of the legs, but the upper part of the thighs, and which gives enormous strength to the loins.

Your "Daily Exercise" Is Waste Effort If Your "Muscular Habits" Are Faulty

You have to admit the logic of his theory. After all, what is the use of practising strenuous bending exercises for five minutes a day, in the effort to get rid of a big waist-line; if, for fifteen hours a day, you stand, sit and walk with your body held in a way that *forces* the accumulation of abdominal fat? What is the use of doing five minutes' "corrective" exercises to cure broken arches in your feet, if you nullify the effect of that exercise by walking and standing in a manner that helps to break down the arches? What is the use of doing "squatting" exercises to develop big thighs, if, when you walk, you use only a few of the leg muscles? If you learn to use as many muscles as possible, and to use them correctly, your new muscular habits will *absolutely mold your body* to that degree of perfection of which every human being is capable.

His book is the only one of its kind and should be in the hands of every man and every woman who is interested in acquiring a beautifully shaped, well proportioned, highly developed body. His teachings are most fascinating, and the beauty of it is that he shows you a method whereby you can get perfect health and a beautiful figure as you go about your daily work. In his book, there is one paragraph of ten lines which contains the whole secret of perfect bodily proportions. If you buy one of his books, it will be interesting to see whether you can identify that paragraph.

This is not a course of instruction, but a *book*, and the name of the volume is

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Edwin Checkley



In every seed there is a something

that knows how to take from its environment the wherewithal to build the body of the organism it animates. From the little seed you place in the ground this **something** sends roots into the earth, blades or branches into the air, and takes **from** the earth and the air that with which it builds.

Within the egg this **something** is wooed to life by the warmth of the brooding mother's breast.

CHIROPRACTIC

teaches that this **something** knows the secret of converting food into flesh and blood, and carries on all the processes of life, in the human body, by means of impulses sent over the nerves. It teaches that when a nerve is impaired by a vertebra becoming misaligned, these impulses do not flow over the nerves normally, and the result is what we call dis-ease. To get the dis-eased member to function again it is necessary to adjust the vertebra that is pressing on the nerve, to normal alignment, thereby permitting the normal flow of impulses over the nerve.

To adjust the vertebra to normal alignment is the work of a competent chiropractor.

A trial will convince the most skeptical of the correctness of these principles.

DEFINITION

The practice of Chiropractic consists of the palpation and adjustment, with the hands, of the movable segments of the spinal column to normal position for the purpose of releasing the prisoned impulse.



Write for information regarding Chiropractors or Schools to the

Universal Chiropractors' Association
Davenport, Iowa, U. S. A.